Cheshire East and Cheshire West and Chester Councils – Waste Needs Assessment Report

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Report Produced for:
Cheshire East Council and Cheshire West and Chester Council.

Report written by:
Gill Tatum & Peter Greifenberg

Q.C. Checked by:
Peter Scholes

Contact:
Anne Mosquera,
Richard House

Additional information:
Mandy Smith

Executive Summary

Why we are producing a Waste Needs Assessment

A Waste Needs Assessment (WNA) is part of an evidence base of studies that is required to produce a comprehensive analysis of the type and number of waste management facilities required to be planned for within the Local Development Framework (LDF) Core Strategy for Cheshire East and Cheshire West and Chester Councils. It should address all waste streams, namely: municipal, commercial and industrial (C&I), construction and demolition and excavation (CD&E), hazardous waste, sewage sludge, agricultural and low level nuclear/non nuclear industry arisings that are being generated in the two authority areas. It should be noted that municipal waste arisings only equate to approx 25% of current waste managed within the authority areas. The plans will cover the future waste management requirements up to 2030 for Cheshire East and 2028 for Cheshire West and Chester to marry up with their LDF timescales. Abbreviations used in this report are contained in **Appendix 1**.

Since Cheshire East (CE) and Cheshire West and Chester (CW&C) became new Unitary Authorities on 1st April 2009, a decision has been taken to work jointly on the

preparation of the waste needs evidence base to support the development of their individual strategic waste planning policies and subsequent Development Plan Documents. Both Councils are currently preparing LDF core strategies to replace the existing Local Plans, which cover the area including the Cheshire Replacement Waste Local Plan (CRWLP) adopted in July 2007. The CRWLP sets out the current planning policies for waste and covers both the areas of Cheshire East and Cheshire West and Chester.

The aim of this WNA is to produce a transparent, future-proof assessment which is able to simulate future waste facility requirements under a range of scenarios. This report covers the findings of the WNA and its associated model using a number of different scenarios, Scenario 1 being the preferred option covered in detail in the main report with the other scenario results covered in the appendices only.

The most up to date data available has been used within the WNA, drawing on the basic sources available. Prime sources are:

- DEFRA 2003 annual agricultural waste and by-products survey for the Northwest, extrapolated from the regional figures and using the ONS data 2008 on the number of registered agricultural activities within Cheshire East and Cheshire West and Chester and informed by the Councils;
- The 2008/09 regional survey of C&I waste arisings completed for 4NW and the Environment Agency (EA) (completed by Urban Mines/Black and Veatch in March 2010);
- CD&E waste Data Interrogator (EA 2008) and list of Exempt sites (2008) supplied by the EA;
- Hazardous waste using the 2008 EA Waste Data Interrogator and also informed from the 2008/09 NW Regional C&I Survey;
- EA/Nuclear Decommissioning Authority for low level nuclear/non nuclear radioactive waste;
- Sewage sludge figures supplied by United Utilities and Welsh Water; and
- Municipal waste arisings supplied by the Councils and supported by the CRWLP (2007).

Where we are now

The current position with regard to waste types and their current treatment are shown for Cheshire East in Figure E1 and Table E1 and for Cheshire West and Chester in Figure E2 and Table E2.

Approximately 87o, 000 tonnes of waste arose in 2009 in Cheshire East (from sources of municipal, C&I, CD&E and Agricultural), with a further 483,000 tonnes of sewage. The figure of 870,000 tonnes includes the agricultural waste arisings removed from farm holdings only. If we take into account all agricultural waste arisings, including the materials that are deposited and treated within agricultural holdings, this increases the total figures by an additional 692,000 tonnes. Discounting the agricultural arisings managed on site, approximately 32% of the remaining waste arisings are currently landfilled. All waste arisings within Cheshire

East and Cheshire West are not necessarily managed within the authority boundaries, with much of the waste exported outside the authority boundary for recycling, composting, treatment, incineration or landfill. In addition, waste arisings are imported into the authority boundaries. The WNA seeks to estimate waste management requirements in the future, should all waste arisings be treated within the authority boundaries.

Figure E1 Principal waste arisings in Cheshire East (09)

