

# LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

## Volume 5 | Technical Appendices

**Route-wide waste and material resources supporting information  
(WM-002-000)**

Waste and material resources

November 2013

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Department  
for Transport

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# 1 Introduction

- 1.1.1 The purpose of this waste and material resources appendix is to provide information to support the route-wide waste and material resources assessment in Volume 3, Section 14.
- 1.1.2 Section 2 of this appendix provides a description of the local policy framework applicable to the waste generation and management associated with the Proposed Scheme. Local policy is defined as that which has been adopted by London borough councils and county councils along the route of the Proposed Scheme. This information supports the national and regional policy framework summaries provided in Volume 3, Section 14.
- 1.1.3 Section 3 of this appendix provides detailed information concerning the environmental baseline, namely:
- the types, quantities and management routes of waste generated in London boroughs and in counties along the route of the Proposed Scheme;
  - waste infrastructure capacity data for London boroughs and counties along the route of the Proposed Scheme; and
  - source data, which has been used to inform the future baseline with respect to the quantity of landfill capacity projected to be available during the period 2017 to 2025 (construction period) and the year 2026 (first year of operation).
- 1.1.4 Section 4 of this appendix provides a schedule of developments that have been included in the cumulative effects assessment detailed in Volume 3, Section 14.

## 2 Local policy framework

### 2.1 Greater London

#### General

- 2.1.1 The Proposed Scheme will be subject to policy provisions applicable to the City of Westminster, the Royal Borough of Kensington and Chelsea, and the London boroughs of Camden, Brent, Hammersmith & Fulham, Ealing and Hillingdon.
- 2.1.2 Applicable policy provisions are not discussed at length as part of the introduction to this assessment in Volume 3, Section 14. This is due to the existence of overarching regional policy for Greater London and the requirement for local development framework documents to be in general conformity with the London Plan and other statutory Mayoral strategies.

#### London Borough of Camden

- 2.1.3 Policy CS18 (Dealing with our waste and encouraging recycling) of the Camden Core Strategy 2010-2025<sup>1</sup> sets out proposals to make Camden a 'low-waste' borough. The North London Waste Plan<sup>2</sup>, which will set out the planning framework for managing waste in several London boroughs, including Camden, is undergoing preparation and is due for adoption in 2016. Both documents form part of the London Borough of Camden's Local Development Framework for planning.

#### City of Westminster

- 2.1.4 Policy CS27 (Design) of the City of Westminster Core Strategy, Adopted January 2011<sup>3</sup>, requires developments to ensure reduction, reuse and recycling of waste and aggregates. Policy CS43 (Sustainable Waste Management) requires application of the waste hierarchy and sets out provisions for waste management infrastructure. The adopted Core Strategy will be subject to two revisions; a National Planning Policy Framework (NPPF) Revision, known as Westminster's City Plan: Strategic Policies<sup>4</sup> is due for adoption in November 2013. The City Management Plan Revision<sup>5</sup> will provide more detailed development management policies to existing strategic policies.

#### Royal Borough of Kensington and Chelsea

- 2.1.5 Policy CE3 of the Core Strategy for the Royal Borough of Kensington and Chelsea, Adopted 8 December 2010<sup>6</sup> sets out provisions to ensure that waste is managed in accordance with the waste hierarchy. This includes use of rail and waterways for the transport of waste and a requirement for major developments to prepare and implement a Site Waste Management Plan. Saved Policy PU14 of the Unitary Development Plan,

<sup>1</sup> Camden Council (2010), *Core Strategy*.

<sup>2</sup> North London Waste Plan; *Report of North London Waste Plan Launch Consultation*; [http://www.nlwp.net/downloads/2013\\_launch/nlwp\\_launch\\_consultation\\_report.pdf](http://www.nlwp.net/downloads/2013_launch/nlwp_launch_consultation_report.pdf); Accessed 19 September 2013.

<sup>3</sup> Westminster City Council (2011), *Core Strategy Adopted January 2011*.

<sup>4</sup> Westminster City Council; *Core Strategy: NPPF Revision*; <http://www.westminster.gov.uk/services/environment/planning/ldf/core-strategy-nppf-revisions/>; Accessed 19 September 2013.

<sup>5</sup> Westminster City Council; *CMP Revision*; <http://www.westminster.gov.uk/services/environment/planning/ldf/cityplan/>; Accessed 19 September 2013.

<sup>6</sup> Kensington and Chelsea Borough Council (2010), *Core Strategy for the Royal Borough of Kensington and Chelsea, Adopted 8 December 2010*.

Adopted 25 May 2002: Extant Policies<sup>7</sup> also seeks to encourage reuse of construction materials in development schemes.

### London Borough of Hammersmith & Fulham

- 2.1.6 Strategic Policy CC3 (Waste Management) of the Hammersmith and Fulham Core Strategy, October 2011<sup>8</sup> provides overarching waste planning policy for the borough. This includes aims to promote sustainable waste behaviour, including sustainable demolition in new developments, and the transport of waste using existing waterways.

### London Borough of Brent

- 2.1.7 Strategic Objective 11 of the London Borough of Brent Core Strategy, Adopted 12 July 2010<sup>9</sup> requires a system of integrated waste management to ensure that waste is treated as a resource. Saved policies W8 (Construction, Demolition and Commercial Waste) and W9 (Construction and Movement of Spoil) of the Brent Unitary Development Plan<sup>10</sup> are also of direct relevance to the Proposed Scheme.

### London Borough of Ealing

- 2.1.8 The London Borough of Ealing's Adopted Development (Core) Strategy<sup>11</sup> does not contain any specific policies on waste and material resources although reference to these is made within several other policies. Generally, these references focus on the need to provide adequate waste management capacity, safeguard existing sites and promote the use of non-road transport of waste. This is with the overall aim of the London Borough of Ealing being as self-sufficient as possible in the management of its waste.
- 2.1.9 Specific development policies for the London Borough of Ealing are contained within the West London Plan, a Joint Waste Development Plan Document<sup>12</sup>, that also forms part of the Local Development Frameworks for the London boroughs of Brent and Hillingdon (amongst others). The West London Waste Plan provides a framework for managing municipal and commercial and industrial (C&I) waste arisings in West London over a 15 year period to 2026.

### London Borough of Hillingdon

- 2.1.10 A Vision for 2026 - Local Plan: Part 1, Strategic Policies (Adopted November 2012)<sup>13</sup>, contains several policies of relevance to waste and material resources. Strategic Objective SO13 (Support Objectives of Sustainable Waste Management) and related Policy EM11 (Sustainable Waste Management) identify the need to minimise waste. Reference is made to the waste hierarchy and the need to address sustainable waste management at all stages of development from design and construction to end-use. Policy EM1 (Climate Change Adaptation and Mitigation) is also relevant in that encourages use of land remediation techniques to reduce need for landfill. Policy BE1 (Built Environment) requires new development to utilise sustainable design and construction techniques to reduce

<sup>7</sup> Kensington and Chelsea Borough Council (2002), *Unitary Development Plan, Adopted 25 May 2002: Extant Policies*.

<sup>8</sup> Hammersmith and Fulham Council (2011), *Hammersmith and Fulham Core Strategy: Local Development Strategy, October 2011*.

<sup>9</sup> Brent Council (2010), *London Borough of Brent Core Strategy, Adopted 12 July 2010*.

<sup>10</sup> Brent Council (2004), *Unitary Development Plan - 2004*.

<sup>11</sup> Ealing Council (2012), *Adopted Development (or Core) Strategy: Rough Edit Version, April 3rd 2012*.

<sup>12</sup> Ealing Council; *The West London Plan*; [http://www.ealing.gov.uk/info/200921/local\\_plans/618/west\\_london\\_waste\\_plan](http://www.ealing.gov.uk/info/200921/local_plans/618/west_london_waste_plan); Accessed 19 September 2013.

<sup>13</sup> Hillingdon Council (2012), *A Vision for 2026 - Local Plan: Part 1, Strategic Policies* (Adopted November 2012).



waste to landfill and maximise reuse and recycling of construction, demolition and excavation waste (CDEW).

## 2.2 Buckinghamshire

- 2.2.1 The Buckinghamshire Minerals and Waste Core Strategy Development Plan Document, Adopted November 2012<sup>14</sup> provides the strategic policy framework and provisions for waste planning within Buckinghamshire until 2026. It contains six Strategic Objectives for Waste of which Strategic Objective SO2 (Improving the Sustainability of Waste Management) is of key importance to this assessment.
- 2.2.2 Supported by a series of policies, Strategic Objective SO2 encourages waste prevention and re-use in line with the waste hierarchy and recovery of energy from waste that cannot be recycled. Targets to recycle 70% of CDEW by 2020 and to recycle and compost 65% of C&I waste by 2026 have been adopted.

## 2.3 Oxfordshire

- 2.3.1 The Oxfordshire Minerals and Waste Plan: Minerals and Waste Core Strategy, Proposed Submission Document, May 2012<sup>15</sup> sets out waste planning strategy for the period to 2030.
- 2.3.2 Oxfordshire County Council is currently preparing a revised version of this document following its withdrawal in July 2013. The revised document is expected to be published for consultation by March 2014 and adopted by December 2015. Key issues to be addressed are related to local aggregates assessment and preparation of the document in accordance with the NPPF.
- 2.3.3 Key themes for Oxfordshire County Council's vision for waste by 2030 are to increase reuse, recycling and composting of waste, treat all residual waste that cannot be recycled or composted send only the minimum amount necessary to landfill. This is supported by targets set out in Policy W3 (Waste Management Targets) that require an overall landfill diversion performance (via recycling) for CDEW of 50% by 2015 rising to 60% by 2020 and beyond to 2030. An overall landfill diversion performance of 75%<sup>16</sup> for C&I waste is required by 2015, rising to 90%<sup>17</sup> by 2020 and again to 95%<sup>18</sup> by 2025 and beyond to 2030.
- 2.3.4 Also of relevance to this assessment is the key objective to promote sustainable waste management methods in construction and demolition. This is based on the principles of the waste hierarchy (specifically waste prevention and recycling), on-site management of waste and appropriate design within new development to facilitate segregation of materials for recovery.
- 2.3.5 Saved policies of the Oxfordshire Minerals and Waste Local Plan 1996<sup>19</sup> also apply as follows:

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<sup>14</sup> Buckinghamshire County Council (2012), *Buckinghamshire Minerals and Waste Core Strategy Development Plan Document*. Adopted November 2012.

<sup>15</sup> Oxfordshire County Council (2012), *Oxfordshire Minerals and Waste Plan: Minerals and Waste Core Strategy, Proposed Submission Document*, May 2012.

<sup>16</sup> Comprising of 60% recycling, composting and food waste treatment and 15% treatment of residual waste.

<sup>17</sup> Comprising of 65% recycling, composting and food waste treatment and 25% treatment of residual waste.

<sup>18</sup> Comprising of 70% recycling, composting and food waste treatment and 25% treatment of residual waste.

<sup>19</sup> Oxfordshire County Council (1996), *Oxfordshire Minerals and Waste Local Plan 1996*.

- Saved Policy W2 makes provision for the acceptance of waste from the Greater London region and other parts of the South East region for management within Oxfordshire subject to provisions; and
- Saved Policies W3 to W7 make various provisions in relation to the development of waste management facilities and release of sites for future landfill capacity.

## 2.4 Hertfordshire

- 2.4.1 The Hertfordshire Waste Core Strategy and Development Management Policies Development Plan Document 2011 to 2026, Adopted November 2012<sup>20</sup> sets out the County's strategic vision and overall spatial strategy for waste planning in Hertfordshire. It also contains detailed development management policies that will be used to make decisions on waste planning applications and inform determination of applications for other local developments that will have waste implications.
- 2.4.2 Policies Two (Waste Prevention and Reduction), Three (Energy and Heat Recovery) and Four (Landfill and Landraise) support waste prevention and reduction, along with energy recovery from residual wastes and a move away from over-reliance on landfill. Targets are also set to achieve an overall landfill diversion rate of 90% of CDEW and 93% of C&I waste by 2026.

## 2.5 Northamptonshire

- 2.5.1 The Northamptonshire Minerals and Waste Development Framework provides the land use planning strategy for minerals and waste-related development in the County.
- 2.5.2 Policy CS7 (Sustainable Design and Use of Resources) of the Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document, Adopted May 2010<sup>21</sup> supports waste prevention and reuse and seeks to ensure the efficient use of resources in both construction and operation. Measures are encouraged to minimise the use of primary aggregates and maximise use of materials made from secondary and recycled sources. It also contains provisions that support construction and demolition methods that minimise waste and implement the waste hierarchy.
- 2.5.3 The Minerals and Waste Development Framework: Development and Implementation Principles Supplementary Planning Document, Adopted September 2011<sup>22</sup> provides guidance and standards on waste minimisation and management in all forms of development.

## 2.6 Warwickshire

- 2.6.1 Warwickshire County Councils' Waste Core Strategy Adopted Version July 2013<sup>23</sup> sets out the spatial strategy, vision, objectives and policies for managing waste for a 15 year plan period to 2027/28. It contains eight objectives with an overall theme of delivering sustainable waste management. This includes managing waste as a resource, moving up

<sup>20</sup> Hertfordshire County Council (2012), *Waste Core Strategy and Development Management Policies Development Plan Document 2011 to 2026*.

<sup>21</sup> Northamptonshire County Council (2010), *Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document*.

<sup>22</sup> Northamptonshire County Council (2011), *Northamptonshire Minerals and Waste Development Framework: Development and Implementation Principles Supplementary Planning Document*, Adopted September 2011.

<sup>23</sup> Warwickshire County Council (2013), *Waste Core Strategy Adopted Version July 2013*.

the waste hierarchy, achieving self-sufficiency in waste management and recovering the value from waste without adverse impact on the environment. Objectives are supported by a series of core strategy and development management policies for waste development.

- 2.6.2 Whilst no specific targets have been set, the Waste Core Strategy makes reference to the Waste and Resources Action Plan's (WRAP) halving waste to landfill commitment in construction and the EU Waste framework Directive target of 70% of non-hazardous construction and demolition waste should be recovered by 2020.

## 2.7 West Midlands metropolitan area

- 2.7.1 Within the West Midlands metropolitan area, Solihull Metropolitan Borough Council (SMBC) and Birmingham City Council provide the strategic planning framework for the Proposed Scheme.

### Solihull metropolitan area

- 2.7.2 The Solihull Unitary Development Plan 2006<sup>24</sup> is the current development plan for Solihull. It contains a number of saved policies of relevance to waste and material resources.
- 2.7.3 Saved policies of key relevance to this assessment include:
- Policy WM1 (Waste Strategy), which supports waste management activities that have regard to the waste hierarchy, the proximity principle and regional self-sufficiency;
  - Policy WM4 (Provision for Recycling for New Development), which requires appropriate provision in new development for the segregation of waste to facilitate recycling and recovery; and
  - Policy WM7 (Landfill), which requires new landfill capacity where there is a demonstrable need in accordance with the policy's criteria.
- 2.7.4 The Solihull Draft Local Plan, Shaping a Sustainable Future: Local Development Framework, Submission Document September 2012<sup>25</sup> will replace saved policies of the adopted Solihull Unitary Development Plan 2006 once adopted.
- 2.7.5 The Solihull Draft Local Plan contains a key objective to move waste up the hierarchy and manage waste as a resource. This is supported primarily by Policy 12 (Resource Management) and Policy 13 (Minerals). Measures include promotion of waste minimisation and use of recycled aggregates in new development.
- 2.7.6 One Planet - Our Future: Waste Management Strategy for Solihull, 2010-2020<sup>26</sup> provides the strategy for municipal waste management in Solihull. Whilst it does not contain any direct policies, some reference is made to commercial waste and the synergies that can be achieved by managing this in conjunction with municipal waste.

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<sup>24</sup> Solihull Metropolitan Borough Council (2006), *Solihull Unitary Development Plan 2006: Written Statement*.

<sup>25</sup> Solihull Metropolitan Borough Council (2012), *The Solihull Draft Local Plan, Shaping a Sustainable Future: Local Development Framework, Submission Document September 2012*.

<sup>26</sup> Solihull Metropolitan Borough Council (2010), *One Planet - Our Future: Waste Management Strategy for Solihull 2010-2020*.

## Birmingham

- 2.7.7 The Birmingham Plan: Birmingham Unitary Development Plan 2005<sup>27</sup> is the current statutory development plan for Birmingham.
- 2.7.8 Policy 3.64A sets out Birmingham City Council's sustainable approach to waste management that takes into account regional self-sufficiency, the proximity principle and the waste hierarchy.
- 2.7.9 Other saved policies of relevance to this assessment include:
- Policy 3.66 (Waste Recycling Facilities), which identifies that there is a market for recycled and secondary aggregates in Birmingham;
  - Policy 3.67 (Energy from Waste Plants) acknowledges that whilst energy from waste facilities can reduce the amount of waste for landfill disposal, reuse and recycling of waste is preferred;
  - Policy 3.68 (Landfill Sites), which identifies that there is unlikely to be scope for large-scale landfill operations in Birmingham in the foreseeable future;
  - Policy 3.70A (New Development and Waste) requires major new development to include a comprehensive scheme for dealing with waste arising from construction and during the life of the development; and
  - Policy ENV7 (Sustainable Development – 'Places for the Future') identifies that future planning guidance will support more sustainable forms of development, including waste minimisation.
- 2.7.10 Emerging policy is provided by the Birmingham Development Plan: Planning for Birmingham's Growing Population, Options Consultation, October 2012<sup>28</sup>. The key objective is to minimise waste and supporting policies will eventually replace those in the Birmingham Unitary Development Plan 2005.
- 2.7.11 Options for achieving the aim of zero waste to landfill for municipal waste, C&I waste and CDEW are provided by the Birmingham Total Waste Strategy: Final Report<sup>29</sup>.

## 2.8 Staffordshire

- 2.8.1 The Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026<sup>30</sup> sets out the vision, objectives and spatial strategy for waste management and the development of waste management facilities up to 2026.
- 2.8.2 Strategic Objective 1 supports new waste development that reduces the effects of greenhouse gas emissions and climate change impacts, helps to maximise waste as a resource, increases diversion from landfill and supports renewable energy supplies where recycling is not viable.

<sup>27</sup> Birmingham City Council (2005), *The Birmingham Plan: Birmingham Unitary Development Plan 2005*.

<sup>28</sup> Birmingham City Council (2012), *Birmingham Development Plan: Planning for Birmingham's Growing Population, Options Consultation, October 2012*.

<sup>29</sup> SKM Enviros (2011), *Birmingham Total Waste Strategy: Final Report, 4 January 2011*. Birmingham City Council, Birmingham.

<sup>30</sup> Staffordshire County Council (2013), *Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026, Adopted March 2013*.

- 2.8.3 Policy 1.2 (Waste as a Resource: Make Better Use of Waste Associated with Non-Waste Development) places an emphasis on developers to incorporate sustainable design techniques and demonstrate resource efficiency to minimise waste and use of raw materials. Building design should take into account end-of-life management to facilitate ease of reuse and recycling and include provision for appropriate waste segregation and storage when in use. CDEW recovery should also be maximised and be supported by a site waste management plan.
- 2.8.4 Policy 1.3 (Construction, Demolition and Excavation Waste) supports CDEW recycling and favours the use of inert waste for restoration purposes over landfill and landraising proposals. Proposals for landfill or landraise will generally not be permitted unless in accordance with the criteria set out within Policy 1.6 (Landfill or Landraise).
- 2.8.5 Where inert waste is to be used for landscaping, screening and engineering purposes and/or for the improvement of agricultural or forestry land, proposals must comply with criteria set out within Policy 1.4 (Use of Waste for Landscaping, Screening, Engineering Purposes or for the Improvement of Agricultural or Forestry Land).
- 2.8.6 Landfill diversion targets for set out for both CDEW and C&I waste in Policy 2.1 (Landfill Diversion Targets). These targets include:
- 70% landfill diversion of CDEW by 2020/21; and
  - 95% landfill diversion of C&I waste by 2015/16 rising to 100% by 2020/21.

## 3 Environmental baseline

### 3.1 Local waste arisings and management

#### Construction, demolition and excavation waste

- 3.1.1 CDEW arisings and waste management methods for the local areas within the defined study area are shown in Table 1 for the year 2013 (baseline) and in Table 2 for the period 2017 to 2025 (future baseline).
- 3.1.2 Future baseline arisings for CDEW shown in Table 2 are shown as the sum of annual projections for each year within the proposed construction period of 2017 to 2025. This presentation method allows for direct comparison of the total quantity of CDEW that will be generated by the Proposed Scheme during this period.
- 3.1.3 Waste management performance (shown as overall diversion from landfill and disposal to landfill) is also based on data for each year within the period 2017 to 2025 (future baseline).
- 3.1.4 Latest available information published by waste planning authorities has been used to inform the local baseline and future baseline for CDEW arisings at local level. Details of the sources of information used are provided further within this section.

Table 1: Baseline (2013) CDEW arisings and management methods by local area

Regional area	Local area	Total arisings (tonnes)	Overall diversion from landfill		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion
Greater London	London Borough of Camden	266,000	231,420	87%	34,580	13%
	London Borough of Brent	365,000	317,550	87%	47,450	13%
	London Borough of Hammersmith & Fulham	232,000	201,840	87%	30,160	13%
	Royal Borough of Kensington and Chelsea	221,000	192,270	87%	28,730	13%
	City of Westminster	274,000	238,380	87%	35,620	13%
	London Borough of Ealing	407,000	354,090	87%	52,910	13%
	London Borough of Hillingdon	324,000	281,880	87%	42,120	13%
	<i>Total</i>	<i>2,089,000</i>	<i>1,817,430</i>	<i>87%</i>	<i>271,570</i>	<i>13%</i>
South East	Buckinghamshire	1,032,000	516,000	50%	516,000	50%
	Oxfordshire	1,040,000	520,000	50%	520,000	50%

Regional area	Local area	Total arisings (tonnes)	Overall diversion from landfill		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion
	<i>Total</i>	<i>2,072,000</i>	<i>1,036,000</i>	<i>50%</i>	<i>1,036,000</i>	<i>50%</i>
East of England	Hertfordshire	1,916,000	1,416,000	74%	500,000	26%
East Midlands	Northamptonshire	1,746,600	1,565,000	90%	181,600	10%
West Midlands	Warwickshire	1,340,047	938,033	70%	402,014	30%
	Solihull metropolitan area	288,888	202,222	70%	86,666	30%
	Birmingham metropolitan area	1,464,560	1,171,648	80%	292,912	20%
	Staffordshire	1,542,600	1,080,000	70%	462,600	30%
	<i>Total</i>	<i>4,636,095</i>	<i>3,391,903</i>	<i>73%</i>	<i>1,244,192</i>	<i>27%</i>

Table 2: Future baseline (2017 to 2025) CDEW arisings and management methods by local area

Regional area	Local area	Total arisings (tonnes)	Overall diversion from landfill		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion
Greater London	London Borough of Camden	2,529,000	2,384,718	94%	144,282	6%
	London Borough of Brent	3,433,000	3,236,856	94%	196,144	6%
	London Borough of Hammersmith and Fulham	2,199,000	2,073,493	94%	125,507	6%
	Royal Borough of Kensington and Chelsea	2,035,000	1,918,658	94%	116,343	6%
	City of Westminster	2,542,000	2,396,722	94%	145,278	6%
	London Borough of Ealing	3,762,000	3,546,947	94%	215,053	6%
	London Borough of Hillingdon	3,052,000	2,877,668	94%	174,332	6%
	<i>Total</i>	<i>19,552,000</i>	<i>18,435,062</i>	<i>94%</i>	<i>1,116,938</i>	<i>6%</i>
South East	Buckinghamshire	9,288,000	6,501,600	70%	2,786,400	30%
	Oxfordshire	11,700,000	6,903,000	59%	4,797,000	41%
	<i>Total</i>	<i>20,988,000</i>	<i>13,404,600</i>	<i>64%</i>	<i>7,583,400</i>	<i>36%</i>

Regional area	Local area	Total arisings (tonnes)	Overall diversion from landfill		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion
East of England	Hertfordshire	20,261,000	16,444,000	81%	3,818,000	19%
East Midlands	Northamptonshire	17,991,000	16,118,400	90%	1,872,600	10%
West Midlands	Warwickshire	11,847,771	8,293,440	70%	3,554,331	30%
	Solihull metropolitan area	2,554,152	1,787,906	70%	766,246	30%
	Birmingham metropolitan area	13,396,840	10,717,472	80%	2,679,368	20%
	Staffordshire	11,952,000	8,368,200	70%	3,583,800	30%
	<i>Total</i>	<i>39,750,763</i>	<i>29,167,018</i>	<i>73%</i>	<i>10,583,745</i>	<i>27%</i>

### Greater London

- 3.1.5 Table 1 and Table 2 present baseline and future baseline CDEW arisings and management methods for the Royal Borough of Kensington and Chelsea, City of Westminster and London boroughs of Camden, Brent, Hammersmith & Fulham, Ealing and Hillingdon.
- 3.1.6 Total CDEW arisings are projections for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) as taken from information presented in Future Waste Arisings in London 2010-2031: A Summary Note<sup>31</sup>.
- 3.1.7 Waste management performance information (shown as overall diversion from landfill) for the year 2013 (baseline) and for each year within the period 2017 to 2025 (future baseline) has been extrapolated linearly between the estimated CDEW landfill diversion performance for Greater London in 2008 (82%) and CDEW landfill diversion targets for 2020 and beyond (95%) as reported by Making Sense of Business Waste: The Mayor's Business Waste Management Strategy for London<sup>32</sup>.