Total Arisings: 872,819

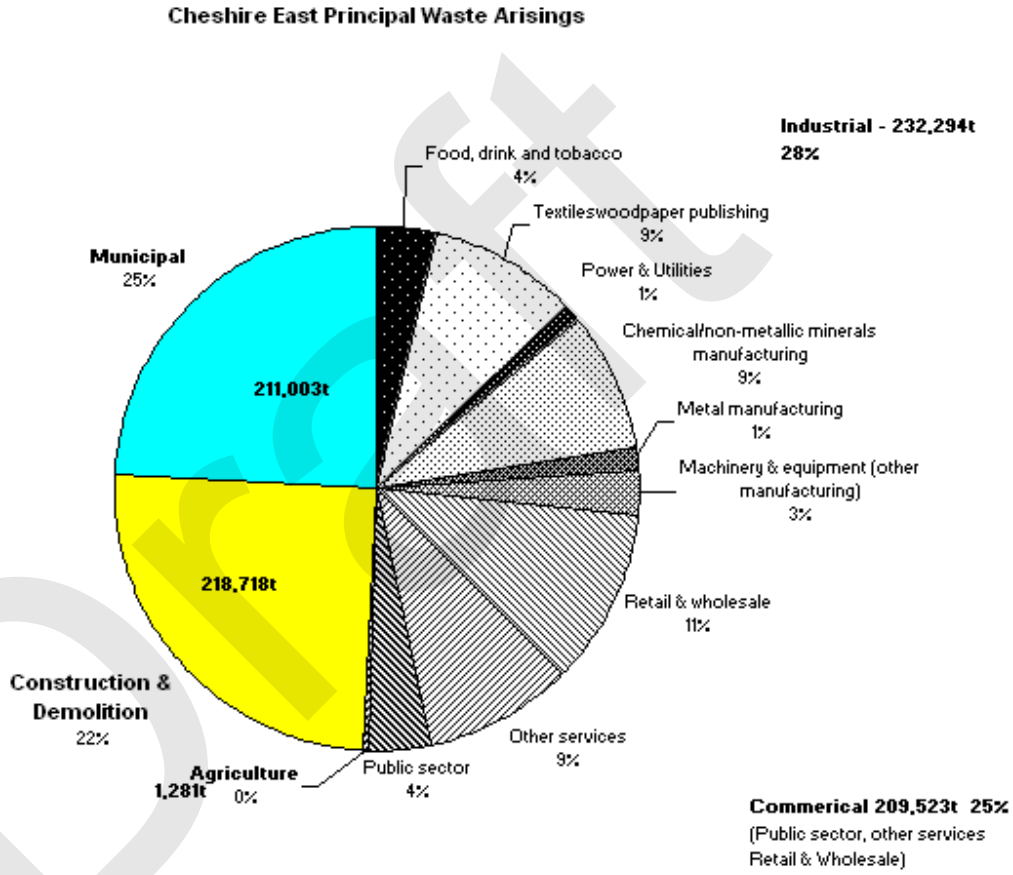

Table E1 Current waste arisings for Cheshire East (o9), 1000 tonnes showing total wastes (including all agricultural wastes managed within land holdings). Management location includes inside and outside of Cheshire East boundaries.

Waste Type	Total	Recycled	Composted	Treatment	Incinerated	Landfilled
Cheshire East 000s Tonnes						
Municipal	211	54	46	0	0	111
Commercial	209	130	0	4	6	69
Industrial	232	109	59	13	7	44
CD&E	218	165	0	0	0	53
Agricultural	693	0	692	0	0	1
Sewage Sludge	483	0	0	483	0	0

Radioactive	0	0	0	0	0	0
Total	2046	458	797	500	13	278

Figure E2 Principal waste arisings in Cheshire West and Chester (09)

Total Arisings: 716,954

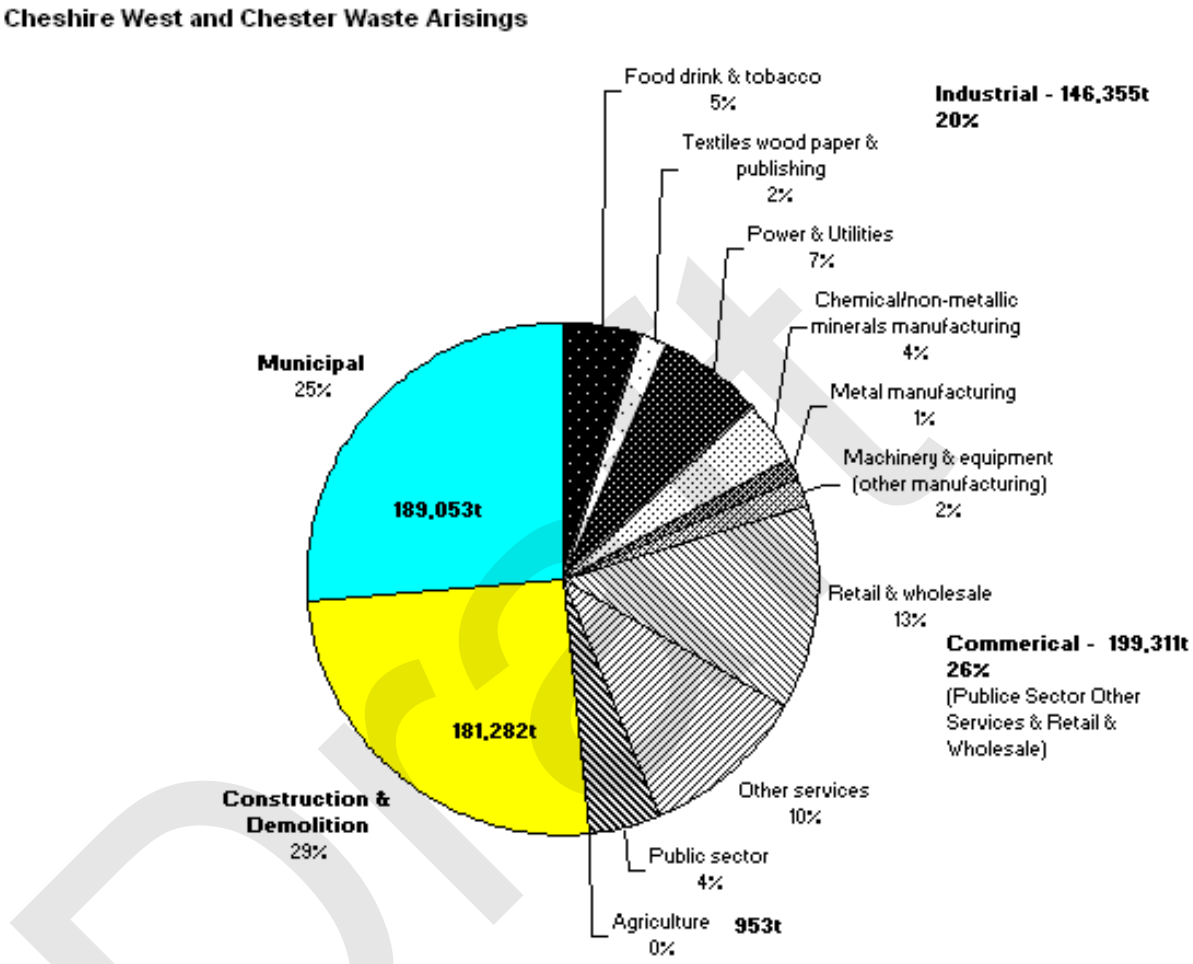

Table E2 Current waste arisings for Cheshire West and Chester (09), 1000 tonnes showing total wastes (including all agricultural wastes managed within land holdings). Management location includes inside and outside of Cheshire West and Chester boundaries.

Waste Type	Total	Recycled	Composted	Treatment	Incinerated	Landfilled
Cheshire West and Chester 000s Tonnes						
Municipal	189	58	36	0	0	95
Commercial	199	124	0	4	5	66
Industrial	146	72	21	9	11	33
CD&E	181	142	0	0	0	39
Agricultural	516	0	515	0	0	1
Sewage Sludge	240	0	0	240	0	0
Radioactive	10	0	0	0	0	10
Total	1481	396	572	253	16	244

Cheshire West and Chester generated approximately 715,000 tonnes (from sources of municipal, C&I, CD&E, Agricultural and Low Level Radioactive) plus a further minimum of 240,000 tonnes of sewage (figures do not include sewage managed through Welsh Water). If we take into account all agricultural waste arisings, including the materials that are deposited and treated within agricultural holdings, this increases the total figures by an additional 515,000 tonnes. Discounting the agricultural arisings managed on site, approximately 34% of these materials are currently landfilled. Details on the waste arisings types and existing waste management facilities are contained in **Appendix 2**.

Where we want to be

A number of factors are likely that could influence the future volume and treatment of waste arisings:

- The effect economic activity has on the quantity of waste arisings generated. For example, a sector may grow or decline over the plan period and there may be a relationship between the size of the sector within the two authority areas and the amount of waste it creates (figures can be determined to reflect predicted changes in employment in each of the sectors over the plan period)
- The effect economic activity has on the quantity of waste arisings generated may however not have a straight forward relationship between employment numbers in a sector and the consequent waste produced. It may well be that the waste generated per sector is influenced by other factors beyond employee numbers, such as changes in production techniques and the ability for re-use of materials or significant changes with technology advancement. Specific waste minimisation implementation measures could also override employment changes (again factors can be used to predict these potential factors)
- Fiscal/financial factors, in particular the impact of the announced landfill tax increases (£80 per tonne in 2014/15), together with higher environmental and climate change awareness, have the potential to drive demand for changes in waste management practice for the larger waste streams generated: commercial, industrial and construction and demolition waste
- Industry responses to the legislative drive for the implementation of the waste hierarchy, principally driving waste away from landfill to recycling and recovery, and
- Recycling potential, particularly for commercial and industrial waste, is increasing with the greatest opportunity for mixed waste. However, difficulties with materials separation of mixed waste and economic factors, such as the value of energy recovered from waste classed as a renewable resource, may drive demand for use of this resource as energy recovery rather than recycling.