### Buckinghamshire

- 3.1.8 Total CDEW arisings for Buckinghamshire are projections for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) as described in Pre-Submission Advice on Minerals and Waste Core Strategy Preferred Options: Task B Verification of the Plan Provision<sup>33</sup> and confirmed within Buckinghamshire County Council's Minerals and Waste Development Framework Annual Monitoring Report 2010/2011<sup>34</sup>.
- 3.1.9 According to the Pre-Submission Advice on Minerals and Waste Core Strategy Preferred Options: Task B Verification of the Plan Provision, no increase in CDEW arisings in

<sup>31</sup> Greater London Authority (2010), *Future Waste Arisings in London 2010-2031: A Summary Note*, March 2010.

<sup>32</sup> Greater London Authority (2011), *Making Business Sense of Waste: The Mayor's Business Waste Strategy for London*, November 2011.

<sup>33</sup> Jacobs (2009), *Buckinghamshire County Council - Pre-Submission Advice on Minerals and Waste Core Strategy Preferred Options: Task B Verification of the Plan Provision (Overall Report, Final November 2009)*. Buckinghamshire County Council.

<sup>34</sup> Buckinghamshire County Council (2011), *Minerals and Waste Development Framework Annual Monitoring Report 2010/11*.



Buckinghamshire is predicted between 2013 and the end of the construction period in 2025.

- 3.1.10 Waste management performance for Buckinghamshire in the year 2013 (baseline) is based on information taken from Buckinghamshire County Council's Minerals and Waste Development Framework Annual Monitoring Report 2010/2011. The report provides an estimate of 50% recycling of CDEW in 2010/11, which has been assumed to apply through the baseline year of 2013 as an overall landfill diversion performance level.
- 3.1.11 For the future baseline, it has been assumed that a target to recycle 70% of CDEW by 2020 (in line with the Government Review of Waste Policy in England) will apply through to 2026<sup>35</sup>. Consequently, a landfill diversion rate of 70% (equivalent to 70% recycling) has been assumed to apply to annual CDEW arisings in Buckinghamshire through the future baseline period of 2017 to 2025.

### *Oxfordshire*

- 3.1.12 Total CDEW waste arisings for Oxfordshire of approximately 1,040,000 tonnes for the year 2013 (baseline) are based on information taken from the Oxfordshire Minerals and Waste Development Framework: Waste Needs Assessment<sup>36</sup>. The figure has been calculated as a linear extrapolation between estimated CDEW arisings for 2010 (650,000 tonnes) and projected CDEW arisings for 2015 (1,300,000 tonnes).
- 3.1.13 Waste management performance for Oxfordshire in the year 2013 (baseline) is based on Oxfordshire County Council's waste management targets of 50% recycling and 50% landfill or landfill restoration for the years 2010 and 2015. It has been assumed that these targets will apply within the intervening period.
- 3.1.14 Total CDEW waste arisings for Oxfordshire of approximately 11,700,000 tonnes for the period 2017 to 2025 (future baseline) is based on the sum of annual projections for each year within this period of approximately 1,300,000 tonnes per annum. This is reported by the Oxfordshire Minerals and Waste Development Framework: Waste Needs Assessment, which states that projections of CDEW arisings are based on a return to past rates of building activity from 2015 onwards with a zero rate of growth throughout the period to 2030.
- 3.1.15 Waste management performance for Oxfordshire in the period 2017 to 2025 (future baseline) is based on an overall recycling target of 59% and an overall landfill or landfill restoration target of 41%. These targets have been calculated based on Oxfordshire County Council's waste management targets of: 50% recycling and 50% landfill or landfill restoration for the year 2015; and 60% recycling and 40% landfill or landfill restoration for the years 2020 and 2025. Recycling targets and landfill or landfill restoration targets have been extrapolated for the intervening years.

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<sup>35</sup> Buckinghamshire County Council (2011), *Minerals and Waste Development Framework Annual Monitoring Report 2010/11*.

<sup>36</sup> Oxfordshire County Council (2012), *Oxfordshire Minerals and Waste Development Framework: Waste Needs Assessment, May 2012*.

### *Hertfordshire*

- 3.1.16 Total CDEW arisings data for Hertfordshire are projections for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) as described in Hertfordshire's Establishment of Waste Forecasts and Targets at 2026<sup>37</sup>.
- 3.1.17 The quantities of CDEW projected by Hertfordshire County Council to be diverted from landfill via recycling, composting and recovery in the year 2013 (baseline) and for each year during the period 2017 to 2025 (future baseline) have been used to inform CDEW waste management performance. This is equivalent to an overall landfill diversion rate of 74% for the year 2013 (baseline) and of 81% for the period 2017 to 2025.

### *Northamptonshire*

- 3.1.18 Total CDEW arisings for Northamptonshire of approximately 1,746,600 tonnes for the year 2013 (baseline) are based on information taken from the Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document, Adopted May 2010<sup>38</sup>. The figure has been calculated as a linear extrapolation between estimated CDEW arisings for 2010/11 (1,653,000 tonnes) and projected CDEW arisings for 2015/16 (1,809,000 tonnes).
- 3.1.19 Waste management performance for Northamptonshire in the year 2013 (baseline) is based on an extrapolated projection for the total quantity of inert CDEW to be reused and recycled (approximately 1,565,000 tonnes) equivalent to 90% of total CDEW arisings.
- 3.1.20 Total CDEW arisings for Northamptonshire of approximately 17,991,000 tonnes for the period 2017 to 2025 (future baseline) are based on the sum of annual projections for each year within this period. Annual projections have been extrapolated using estimated CDEW arisings for 2015/16 (1,809,000 tonnes), 2020/21 (1,969,000 tonnes) and 2025/26 (2,123,000) tonnes as reported by the Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document, Adopted May 2010.
- 3.1.21 Waste management performance for Northamptonshire in the period 2017 to 2025 (future baseline) is based on an extrapolated projection for the total quantity of inert CDEW to be reused and recycled (approximately 16,118,400 tonnes) equivalent to 90% of total CDEW arisings.

### *Warwickshire*

- 3.1.22 Total CDEW arisings for Warwickshire are projections for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) taken from the West Midlands Landfill Capacity Study 2009 Update<sup>39</sup>. The projections used include Scenario 1 datasets for both Warwickshire and Coventry in order to provide a full picture of CDEW arisings for the County.

<sup>37</sup> SLR Global Environmental Solutions (2010), *Hertfordshire's Establishment of Waste Forecasts and Targets at 2026, October 2010 (Rev 1)*. Hertfordshire County Council.

<sup>38</sup> Northamptonshire County Council (2010), *Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document*.

<sup>39</sup> Scott Wilson (2009), *West Midlands Landfill Capacity Study Update 2009, Study Report June 2009*. West Midlands Regional Assembly.

- 3.1.23 Scenario 1 datasets, which provide the same projections as Scenario 2 and Scenario 3, have been used since this is the preferred approach used by Warwickshire County Council to make CDEW projections in its recent Waste Background Technical Document<sup>40</sup>. Warwickshire County Council considers Scenario 1 to provide the most robust methodology and up-to-date baseline data on which to make projections.
- 3.1.24 Warwickshire County Council's Waste Core Strategy Adopted Version July 2013<sup>41</sup> provides limited information in relation to management of CDEW but does make reference to meeting the European Waste Framework Directive (2008/98/EC)<sup>42</sup> to reuse, recycle and recover 70% of non-hazardous construction and demolition waste by 2020. A landfill diversion rate of 70% has thus been assumed to apply to projected CDEW arisings for each year within the future baseline period 2017 to 2025. This has also been assumed for the year 2013 (baseline) in the absence of other data.

#### *Solihull metropolitan area*

- 3.1.25 Total CDEW arisings for the Solihull metropolitan area are projections for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) taken from the West Midlands Landfill Capacity Study 2009 Update, which has been used by Solihull Metropolitan Borough Council as part of its Local Development Framework Evidence Base<sup>43</sup>.
- 3.1.26 The projections used are taken from the Scenario 1 dataset following the approach used by Warwickshire County Council. Annual projections are greater than the annual CDEW arisings estimate provided by Solihull Metropolitan Borough Council (approximately 180,000 tonnes per year)<sup>44</sup> but supporting information for this figure is limited and so has not been used.
- 3.1.27 Waste management performance for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) has been assumed as for Warwickshire on account on the evidence base used for projected CDEW arisings and reference to European Waste Framework Directive (2008/98/EC) targets.

#### *Birmingham metropolitan area*

- 3.1.28 Total CDEW arisings for the Birmingham metropolitan area are projections for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) based on latest available information taken from the Birmingham Total Waste Strategy: Final Report<sup>45</sup>. The projections used are taken from the Scenario 2 dataset that take into account the recent economic downturn and future projected construction output.
- 3.1.29 Annual projections have been extrapolated using estimated CDEW arisings for 2006/07 (1,655,700 tonnes), 2014/15 (1,451,500 tonnes), 2019/20 (1,488,100 tonnes) and 2025/26 (1,495,500 tonnes) to provide arisings data for the year 2013 (baseline) and the period 2017 to 2025 (future baseline).

<sup>40</sup> Warwickshire County Council (Undated), *Waste Core Strategy: Waste Background Technical Document*.

<sup>41</sup> Warwickshire County Council (2013), *Waste Core Strategy Adopted Version July 2013*.

<sup>42</sup> Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste and Repealing Certain Directives. Strasbourg, European Parliament and European Council.

<sup>43</sup> Solihull Metropolitan Borough Council; *The LDF Evidence Base*; <http://www.solihull.gov.uk/ldf/15498.htm>; Accessed 12 September 2013.

<sup>44</sup> Solihull Metropolitan Borough Council (2010), *One Planet - Our Future: Waste Management Strategy for Solihull 2010-2020*.

<sup>45</sup> SKM Enviros (2011), *Birmingham Total Waste Strategy: Final Report*, 4 January 2011. Birmingham City Council, Birmingham.

- 3.1.30 The arisings projections used are less than those reported for the Birmingham metropolitan area by the West Midlands Landfill Capacity Study 2009 Update. For comparison, the latter provides estimates of approximately 1,843,126 tonnes for the year 2013 (baseline) and a total of approximately 16,295,659 tonnes for the period 2017 to 2025 (future baseline). However, the evidence base used to inform the Birmingham Total Waste Strategy: Final Report is based on the Birmingham Waste Capacity Study: Final Report<sup>46</sup>, which was commissioned by Birmingham City Council to inform its emerging Birmingham Development Plan and provides more recent information than the West Midlands Landfill Capacity Study 2009 Update.
- 3.1.31 There is little information available with respect to future projections of waste management performance but the Birmingham Total Waste Strategy: Final Report uses 2005 DCLG data to inform waste management routes and required capacity. Overall landfill diversion for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) is based on the DCLG's reported 50% CDEW recycled as aggregate or soil and 30% CDEW used at exempt sites (i.e. a total of 80%). Similarly, projected quantities of CDEW to landfill is based on 8% CDEW used for landfill engineering or restoration purposes and 12% CDEW disposal to landfill (i.e. a total of 20%).

### Staffordshire

- 3.1.32 Total CDEW waste arisings for Staffordshire for the year 2013 (baseline) and the period 2017 to 2025 (future baseline) are based on information taken from the Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026 - Appendix 6: Waste Data Tables, Adopted March 2013<sup>47</sup>.
- 3.1.33 Annual projections have been extrapolated using published CDEW arisings for 2010/11 (1,839,000 tonnes) and projections for 2015/16 (1,345,000 tonnes), 2020/21 (1,330,000 tonnes) and 2025/26 (1,318,000 tonnes) to provide arisings data for the year 2013 (baseline) and the period 2017 to 2025 (future baseline). Estimated CDEW arisings provided by the Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026 are broadly consistent with the combined dataset projections (Scenario 1) for Staffordshire and Stoke-on-Trent as reported by the West Midlands Landfill Capacity Study 2009 Update, i.e. approximately 1.3 million tonnes per annum.
- 3.1.34 Waste management performance for Staffordshire in the year 2013 (baseline) and the period 2017 to 2025 (future baseline) is based on Staffordshire County Council's application of the European Waste Framework Directive (2008/98/EC) target to reuse, recycle and recover 70% of non-hazardous construction and demolition waste by 2020. This target applies across the Staffordshire and Stoke-on-Trent Joint Waste Local Plan period of 2010 to 2026.

### Commercial and industrial waste arisings and management

- 3.1.35 C&I waste arisings and waste management methods for the local areas within the defined study area are shown in Table 3 for the year 2013 (baseline), Table 4 for the period 2017 to

<sup>46</sup> Enviro Consulting Limited (2010), *Birmingham Waste Capacity Study: Final Report, February 2010*. Birmingham City Council.

<sup>47</sup> Staffordshire County Council (2013), *Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026 - Appendix 6: Waste Data Tables, Adopted March 2013*.

2025 (future baseline for worker accommodation site waste during construction) and Table 5 for the year 2026 (future baseline for operation).

- 3.1.36 Future baseline arisings for C&I waste shown in Table 4 are shown as the sum of annual projections for each year within the proposed construction period of 2017 to 2025. This presentation method allows for direct comparison of the total quantity of C&I waste that will be generated by the Proposed Scheme during this period. Waste management performance (shown as recycling and composting, other diversion from landfill and disposal to landfill) is also based on data for each year within the period 2017 to 2025 (future baseline).
- 3.1.37 Latest available information published by the waste planning authorities has been used to inform the local baseline and future baseline for C&I waste arisings. Details of the sources of information used are provided further within this section.

Table 3: Baseline (2013) C&I waste arisings and management methods by local area

Regional area	Local area	Total arisings (tonnes)	Recycling and composting		Other diversion from landfill <sup>48</sup>		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion	Tonnes	Proportion
Greater London	London Borough of Camden	408,000	244,800	60%	122,400	30%	40,800	10%
	London Borough of Brent	201,000	120,600	60%	60,300	30%	20,100	10%
	London Borough of Hammersmith and Fulham	185,000	111,000	60%	55,500	30%	18,500	10%
	Royal Borough of Kensington and Chelsea	150,000	90,000	60%	45,000	30%	15,000	10%
	City of Westminster	744,000	446,400	60%	223,200	30%	74,400	10%
	London Borough of Ealing	226,000	135,600	60%	67,800	30%	22,600	10%
	London Borough of Hillingdon	336,000	201,600	60%	100,800	30%	33,600	10%
	<i>Total</i>	<i>2,250,000</i>	<i>1,350,000</i>	<i>60%</i>	<i>675,000</i>	<i>30%</i>	<i>225,000</i>	<i>10%</i>
South East	Buckinghamshire	1,080,000	550,800	51%	-	-	529,200	49%
	Oxfordshire	577,580	323,445	56%	51,982	9%	202,153	35%
	<i>Total</i>	<i>1,657,580</i>	<i>874,245</i>	<i>53%</i>	<i>51,982</i>	<i>3%</i>	<i>731,353</i>	<i>44%</i>
East of England	Hertfordshire	1,022,000	515,000	50%	427,000	42%	80,000	8%

<sup>48</sup> Through other waste recovery methods such as thermal treatment.

Regional area	Local area	Total arisings (tonnes)	Recycling and composting		Other diversion from landfill <sup>48</sup>		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion	Tonnes	Proportion
East Midlands	Northamptonshire	1,162,800	628,400	54%	177,400	15%	357,000	31%
West Midlands	Warwickshire	576,636	397,879	69%	-	-	178,757	31%
	Solihull metropolitan area	158,267	109,204	69%	-	-	49,063	31%
	Birmingham metropolitan area	973,460	671,687	69%	-	-	301,773	31%
	Staffordshire	1,660,200	1,455,750	88%	-	-	204,450	12%
	<i>Total</i>	<i>3,368,563</i>	<i>2,634,520</i>	<i>78%</i>	<i>-</i>	<i>-</i>	<i>734,043</i>	<i>22%</i>

Table 4: Future baseline (2017 to 2025) C&amp;I waste arisings and management methods by local area

Regional area	Local area	Total arisings (tonnes)	Recycling and composting		Other diversion from landfill <sup>49</sup>		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion	Tonnes	Proportion
Greater London	London Borough of Camden	3,690,000	2,550,550	69%	1,107,000	30%	32,450	1%
	London Borough of Brent	1,787,000	1,234,900	69%	536,100	30%	16,000	1%
	London Borough of Hammersmith and Fulham	1,705,000	1,178,580	69%	511,500	30%	14,920	1%
	Royal Borough of Kensington and Chelsea	1,391,000	961,490	69%	417,300	30%	12,210	1%
	City of Westminster	6,804,000	4,702,860	69%	2,041,200	30%	59,940	1%
	London Borough of Ealing	1,909,000	1,319,030	69%	572,700	30%	17,270	1%
	London Borough of Hillingdon	3,041,000	2,101,850	69%	912,300	30%	26,850	1%
	<i>Total</i>	<i>20,327,000</i>	<i>14,049,260</i>	<i>69%</i>	<i>6,098,100</i>	<i>30%</i>	<i>179,640</i>	<i>1%</i>
South East	Buckinghamshire	10,973,000	6,630,223	60%	1,403,277	13%	2,939,500	27%
	Oxfordshire	5,466,710	3,610,317	66%	1,295,306	24%	561,087	10%
	<i>Total</i>	<i>16,439,710</i>	<i>10,240,540</i>	<i>62%</i>	<i>2,698,583</i>	<i>17%</i>	<i>3,500,587</i>	<i>21%</i>
East of	Hertfordshire	9,561,000	5,045,000	53%	3,811,000	40%	705,000	7%

<sup>49</sup> Through other waste recovery methods such as thermal treatment.

Regional area	Local area	Total arisings (tonnes)	Recycling and composting		Other diversion from landfill <sup>49</sup>		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion	Tonnes	Proportion
England								
East Midlands	Northamptonshire	11,632,800	6,563,400	56%	1,856,400	16%	3,213,000	28%
West Midlands	Warwickshire	5,828,521	4,353,863	75%	-	-	1,474,658	25%
	Solihull metropolitan area	2,095,131	1,571,348	75%	-	-	523,783	25%
	Birmingham metropolitan area	9,738,750	4,479,825	46%	1,266,038	13%	3,992,887	41%
	Staffordshire	19,225,000	19,049,500	99%	-	-	175,500	1%
	<i>Total</i>	<i>36,887,402</i>	<i>29,454,536</i>	<i>80%</i>	<i>1266038</i>	<i>3%</i>	<i>6,166,828</i>	<i>17%</i>

Table 5: Future baseline (2026) C&amp;I waste arisings and management methods by local area

Regional area	Local area	Total arisings (tonnes)	Recycling and composting		Other diversion from landfill <sup>50</sup>		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion	Tonnes	Proportion
Greater London	London Borough of Camden	417,000	291,900	70%	125,100	30%	-	0%
	London Borough of Brent	196,000	137,200	70%	58,800	30%	-	0%
	London Borough of Hammersmith and Fulham	195,000	136,500	70%	58,500	30%	-	0%
	Royal Borough of Kensington and Chelsea	155,000	108,500	70%	46,500	30%	-	0%
	City of Westminster	767,000	536,900	70%	230,100	30%	-	0%
	London Borough of Ealing	209,000	146,300	70%	62,700	30%	-	0%
	London Borough of Hillingdon	341,000	238,700	70%	102,300	30%	-	0%
	<i>Total</i>	<i>2,280,000</i>	<i>1,596,000</i>	<i>70%</i>	<i>684,000</i>	<i>30%</i>	<i>-</i>	<i>0%</i>
South East	Buckinghamshire	1,285,000	835,250	65%	244,150	19%	205,600	16%
	Oxfordshire	626,700	438,690	70%	156,675	25%	31,335	5%

<sup>50</sup> Through other waste recovery methods such as thermal treatment.

Regional area	Local area	Total arisings (tonnes)	Recycling and composting		Other diversion from landfill <sup>50</sup>		Disposal to landfill	
			Tonnes	Proportion	Tonnes	Proportion	Tonnes	Proportion
	<i>Total</i>	1,911,700	1,273,940	67%	400,825	21%	236,935	12%
East of England	Hertfordshire	1,060,000	576,000	54%	408,000	39%	76,000	7%
East Midlands	Northamptonshire	1,356,000	779,000	57%	220,000	16%	357,000	26%
West Midlands	Warwickshire	698,277	523,708	75%	-	-	174,569	25%
	Solihull metropolitan area	243,694	182,770	75%	-	-	60,924	25%
	Birmingham metropolitan area	1,112,000	511,520	46%	144,560	13%	455,920	41%
	Staffordshire	2,245,000	2,245,000	100%	-	-	-	0%
	<i>Total</i>	4,298,971	3,462,998	81%	144,560	3%	691,413	16%

### Greater London

- 3.1.38 Table 3, Table 4 and Table 5 present baseline C&I waste arisings and management methods for the Royal Borough of Kensington and Chelsea, City of Westminster and London boroughs of Camden, Brent, Hammersmith & Fulham, Ealing and Hillingdon
- 3.1.39 Total C&I waste arisings data relates to projections for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction)<sup>51</sup> and the year 2026 (future baseline for operation) as taken from information presented in Future Waste Arisings in London 2010-2031: A Summary Note<sup>52</sup>.
- 3.1.40 C&I waste management performance data (shown as recycling and composting and other diversion from landfill) for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) has been extrapolated linearly between the estimated C&I waste landfill diversion performance for Greater London in 2008 (52% recycling and composting, 6% incineration and 24% other treatment) and C&I recycling and composting targets for 2020 and beyond (70%) as reported by Making Sense of Business Waste: The Mayor's Business Waste Management Strategy for London<sup>53</sup>.
- 3.1.41 It has been assumed, as part of this extrapolation, that increases in recycling and composting result in a corresponding reduction in landfill (i.e. incineration and other treatment rates remain constant in the absence of any projected data for these waste management methods).

<sup>51</sup> Based on the sum of annual projections of C&I waste arisings for each year during the period 2017 to 2025.

<sup>52</sup> Greater London Authority (2010), *Future Waste Arisings in London 2010-2031: A Summary Note*, March 2010.

<sup>53</sup> Greater London Authority (2011), *Making Business Sense of Waste: The Mayor's Business Waste Management Strategy for London*, November 2011.



### *Buckinghamshire*

- 3.1.42 Total C&I waste arisings data for Buckinghamshire are projections for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) as described in Pre-Submission Advice on Minerals and Waste Core Strategy Preferred Options: Task B Verification of the Plan Provision<sup>54</sup>. The projection for the year 2026 (future baseline for operation) is also confirmed within Buckinghamshire County Council's Minerals and Waste Development Framework Annual Monitoring Report 2010/2011<sup>55</sup>.
- 3.1.43 Waste management performance for Buckinghamshire in the year 2013 (baseline) is based on information taken from Buckinghamshire County Council's Minerals and Waste Development Framework Annual Monitoring Report 2010/2011. The report provides an estimate of 51% recycling and composting of C&I waste in 2010/11, which has been assumed to apply through the baseline year of 2013 as a minimum performance level. The report does not provide any estimate of additional recovery of C&I waste during 2010/11.
- 3.1.44 Waste management performance for Buckinghamshire in the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) is based on future targets for C&I waste management as described in Buckinghamshire County Council's Minerals and Waste Development Framework Annual Monitoring Report 2010/2011. This includes a recycling and composting target of 65% by 2025 and an additional recovery target of 19% by 2025, providing an overall landfill diversion target of 84% by 2025.
- 3.1.45 For the period 2017 to 2025 (future baseline for worker accommodation site waste during construction), waste management performance targets for each year have been extrapolated using the published waste management performance for C&I waste in 2010/11 and C&I waste management performance targets for 2025.
- 3.1.46 For the year 2026 (future baseline for operation), it has been assumed that the waste management performance targets for 2025 will apply through to the future baseline year of 2026 in the absence of any target-specific data for subsequent years.

### *Oxfordshire*

- 3.1.47 Total C&I waste arisings for Oxfordshire are projections for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) based on the medium growth scenario set out in the Oxfordshire Minerals and Waste Development Framework: Waste Needs Assessment<sup>56</sup>. Analysis undertaken by Oxfordshire County Council considers the medium-growth scenario of 0.63% per annum to be realistic given a projected upturn in the economy and expected reductions in local industrial waste outputs.
- 3.1.48 Oxfordshire County Council's projections are based on 2010 data (566,800 tonnes) that provides a projection of approximately 577,580 tonnes for the year 2013 (baseline), a total

<sup>54</sup> Jacobs (2009), *Buckinghamshire County Council - Pre-Submission Advice on Minerals and Waste Core Strategy Preferred Options: Task B Verification of the Plan Provision (Overall Report, Final November 2009)*. Buckinghamshire County Council.

<sup>55</sup> Buckinghamshire County Council (2011), *Minerals and Waste Development Framework Annual Monitoring Report 2010/11*.

<sup>56</sup> Oxfordshire County Council (2012), *Oxfordshire Minerals and Waste Development Framework: Waste Needs Assessment, May 2012*.

of approximately 5,466,710 tonnes for the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and approximately 626,700 tonnes for the year 2026 (future baseline for operation).

- 3.1.49 Waste management performance for Oxfordshire in the year 2013 (baseline) is based on a recycling and composting rate of 56%, an additional recovery rate of 9% and a landfill rate of 35%. These rates have been extrapolated using Oxfordshire County Council's waste management targets of:
- 50% recycling and composting and 50% landfill for the year 2010; and
  - 60% recycling and composting, 15% recovery and 25% landfill for the year 2015.
- 3.1.50 Waste management performance for each year within the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) has been extrapolated using Oxfordshire County Council's published waste management targets of:
- 60% recycling and composting, 15% recovery and 25% landfill for the year 2015;
  - 65% recycling and composting, 25% recovery and 10% landfill for the year 2020; and
  - 70% recycling and composting, 25% recovery and 5% landfill for the year 2025.
- 3.1.51 Waste management performance for Oxfordshire in the year 2026 (future baseline for operation) is based on Oxfordshire County Council's waste management targets of 70% recycling and composting, 25% recovery and 5% landfill for the years 2025 and 2030. It has been assumed that these targets will apply within the intervening period.

### *Hertfordshire*

- 3.1.52 Total C&I waste arisings data for Hertfordshire are projections for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction)<sup>57</sup> and the year 2026 (future baseline for operation) as described in Hertfordshire's Establishment of Waste Forecasts and Targets at 2026<sup>58</sup>.
- 3.1.53 The quantities of C&I waste projected by Hertfordshire County Council to be diverted from landfill via recycling, composting and recovery in the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) have been used to inform C&I waste management performance.

### *Northamptonshire*

- 3.1.54 Total C&I waste arisings for Northamptonshire of approximately 1,162,800 tonnes for the year 2013 (baseline) are based on information taken from the Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document, Adopted May 2010<sup>59</sup>. The figure has been calculated as a linear extrapolation between

<sup>57</sup> Based on the sum of annual projections of C&I waste arisings for each year during the period 2017 to 2025.

<sup>58</sup> SLR Global Environmental Solutions (2010), *Hertfordshire's Establishment of Waste Forecasts and Targets at 2026, October 2010 (Rev 1)*. Hertfordshire County Council.

<sup>59</sup> Northamptonshire County Council (2010), *Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document*.

estimated C&I waste arisings for 2010/11 (1,113,000 tonnes) and projected C&I waste arisings for 2015/16 (1,196,000 tonnes).

- 3.1.55 Waste management performance for Northamptonshire in the year 2013 (baseline) is based on an extrapolated projection for the total quantity of C&I waste to be recycled and treated by biological processes such as composting and anaerobic digestion. This figure of approximately 628,400 tonnes is equivalent to 54% of total C&I waste arisings. An additional quantity of approximately 177,400 tonnes is projected to be recovered by advanced treatment processes equivalent to a further 15% of total waste arisings.
- 3.1.56 Total C&I waste arisings for Northamptonshire of approximately 11,632,800 tonnes for the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) are based on the sum of annual projections for each year within this period. Annual projections have been extrapolated using the estimated C&I waste arisings for 2015/16 (1,196,000 tonnes), 2020/21 (1,277,000 tonnes) and 2025/26 (1,356,000 tonnes) as reported by the Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document, Adopted May 2010.
- 3.1.57 Waste management performance for each year within the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) has been extrapolated based on projected waste management performance information published by Northamptonshire County Council for the years 2015/16, 2020/21 and 2025/26.
- 3.1.58 Total C&I waste arisings for Northamptonshire of approximately 1,356,000 tonnes for the year 2026 (future baseline for operation) is a projection for the year 2025/26 taken from the Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document, Adopted May 2010. Since 2025/26 is the latest year for which projections have been made by Northamptonshire County Council, it has been assumed that this level of C&I waste arisings will continue through to the year 2026/27 as per the annual reporting period used.
- 3.1.59 Waste management performance for Northamptonshire in the year 2026 (future baseline for operation) is based on Northamptonshire County Council's projection for the total quantity of C&I waste to be recycled and treated by biological processes such as composting and anaerobic digestion in 2025/26<sup>60</sup>. This figure of approximately 779,000 tonnes is equivalent to 57% of total C&I waste arisings. An additional quantity of approximately 220,000 tonnes is projected to be recovered by advanced treatment processes equivalent to a further 16% of total waste arisings.

### *Warwickshire*

- 3.1.60 Total C&I waste arisings for Warwickshire of approximately 576,636 tonnes for the year 2013 (baseline), approximately 5,828,521 tonnes for the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and approximately 698,277 tonnes for the year 2026 (future baseline for operation) are based on information taken from Waste Core Strategy Adopted Version July 2013<sup>61</sup>. These figures have been extrapolated from Warwickshire County Council's projections for the years 2009/10

<sup>60</sup> Assumed to apply through to 2026/27 as per the annual reporting period used.

<sup>61</sup> Warwickshire County Council (2013), *Waste Core Strategy Adopted Version July 2013*.

(546,367 tonnes), 2014/15 (584,323 tonnes), 2019/20 (627,477 tonnes), 2024/25 (676,540 tonnes) and 2027/28 (709,146 tonnes).

- 3.1.61 Information from the Waste Core Strategy Adopted Version July 2013 provides more recent data than the West Midlands Landfill Capacity Study 2009 Update<sup>62</sup> and hence has been used to inform C&I waste arisings for Warwickshire for this assessment.
- 3.1.62 Waste management performance targets for the year 2013 (baseline), for each year within the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) have been extrapolated based on Warwickshire County Council's minimum landfill diversion targets of 65% for 2009/10, 70% for 2014/15 and 75% for 2019/20, 2024/25 and 2027/28 as reported by the Waste Core Strategy Adopted Version July 2013.

#### *Solihull metropolitan area*

- 3.1.63 Total C&I waste arisings for the Solihull metropolitan area are projections for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) taken from the West Midlands Landfill Capacity Study 2009 Update. This has been used by Solihull Metropolitan Borough Council as part of its Local Development Framework Evidence Base<sup>63</sup>.
- 3.1.64 The projections used are taken from the Scenario 1 dataset following the approach used in this assessment to derive baseline and future baseline CDEW arisings for the Solihull metropolitan area. The Scenario 1 dataset figure of approximately 158,267 tonnes for the year 2013 (baseline) is also consistent with the approximate annual C&I waste arisings figure of 160,000 tonnes reported by Solihull Metropolitan Borough Council<sup>64</sup>.
- 3.1.65 One Planet - Our Future: Waste Management Strategy for Solihull, 2010-2020 is focused primarily on municipal solid waste management and contains little information with respect to management of C&I waste. Waste management performance for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation), therefore, has been assumed as for the neighbouring county of Warwickshire following the approach adopted to estimate CDEW waste management performance.

#### *Birmingham metropolitan area*

- 3.1.66 Total C&I waste arisings for the Birmingham metropolitan area are projections for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) based on latest available information taken from the Birmingham Waste Capacity Study: Final Report<sup>65</sup>.

<sup>62</sup> Scott Wilson (2009), *West Midlands Landfill Capacity Study Update 2009, Study Report June 2009*. West Midlands Regional Assembly.

<sup>63</sup> Solihull Metropolitan Borough Council; *The LDF Evidence Base*; <http://www.solihull.gov.uk/ldf/15498.htm>; Accessed 12 September 2013.

<sup>64</sup> Solihull Metropolitan Borough Council (2010), *One Planet - Our Future: Waste Management Strategy for Solihull 2010-2020*.

<sup>65</sup> Enviro Consulting Limited (2010), *Birmingham Waste Capacity Study: Final Report, February 2010*. Birmingham City Council.

- 3.1.67 The projections used - approximately 973,460 tonnes for the year 2013 (baseline), approximately 9,738,750 tonnes in total for the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and approximately 1,112,000 tonnes for the year 2026 (future baseline for operation) - are based on the Scenario 2 dataset, which is based on more optimistic employment forecasts used to inform the former Regional Spatial Strategy for the West Midlands. These projections are more broadly consistent with the lower C&I waste projections (Scenarios 1, 2 and 3) reported by the West Midlands Landfill Capacity Study 2009 Update and the ADAS Study into Commercial and Industrial Waste Arisings<sup>66</sup>.
- 3.1.68 Due to limited availability of information for the year 2013 (baseline), waste management performance has been assumed as for Warwickshire following the approach used to inform this for the Solihull metropolitan area.
- 3.1.69 Waste management performance for the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) has been extrapolated using information from the Birmingham Waste Capacity Study: Final Report for the years 2014/15, 2019/20 and 2025/26.

### Staffordshire

- 3.1.70 Total C&I waste arisings for Staffordshire for the year 2013 (baseline), the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) and the year 2026 (future baseline for operation) are based on information taken from the Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026 - Appendix 6: Waste Data Tables, Adopted March 2013<sup>67</sup>.
- 3.1.71 The annual projection (approximately 1,660,200 tonnes) for the year 2013 (baseline) has been extrapolated between estimated C&I waste arisings reported for 2010/11 (1,518,000 tonnes) and 2015/16 (1,755,000 tonnes). An overall landfill diversion rate of 88% has been applied equivalent to approximately 1,455,750 tonnes, based on extrapolation between Staffordshire County Council's reported minimum landfill diversion rates of 75% for 2010/11 and 95% for 2015/16.
- 3.1.72 Total C&I waste arisings for the period 2017 to 2025 (future baseline for worker accommodation site waste during construction) are based on annual projections for each year within that period. These projections have been extrapolated using reported C&I waste arisings for the years 2015/16 (1,755,000 tonnes), 2020/21 (2,245,000 tonnes) and 2025/26 (2,245,000 tonnes). Waste management performance for each year has been extrapolated in the same way based on published minimum landfill diversion targets of 95% for 2025/16 and 100% for both 2020/21 and 2025/26.
- 3.1.73 The annual projection (approximately 2,245,000 tonnes) for the year 2026 (future baseline for operation) has been taken directly from the Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026 - Appendix 6: Waste Data Tables, Adopted March 2013 for the year 2025/26 (assumed to apply to the 2026/27 reporting year in the absence of

<sup>66</sup> ADAS (2009), *Study into Commercial and Industrial Waste Arisings*, April 2009. East of England Regional Assembly.

<sup>67</sup> Staffordshire County Council (2013), *Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026 - Appendix 6: Waste Data Tables*, Adopted March 2013.

published, projected arisings data beyond 2025/26). Staffordshire County Council assumes a minimum 100% landfill diversion by 2026.

## 3.2 Baseline waste infrastructure capacity

### Greater London

3.2.1 Table 6 provides baseline waste infrastructure capacity data for Greater London and the sub-regional areas through which the Proposed Scheme will pass. These sub-regional areas are referred to as:

- North West London Waste Authority (in relation to London Borough of Camden);
- Central London (in relation to the City of Westminster);
- Western Riverside (in relation to the London Borough of Hammersmith & Fulham and the Royal Borough of Kensington and Chelsea); and
- West London Waste Authority (in relation to the London boroughs of Brent, Ealing and Hillingdon).

Table 6: Baseline waste infrastructure capacity by sub-regional area and region in 2011 (Greater London)<sup>68</sup>

Facility type	North London Waste Authority	Central London	Western Riverside	West London Waste Authority	Sub-regional total	Greater London
	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)
Inert waste landfill	0	0	0	750,000	750,000	1,123,500
Non-hazardous waste landfill	0	0	0	62,250	62,250	7,283,250
Hazardous waste landfill	0	0	0	0	0	325,500
<i>Total landfill</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>812,250</i>	<i>812,250</i>	<i>8,732,250</i>
Municipal solid waste, C&I waste incineration	675,000	0	0	0	675,000	1,863,000
Other incineration	75,000	0	0	8,000	83,000	227,000
<i>Total incineration</i>	<i>750,000</i>	<i>0</i>	<i>0</i>	<i>8,000</i>	<i>758,000</i>	<i>2,090,000</i>
Waste transfer	1,445,000	202,000	550,000	1,663,000	3,860,000	6,762,000
Waste treatment	542,000	0	488,000	350,000	1,380,000	3,171,000
Metal recycling	296,000	0	254,000	93,000	643,000	1,229,000
<i>Total treatment and waste transfer</i>	<i>2,283,000</i>	<i>202,000</i>	<i>1,292,000</i>	<i>2,106,000</i>	<i>5,883,000</i>	<i>11,162,000</i>
Total	3,033,000	202,000	1,292,000	2,926,250	7,453,250	21,984,250

<sup>68</sup> Environment Agency; *Waste Data Table 2011 - London Waste Inputs and Capacity 2011*; <http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.

## South East

3.2.2 Table 7 provides baseline waste infrastructure capacity data for Buckinghamshire, Oxfordshire and overall for the South East region.

Table 7: Baseline waste infrastructure capacity by county and region in 2011 (South East)<sup>69</sup>

Facility type	Buckinghamshire	Oxfordshire	Sub-regional total	South East
	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)
Inert waste landfill	756,000	6,204,000	6,960,000	41,832,000
Non-hazardous waste landfill	33,557,730	8,352,290	41,910,020	55,520,360
Hazardous waste landfill	0	0	0	1,879,500
<i>Total landfill</i>	<i>34,313,730</i>	<i>14,556,290</i>	<i>48,870,020</i>	<i>99,231,860</i>
Municipal solid waste, C&I waste incineration	0	0	0	1,762,000
Other incineration	0	0	0	656,000
<i>Total incineration</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2,418,000</i>
Waste transfer	352,000	386,000	738,000	5,441,000
Waste treatment	296,000	678,000	974,000	6,004,000
Metal recycling	157,000	58,000	215,000	2,173,000
<i>Total treatment and waste transfer</i>	<i>805,000</i>	<i>1,122,000</i>	<i>1,927,000</i>	<i>13,618,000</i>
Total	35,118,730	15,678,290	50,797,020	115,267,860

<sup>69</sup> Environment Agency; *Waste Data Table 2011 - South East Waste Inputs and Capacity 2011*; <http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.



## East of England

3.2.3 Table 8 provides baseline waste infrastructure capacity data for Hertfordshire and overall for the East of England region. The sub-regional data shown relates solely to Hertfordshire but is duplicated within Table 8 for ease of comparison with other data tables.

Table 8: Baseline waste infrastructure capacity by county and region in 2011 (East of England)<sup>70</sup>

Facility type	Hertfordshire	Sub-regional total	East of England
	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)
Inert waste landfill	2,086,500	2,086,500	11,505,000
Non-hazardous waste landfill	3,183,880	3,183,880	42,457,820
Hazardous waste landfill	0	0	0
<i>Total landfill</i>	<i>5,270,380</i>	<i>5,270,380</i>	<i>53,962,820</i>
Municipal solid waste, C&I waste incineration	0	0	0
Other incineration	0	0	901,000
<i>Total incineration</i>	<i>0</i>	<i>0</i>	<i>901,000</i>
Waste transfer	742,000	742,000	4,414,000
Waste treatment	470,000	470,000	6,920,000
Metal recycling	399,000	399,000	2,415,000
<i>Total treatment and waste transfer</i>	<i>1,611,000</i>	<i>1,611,000</i>	<i>13,749,000</i>
Total	6,881,380	6,881,380	68,612,820

<sup>70</sup> Environment Agency; *Waste Data Table 2011 - East of England Waste Inputs and Capacity 2011*; <http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.

## East Midlands

3.2.4 Table 9 provides baseline waste infrastructure capacity data for Northamptonshire and overall for the East Midlands region. The sub-regional data shown relates solely to Northamptonshire but is duplicated within Table 9 for ease of comparison with other data tables.

Table 9: Baseline waste infrastructure capacity by county and region in 2011 (East Midlands)<sup>71</sup>

Facility type	Northamptonshire	Sub-regional total	East Midlands
	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)
Inert waste landfill	951,000	951,000	34,131,000
Non-hazardous waste landfill	4,037,950	4,037,950	34,766,210
Hazardous waste landfill	351,000	351,000	361,500
<i>Total landfill</i>	<i>5,339,950</i>	<i>5,339,950</i>	<i>69,258,710</i>
Municipal solid waste, C&I waste incineration	0	0	260,000
Other incineration	0	0	694,000
<i>Total incineration</i>	<i>0</i>	<i>0</i>	<i>954,000</i>
Waste transfer	757,000	757,000	3,144,000
Waste treatment	759,000	759,000	3,387,000
Metal recycling	56,000	56,000	1,101,000
<i>Total treatment and waste transfer</i>	<i>1,572,000</i>	<i>1,572,000</i>	<i>7,632,000</i>
Total	6,911,950	6,911,950	77,844,710

<sup>71</sup> Environment Agency; *Waste Data Table 2011 - East Midlands Waste Inputs and Capacity 2011*; <http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.

## West Midlands

3.2.5 Table 10 provides baseline waste infrastructure capacity data for Warwickshire, the West Midlands Metropolitan District (including the Solihull and Birmingham metropolitan areas), Staffordshire and overall for the West Midlands region.

Table 10: Baseline waste infrastructure capacity county and region in 2011 (West Midlands)<sup>72</sup>

Facility type	Warwickshire	West Midlands and Metropolitan District	Staffordshire	Sub-regional total	West Midlands
	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)	Capacity (tonnes)
Inert waste landfill	1,309,500	4,147,500	3,916,500	9,373,500	15,646,500
Non-hazardous waste landfill	9,604,760	13,708,280	10,218,960	33,532,000	42,076,850
Hazardous waste landfill	510,000	0	195,000	705,000	705,000
<i>Total landfill</i>	<i>11,424,260</i>	<i>17,855,780</i>	<i>14,330,460</i>	<i>43,610,500</i>	<i>58,428,350</i>
Municipal solid waste, C&I waste incineration	0	930,000	210,000	1,140,000	1,140,000
Other incineration	289,000	10,000	120,000	419,000	429,000
<i>Total incineration</i>	<i>289,000</i>	<i>940,000</i>	<i>330,000</i>	<i>1,559,000</i>	<i>1,569,000</i>
Waste transfer	220,000	1,950,000	565,000	2,735,000	3,736,000
Waste treatment	359,000	840,000	718,000	1,917,000	2,481,000
Metal recycling	165,000	1,907,000	71,000	2,143,000	2,395,000
<i>Total treatment and waste transfer</i>	<i>744,000</i>	<i>4,697,000</i>	<i>1,354,000</i>	<i>6,795,000</i>	<i>8,612,000</i>
Total	12,457,260	23,492,780	16,014,460	51,964,500	68,609,350

3.2.6 In relation to the information presented in Table 6 through to Table 10, landfill capacity information is provided by the Environment Agency as cubic metres but has been converted to tonnes using the following volume to mass density conversion factors:

- 1.5 tonnes per cubic metre for hazardous waste landfill;
- 0.83 tonnes per cubic metre for non-hazardous waste landfill; and
- 1.5 tonnes per cubic metre for inert waste landfill<sup>73</sup>.

<sup>72</sup> Environment Agency; *Waste Data Table 2011 - West Midlands Waste Inputs and Capacity 2011*; <http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.

<sup>73</sup> As used to inform significance criteria for this assessment.

- 3.2.7 In relation to the information presented in Table 6 through to Table 10, the capacity of waste transfer, waste treatment and metal recycling facilities is based on the annual input rates provided by the Environment Agency as separate capacity information is not provided (i.e. capacity assumed to be at least equivalent to the input rates specified by the Environment Agency).

### 3.3 Future baseline waste infrastructure capacity

#### General

- 3.3.1 This section presents the source data that has been used to inform the future baseline with respect to the quantity of landfill capacity projected to be available during the period 2017 to 2025 and the year 2026.
- 3.3.2 Permitted capacity data published by the Environment Agency has been used to provide data for each class of landfill as defined by Council Directive 1999/31/EC (the 'Landfill Directive'), i.e. for inert, non-hazardous and hazardous waste landfills.
- 3.3.3 Projected landfill capacity is based on the average percentage change in permitted landfill capacity for the years 2004 to 2011 (for inert and non-hazardous waste landfill)<sup>74</sup> and for the years 2006 to 2011 (for hazardous waste landfill)<sup>75</sup> as reported by the Environment Agency<sup>76</sup>. The average percentage change has then been applied to the reported 2011 permitted landfill capacity and projected forward to 2026.
- 3.3.4 This method assumes that the average percentage change in permitted capacity for each class of landfill remains constant. Use of an average value taken from historical data also provides a reasonable allowance for potential future increases in permitted capacity for each class of landfill.
- 3.3.5 This approach is considered to provide a reasonable scenario with respect to future landfill capacity within the aggregated five regions and which takes into account future draw-down and increases in permitted capacity, as well as government policy measures to divert waste from landfill and the requirement for waste planning authorities to provide for future landfill capacity needs.

#### Inert waste landfill capacity

##### *Historic landfill capacity trend data*

- 3.3.6 Table 11 presents permitted inert waste landfill capacity data published by the Environment Agency for the period 2004 to 2011 (latest available published data).
- 3.3.7 Inert waste landfill capacity is shown in thousands of cubic metres as published by the Environment Agency. Data for 'national' inert waste landfill capacity relates to England only.

<sup>74</sup> Based on latest available historic datasets published by the Environment Agency.

<sup>75</sup> Due to changes in legislation concerning hazardous waste landfill in 2005, historic data for permitted hazardous landfill capacity pre-2006 has not been used (i.e. it is not comparable to that published since 2006).

<sup>76</sup> Environment Agency; *Waste Data and Information*; <http://www.environment-agency.gov.uk/research/library/data/34169.aspx>; Accessed 12 August 2013.

3.3.8 Also shown in Table 11 are the annual percentage change in inert waste landfill capacity and the average percentage change for the period 2004 to 2011.

Table 11: National and regional inert waste landfill capacity trends, 2004 to 2011 ('000 cubic metres)

Regional area		2004	2005	2006	2007	2008	2009	2010	2011	Average capacity change, 2004 to 2011
Greater London	Capacity ('000 m <sup>3</sup> )	1,986	1,322	1,125	403	471	289	1,109	749	-
	Capacity change (%)	-	-50%	-18%	-179%	14%	-63%	74%	-48%	-39%
South East	Capacity ('000 m <sup>3</sup> )	24,275	13,812	15,026	23,034	28,378	29,077	29,228	27,888	-
	Capacity change (%)	-	-76%	8%	35%	19%	2%	1%	-5%	-2%
East of England	Capacity ('000 m <sup>3</sup> )	5,586	5,542	9,954	10,879	10,342	8,204	7,155	7,670	-
	Capacity change (%)	-	-1%	44%	8%	-5%	-26%	-15%	7%	-2%
East Midlands	Capacity ('000 m <sup>3</sup> )	13,023	10,675	10,037	34,467	19,510	24,357	22,671	22,754	-
	Capacity change (%)	-	-22%	-6%	71%	-77%	20%	-7%	0%	-3%
West Midlands	Capacity ('000 m <sup>3</sup> )	15,219	15,064	13,756	11,673	11,241	12,888	11,550	10,431	-
	Capacity change (%)	-	-1%	-10%	-18%	-4%	13%	-12%	-11%	-6%
Total of five regions	Capacity ('000 m <sup>3</sup> )	60,089	46,413	49,899	80,455	69,942	74,814	71,712	69,492	-
	Capacity change (%)	-	-29%	7%	38%	-15%	7%	-4%	-3%	0%
England	Capacity ('000 m <sup>3</sup> )	96,772	79,445	95,730	119,512	109,069	123,700	117,828	121,316	-
	Capacity change (%)	-	-22%	17%	20%	-10%	12%	-5%	3%	2%

### Landfill capacity projections

- 3.3.9 Table 12 presents permitted inert waste landfill capacity projections to 2026 based on latest available published data for 2011.
- 3.3.10 Projections have been derived by applying the average capacity change 2004 to 2011 (shown in Table 11) to the published inert waste landfill capacity for 2011 and for each year beyond to 2026.
- 3.3.11 In Table 12, the published inert waste landfill capacity for 2011 has been converted to tonnes using an inert waste landfill density conversion factor of 1.5 tonnes per cubic metre.<sup>77</sup> The purpose of this is to provide comparable information for use in this assessment (i.e. landfill void space and quantity of waste requiring off-site disposal to landfill are both expressed in tonnes).
- 1.1.1 For ease of reference, inert waste landfill capacity projections are shown for:
- 2011 (latest available published data converted to tonnes);
  - 2015, 2020 and 2025 (five year intervals and end of construction in 2025);
  - 2017 (start of construction); and
  - 2026 (first year of operation).

Table 12: National and regional inert waste landfill capacity projections to 2026 (tonnes)

Regional area	2011	2015	2017	2020	2025	2026
Greater London	1,123,500	160,637	60,741	14,123	1,242	764
South East	41,832,584	38,145,518	36,425,702	33,990,266	30,287,651	29,597,008
East of England	11,505,551	12,372,686	12,830,462	13,549,077	14,837,320	15,109,309
East Midlands	34,130,500	30,160,600	28,352,323	25,841,138	22,140,290	21,466,322
West Midlands	15,646,724	12,234,270	10,818,210	8,995,419	6,614,008	6,219,470
<i>Total of five regions</i>	104,238,859	93,073,711	88,487,438	82,390,023	73,880,511	72,392,873
England	181,974,311	198,353,122	207,087,326	220,915,017	246,043,238	251,401,968

### Non-hazardous waste landfill capacity

#### Historic landfill capacity trend data

- 3.3.12 Table 13 presents permitted non-hazardous waste landfill capacity data published by the Environment Agency for the period 2004 to 2011 (latest available published data).
- 3.3.13 Non-hazardous waste landfill capacity is shown in thousands of cubic metres as published by the Environment Agency. Data for 'national' non-hazardous waste landfill capacity relates to England only.

<sup>77</sup> As used to inform significance criteria for this assessment set out in Section 16 and supporting annexes of the SMR Addendum (Volume 5: Appendix CT-001-00/2).

3.3.14 Also shown in Table 13 are the annual percentage change in non-hazardous waste landfill capacity and the average percentage change for the period 2004 to 2011.

Table 13: National and regional non-hazardous waste landfill capacity trends, 2004 to 2011 ('000 cubic metres)

Regional area		2004	2005	2006	2007	2008	2009	2010	2011	Average capacity change, 2004 to 2011
Greater London	Capacity ('000 m <sup>3</sup> )	11,627	9,896	8,580	8,258	5,525	4,152	7,994	8,775	-
	Capacity change (%)	-	-17%	-15%	-4%	-49%	-33%	48%	9%	-9%
South East	Capacity ('000 m <sup>3</sup> )	96,787	95,221	79,962	76,771	77,297	63,611	72,041	66,892	-
	Capacity change (%)	-	-2%	-19%	-4%	1%	-22%	12%	-8%	-6%
East of England	Capacity ('000 m <sup>3</sup> )	61,734	59,629	60,373	56,550	64,083	59,220	55,195	51,154	-
	Capacity change (%)	-	-4%	1%	-7%	12%	-8%	-7%	-8%	-3%
East Midlands	Capacity ('000 m <sup>3</sup> )	56,189	57,685	55,527	52,225	49,313	42,631	45,733	41,888	-
	Capacity change (%)	-	3%	-4%	-6%	-6%	-16%	7%	-9%	-5%
West Midlands	Capacity ('000 m <sup>3</sup> )	61,607	66,957	70,510	71,644	67,483	55,237	53,682	50,696	-
	Capacity change (%)	-	8%	5%	2%	-6%	-22%	-3%	-6%	-3%
Total of five regions	Capacity ('000 m <sup>3</sup> )	287,944	289,387	274,951	265,448	263,700	224,852	234,646	219,404	-
	Capacity change (%)	-	0%	-5%	-4%	-1%	-17%	4%	-7%	-4%
England	Capacity ('000 m <sup>3</sup> )	528,956	549,895	544,361	504,928	484,812	431,108	429,143	407,667	-
	Capacity change (%)	-	4%	-1%	-8%	-4%	-12%	0%	-5%	-4%

### Landfill capacity projections

3.3.15 Table 14 presents non-hazardous waste landfill capacity projections to 2026 based on latest available published data for 2011.

3.3.16 Projections have been derived by applying the average capacity change 2004 to 2011 (shown in Table 13) to the published non-hazardous waste landfill capacity for 2011 and for each year beyond to 2026.

3.3.17 In Table 14, the published non-hazardous waste landfill capacity for 2011 has been converted to tonnes using a non-hazardous waste landfill density conversion factor of 0.83 tonnes per cubic metre<sup>78</sup>. The purpose of this is to provide comparable information for use in this assessment (i.e. landfill void space and quantity of waste requiring off-site disposal to landfill are both expressed in tonnes).

3.3.18 For ease of reference, non-hazardous landfill capacity projections are shown for:

- 2011 (latest available published data converted to tonnes);
- 2015, 2020 and 2025 (five year intervals and end of construction in 2025);
- 2017 (start of construction); and
- 2026 (first year of operation).

Table 14: National and regional non-hazardous waste landfill capacity projections to 2026 (tonnes)

Regional area	2011	2015	2017	2020	2025	2026
Greater London	7,283,001	5,016,308	4,163,141	3,147,578	1,975,008	1,799,233
South East	55,520,094	43,422,498	38,401,404	31,937,107	23,489,638	22,089,836
East of England	42,457,587	37,652,197	35,457,477	32,402,916	27,885,464	27,060,550
East Midlands	34,767,108	28,903,194	26,353,268	22,943,910	18,213,316	17,391,352
West Midlands	42,077,810	42,077,810	42,077,810	42,077,810	42,077,810	42,077,810
<i>Total of five regions</i>	182,105,600	157,072,007	146,453,100	132,509,322	113,641,236	110,418,781
England	338,363,661	288,500,220	266,395,795	236,373,721	193,665,488	186,098,487

## Hazardous waste landfill capacity

### *Historic landfill capacity trend data*

3.3.19 Table 15 presents permitted hazardous waste landfill capacity data published by the Environment Agency for the period 2006 to 2011 (latest available published data).

3.3.20 Hazardous waste landfill capacity is shown in thousands of cubic metres as published by the Environment Agency. Data for 'national' hazardous waste landfill capacity relates to England only.

3.3.21 Also shown in Table 15 are the annual percentage change in hazardous waste landfill capacity and the average percentage change for the period 2006 to 2011.

<sup>78</sup> As used to inform significance criteria for this assessment set out in Section 16 and supporting annexes of the SMR Addendum (Volume 5: Appendix CT-001-00/2).



Table 15: National and regional hazardous waste landfill capacity trends, 2006 to 2011 ('000 cubic metres)

Regional area		2006	2007	2008	2009	2010	2011	Average capacity change, 2006 to 2011
Greater London	Capacity ('000 m <sup>3</sup> )	350	325	290	242	227	217	-
	Capacity change (%)	-	-8%	-12%	-20%	-7%	-5%	-10%
South East	Capacity ('000 m <sup>3</sup> )	1,018	712	632	561	774	1,253	-
	Capacity change (%)	-	-43%	-13%	-13%	28%	38%	-1%
East of England	Capacity ('000 m <sup>3</sup> )	0	0	0	0		0	-
	Capacity change (%)	-	0%	0%	0%	0%	0%	0%
East Midlands	Capacity ('000 m <sup>3</sup> )	801	702	693	693	494	241	-
	Capacity change (%)	-	-14%	-1%	0%	-40%	-105%	-32%
West Midlands	Capacity ('000 m <sup>3</sup> )	337	327	130	470	470	470	-
	Capacity change (%)	-	-3%	-152%	72%	0%	0%	-16%
Total of five regions	Capacity ('000 m <sup>3</sup> )	2,506	2,065	1,745	1,966	1,965	2,179	-
	Capacity change (%)	-	-21%	-18%	11%	0%	10%	-4%
England	Capacity ('000 m <sup>3</sup> )	15,656	18,752	18,929	18,128	17,398	17,823	-
	Capacity change (%)	-	17%	1%	-4%	-4%	2%	-2%

### Landfill capacity projections

- 3.3.22 Table 16 presents hazardous waste landfill capacity projections to 2026 based on latest available published data for 2011.
- 3.3.23 Projections have been derived by applying the average capacity change 2006 to 2011 (shown in Table 15) to the published hazardous waste landfill capacity for 2011 and for each year beyond to 2026.

3.3.24 In Table 16, the published hazardous waste landfill capacity for 2011 has been converted to tonnes using a hazardous waste landfill density conversion factor of 1.5 tonnes per cubic metre<sup>79</sup>. The purpose of this is to provide comparable information for use in this assessment (i.e. landfill void space and quantity of waste requiring off-site disposal to landfill are both expressed in tonnes).

3.3.25 For ease of reference, hazardous waste landfill capacity projections are shown for:

- 2011 (latest available published data converted to tonnes);
- 2015, 2020 and 2025 (five year intervals and end of construction in 2025);
- 2017 (start of construction); and
- 2026 (first year of operation).

Table 16: National and regional hazardous waste landfill capacity projections to 2026 (tonnes)

Regional area	2011	2015	2017	2020	2025	2026
Greater London	325,442	211,949	171,045	124,003	72,549	65,173
South East	1,878,825	1,840,575	1,821,744	1,793,857	1,748,324	1,739,357
East of England	0	0	0	0	0	0
East Midlands	360,966	76,249	35,045	10,919	1,564	1,060
West Midlands	705,000	343,518	239,789	139,846	56,931	47,565
<i>Total of five regions</i>	3,270,233	2,472,291	2,267,623	2,068,625	1,879,368	1,853,155
England	26,733,849	29,213,856	30,538,843	32,639,847	36,467,615	37,285,434

<sup>79</sup> As used to inform significance criteria for this assessment set out in Section 16 and supporting annexes of the SMR Addendum (Volume 5: Appendix CT-001-00/2).

## 4 Schedule of developments

- 4.1.1 A qualitative assessment has been undertaken to establish the cumulative effects associated with the off-site disposal to landfill of solid waste that will be generated by construction and operation of the Proposed Scheme and other developments along its route.
- 4.1.2 The cumulative effects assessment takes into account:
- developments that are likely to be under construction (in whole or in part for phased development) at the same time as the Proposed Scheme (2017 to 2025) and will thus have a simultaneous requirement for landfill of any CDEW generated during this timeframe; and
  - developments that are assumed to become operational at the same time as the Proposed Scheme (i.e. in the year 2026) and will thus have a simultaneous requirement for landfill of any operational waste generated during that year.
- 4.1.3 Table 17 provides a schedule of developments that have been included in the cumulative effects assessment in accordance with the aforementioned criteria.
- 4.1.4 The schemes presented in Table 17 comprise of a variety of schemes including residential, mixed use, industrial and commercial development.
- 4.1.5 Construction and operation of these developments will produce CDEW, C&I waste and municipal solid waste, a proportion of which will require disposal to landfill.
- 4.1.6 No developments have been identified within either the East of England or East Midlands region for consideration within the cumulative effects assessment.

Table 17: Schedule of developments included in cumulative assessment

Regional area	Type of development	Location	Local planning authority and/or reference
Greater London	Mixed use	York Way / Randell's Road, Islington, London	London Borough of Islington/ Saved Policy AO36 Unitary Development Plan 2002
	Mixed use	King's Cross Opportunity Area	London Borough of Islington/ Po41261
	Residential redevelopment	Abbey Co-op housing sites and Community Centre and Belsize Road car-park, Abbey Road, London	London Borough of Camden/ 2012/0096/P
	Industrial development	Atlas Road, Ealing	London Borough of Ealing/ 75852600
	Mixed use	Southern Gateway Allocation	London Borough of Ealing/17 (UDP)
	Mixed use	Canterbury Works	London Borough of Brent/ SK4 (Site Specific Allocations 2011)
	Residential development	1-3, Canterbury House, Canterbury Road, London	London Borough of Brent/ 11/0179 and 07/2234
	Residential development	British Legion Hall, 1 Albert Road and	London Borough of Brent/SK2 (Site

Regional area	Type of development	Location	Local planning authority and/or reference
		5 Albert Road, London	Specific Allocations 2011)
	Mixed use	Kensal Town	Royal Borough of Kensington and Chelsea/ 94343849
	Transport safeguarding	North Pole Depot	London Borough of Hammersmith and Fulham/103971867
	Mixed use	Old Oak Common Sidings	London Borough of Hammersmith and Fulham/103971788
	Train maintenance depot	North Pole International, Mitre Way, London,	London Borough of Hammersmith and Fulham/ 2011/03005/FUL
	Mixed use	First Central, Coronation Road/Lakeside Avenue, Park Royal, London	London Borough of Brent/10/3221
	Commercial	Former Guinness Brewery Site, Rainsford Road, Park Royal, London	London Borough of Brent/10/3310
South East	Potential strategic waste facility	Creighton Rd, Woodham, Aylesbury, Buckinghamshire	Buckinghamshire CC/CS14
	Mixed use including housing	Former Calvert Brickworks, Brackley Lane, Charndon, Buckinghamshire	Aylesbury Vale DC/75760968
East of England	N/A	N/A	N/A
East Midlands	N/A	N/A	N/A
West Midlands	Mixed commercial use	Stoneleigh Park, Stoneleigh Road, Stoneleigh, Kenilworth CV8 2LZ	Warwickshire CC/W/12/0766
	Erection of care home	Former Multilines, The Trading Estate, Common Lane, Kenilworth, CV8 2EL	Warwickshire CC/W/11/1394
	Development of academic facilities	University of Warwick, Gibbet Hill Road, Coventry, CV4 7AL	Warwickshire CC/ W/07/1120
	Principal Employment Site	Site 6, University of Warwick Science Park	City of Coventry/ Unitary Development Plan 2001: Policy E6 - Principal Employment Sites
	Residential development	Father Hudson Society, Coventry Road, Coleshill, Warwickshire	North Warwickshire DC/ Local Plan 2006: Policy HSG1 Housing Land Allocations and Proposals
	General industrial/storage and distribution	Unit 1a, Plot 3A Edison Road, Hams Hall Distribution Park, Coleshill, Warwickshire B46 1AN	North Warwickshire DC/PAP/2011/0295
	Redevelopment of military barracks	Regimental Headquarters (Mercian Regiment), Whittington Barracks, Tamworth Road, Whittington Heath, Lichfield Staffordshire WS14 9PY	Staffordshire CC/ 11/00425/FULM
	Land For Employment Development	Burton Old Road, Lichfield,	Staffordshire CC/ 11/00928/OUTM

Regional area	Type of development	Location	Local planning authority and/or reference
		Staffordshire	
	Industrial and warehouse development	Land At Easthill Farm Wood End Lane, Fradley, Lichfield Staffordshire WS13 8NF	Staffordshire CC/11/00272/OUTM
	Commercial mixed use	Land At Fradley Park Halifax Avenue / Wood End Lane, Fradley, Lichfield, Staffordshire	Staffordshire CC/10/01403/REMM
	Advanced manufacturing and technology facility	Land south of Solihull Parkway and north of Blackfirs Lane, Birmingham Business Park, Solihull B37 7YN	Solihull MBC/2012/471
	Mixed use leisure and entertainment	NEC Site, North and East of Pendigo Way, Solihull	Solihull MBC/2011/1159
	Residential development	Elmdon Road, Marston Green, Birmingham	Solihull MBC/ UPD policy H2/1(d)
	Mixed use redevelopment	Land between Craig Croft and Hedingham Grove, Birmingham B37 7TR	Solihull MBC/ 2012/507
	Residential development	Solihull College, (Chelmsley Campus), Solihull	Solihull MBC/ UDP policy H1/1.17
	Mixed use	Land bounded by Gospel Street, Cardigan Street, Curzon Street and Digbeth Branch Canal, Eastside, Birmingham B4 7RJ	Birmingham CC/ 2012/04578/PA
	Mixed use	Bordesley Street, Typhoo Wharf, Digbeth, Birmingham	Birmingham CC/ 2012/03227/PA
	Masshouse Plot 7 (mixed use)	Land bounded by Dale End, Chapel Street, Moor Street Queensway and Priory Queensway, Birmingham	Birmingham CC/ 2007/01816/PA

## 5 References

- ADAS (2009), *Study into Commercial and Industrial Waste Arisings, April 2009*. East of England Regional Assembly.
- Birmingham City Council (2012), *Birmingham Development Plan: Planning for Birmingham's Growing Population, Options Consultation, October 2012*.
- Birmingham City Council (2005), *The Birmingham Plan: Birmingham Unitary Development Plan 2005*.
- Brent Council (2010), *London Borough of Brent Core Strategy, Adopted 12 July 2010*.
- Brent Council (2004), *Unitary Development Plan - 2004*.
- Buckinghamshire County Council (2012), *Buckinghamshire Minerals and Waste Core Strategy Development Plan Document. Adopted November 2012*.
- Buckinghamshire County Council (2011), *Minerals and Waste Development Framework Annual Monitoring Report 2010/11*.
- Camden Council (2010), *Core Strategy*.
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste and Repealing Certain Directives*. Strasbourg, European Parliament and European Council.
- Ealing Council (2012), *Adopted Development (or Core) Strategy: Rough Edit Version, April 3rd 2012*.
- Ealing Council; *The West London Plan*;  
[http://www.ealing.gov.uk/info/200921/local\\_plans/618/west\\_london\\_waste\\_plan](http://www.ealing.gov.uk/info/200921/local_plans/618/west_london_waste_plan); Accessed 19 September 2013.
- Environment Agency; *Waste Data and Information*; <http://www.environment-agency.gov.uk/research/library/data/34169.aspx>; Accessed 12 August 2013.
- Environment Agency; *Waste Data Table 2011 - East Midlands Waste Inputs and Capacity 2011*;  
<http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.
- Environment Agency; *Waste Data Table 2011 - East of England Waste Inputs and Capacity 2011*;  
<http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.
- Environment Agency; *Waste Data Table 2011 - London Waste Inputs and Capacity 2011*;  
<http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.
- Environment Agency; *Waste Data Table 2011 - South East Waste Inputs and Capacity 2011*;  
<http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.
- Environment Agency; *Waste Data Table 2011 - West Midlands Waste Inputs and Capacity 2011*;  
<http://www.environment-agency.gov.uk/research/library/data/142773.aspx>; Accessed 12 August 2013.
- Enviros Consulting Limited (2010), *Birmingham Waste Capacity Study: Final Report, February 2010*. Birmingham City Council.
- Greater London Authority (2010), *Future Waste Arisings in London 2010-2031: A Summary Note, March 2010*.

Greater London Authority (2011), *Making Business Sense of Waste: The Mayor's Business Waste Strategy for London*, November 2011.

Hammersmith and Fulham Council (2011), *Hammersmith and Fulham Core Strategy: Local Development Strategy*, October 2011.

Hertfordshire County Council (2012), *Waste Core Strategy and Development Management Policies Development Plan Document 2011 to 2026*.

Hillingdon Council (2012), *A Vision for 2026 - Local Plan: Part 1, Strategic Policies* (Adopted November 2012).

Jacobs (2009), *Buckinghamshire County Council - Pre-Submission Advice on Minerals and Waste Core Strategy Preferred Options: Task B Verification of the Plan Provision (Overall Report, Final November 2009)*. Buckinghamshire County Council.

Kensington and Chelsea Borough Council (2010), *Core Strategy for the Royal Borough of Kensington and Chelsea*, Adopted 8 December 2010.

Kensington and Chelsea Borough Council (2002), *Unitary Development Plan, Adopted 25 May 2002: Extant Policies*.

North London Waste Plan; *Report of North London Waste Plan Launch Consultation*; [http://www.nlwp.net/downloads/2013\\_launch/nlwp\\_launch\\_consultation\\_reportpdf](http://www.nlwp.net/downloads/2013_launch/nlwp_launch_consultation_reportpdf); Accessed 19 September 2013.

Northamptonshire County Council (2010), *Northamptonshire Minerals and Waste Development Framework: Core Strategy Development Plan Document*.

Northamptonshire County Council (2011), *Northamptonshire Minerals and Waste Development Framework: Development and Implementation Principles Supplementary Planning Document*, Adopted September 2011.

Oxfordshire County Council (2012), *Oxfordshire Minerals and Waste Development Framework: Waste Needs Assessment*, May 2012.

Oxfordshire County Council (1996), *Oxfordshire Minerals and Waste Local Plan 1996*.

Oxfordshire County Council (2012), *Oxfordshire Minerals and Waste Plan: Minerals and Waste Core Strategy, Proposed Submission Document*, May 2012.

Scott Wilson (2009), *West Midlands Landfill Capacity Study Update 2009, Study Report June 2009*. West Midlands Regional Assembly.

SKM Enviros (2011), *Birmingham Total Waste Strategy: Final Report, 4 January 2011*. Birmingham City Council, Birmingham.

SLR Global Environmental Solutions (2010), *Hertfordshire's Establishment of Waste Forecasts and Targets at 2026, October 2010 (Rev 1)*. Hertfordshire County Council.

Solihull Metropolitan Borough Council (2010), *One Planet - Our Future: Waste Management Strategy for Solihull 2010-2020*.

Solihull Metropolitan Borough Council (2006), *Solihull Unitary Development Plan 2006: Written Statement*.

Solihull Metropolitan Borough Council; *The LDF Evidence Base*;  
<http://www.solihull.gov.uk/ldf/15498.htm>; Accessed 12 September 2013.

Solihull Metropolitan Borough Council (2012), *The Solihull Draft Local Plan, Shaping a Sustainable Future: Local Development Framework, Submission Document September 2012*.

Staffordshire County Council (2013), *Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026, Adopted March 2013*.

Staffordshire County Council (2013), *Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010-2026 - Appendix 6: Waste Data Tables, Adopted March 2013*.

Warwickshire County Council (2013), *Waste Core Strategy Adopted Version July 2013*.

Warwickshire County Council (Undated), *Waste Core Strategy: Waste Background Technical Document*.

Westminster City Council; *CMP Revision*;  
<http://www.westminster.gov.uk/services/environment/planning/ldf/cityplan/>; Accessed 19 September 2013.

Westminster City Council; *Core Strategy: NPPF Revision*;  
<http://www.westminster.gov.uk/services/environment/planning/ldf/core-strategy-nppf-revisions/>;  
Accessed 19 September 2013.

Westminster City Council (2011), *Core Strategy Adopted January 2011*.