In order to predict where we want to be, a number of influencing scenarios were developed to be run through a bespoke interactive model compiled to support the

WNA. Running the model generates any waste management capacity gaps which can then be identified and analysed, with respect to waste type and source, under a number of different parameters that make up the scenarios. The scenarios were chosen in consultation with both Councils.

The Waste Need Assessment under the different scenarios modelled predicts capacity gaps and requirements over the plan period for Cheshire East and for Cheshire West and Chester. Three scenarios were run through the model: optimum, worst case and an alternative to reflect the residual municipal waste treatment with funding re-directed to municipal food recycling. See **Appendix 2** (Section 10.6) for details of the scenarios and **Appendix 3** to cover the results from running the alternative scenarios.

Scenario 1 was chosen because this scenario represents an optimum. It models a successful outcome to the authorities' municipal waste management strategies, and accords with National and EU waste management policy with respect to the waste hierarchy for non-municipal waste arisings. In this scenario recycling targets for municipal waste set by the Councils, as unitary waste collection and disposal authorities, are achieved and recycling potential identified through analysis of the North West Regional Commercial and Industrial waste survey 2009 and Environment Agency data (2008) on deposited construction and demolition waste and for the agricultural sector are also achieved.

The preferred "optimum" scenario represents a successful outcome to the authorities' municipal waste management strategies and accords with national and EU waste management policy with respect to the waste hierarchy for non-municipal arisings. In this scenario a number of assumptions were made:

- Growth/decline (economic impacting on waste arisings) relationship on both municipal (via population scale over the plan period) and non-municipal wastes (by sector growth/decline influence, excluding agricultural sector growth/decline based upon past historical trends of activity)
- The Cheshire East contract changes go ahead as planned and recycling targets are achieved alongside residual treatment through the residual waste management contract (54% by 2020, 46% treatment, 5% of secondary materials from treatment to landfill, 58% recycling by 2030, 42% treatment and 5% of secondary materials from treatment to landfill)
- The Cheshire West and Chester contract goes ahead as planned and recycling targets are achieved alongside residual waste treatment through the residual waste management contract (60% recycling 2014, 40% residual treatment, 5% of secondary materials from treatment to landfill, 70% recycling by 2019, 30% treatment, 5% of secondary materials from treatment to landfill)
- C&I recycling rate for mixed waste reaches 90% diversion by 2020
- CD&E recycling rate reaches 75% by 2020
- Agricultural waste recycling increases 50% by 2020
- Sites with planning permission but not yet operational at the start of the plan period would become operational as planned within the plan period (this includes sites such as those providing significant capacity at Ince Marshes and Kinderton Lodge landfill site)

In this scenario recycling targets for municipal waste set by the Councils, as unitary waste collection and disposal authorities, are achieved, as is the recycling potential identified through analysis of the North West Regional Commercial and Industrial Waste survey 2009 and Environment Agency data 2008 on deposited construction and demolition waste and for the agricultural sector.

Table E3 Where we want to be Cheshire East – Optimum Scenario

Waste Type	Municipal	C&I	CD&E	Agriculture
2020 Recycled/ composted	54%	75% (mixed waste only)	75%	50%
2020 Treatment	44%		25%	50%
2020 Landfill	2%	25%		
2030 Recycled/ composted	58%			
2030 Treatment	41%			
2030 Landfill	1%			

Table E4 Where we want to be Cheshire West and Chester – Optimum Scenario

Waste Type	Municipal	C&I	CD&E	Agriculture
2014 Recycled/ composted	60%			
2014 Treatment	38%			
2014 Landfill	2%			
2019/20 Recycled/ composted	70%	75%	75%	50%
2019/20 Treatment	28%		25%	50%
2019/20 Landfill	2%	25%		
2030 Recycled/ composted	70%	75%	75%	50%
2030 Treatment	28%		25%	50%
2030 Landfill	2%	25%		

Current Facilities

The current waste facilities with their capacity as at 08/09 are summarised in Table E5 for Cheshire East and Table E6 for Cheshire West and Chester.

Further details are contained in **Appendix 2** (Section 10.5).
Summary of current capacity volumes (08/09):

Landfill Cheshire East
Landfill (non-hazardous) – current throughput 205,000t with 1,394,000t void space
Landfill C&D – current throughput 11,000t with unknown void space
Landfill unique – current throughput 45,000t with 100,000t void space

Other waste treatment Cheshire East
Recycling – current throughput and capacity unknown
Recycling C&D – current throughput unknown, capacity 35,000t
Metals recycling – current throughput 25,000t, capacity 42,000t
Composting – current throughput 42,000t, capacity 622,000t

Landfill Cheshire West and Chester
Landfill (non-hazardous) – current throughput 250,000t with 5,084,000t void space
Landfill C&D – no facilities
Landfill unique – current throughput 622,000t with 1,900,000t void space

Other waste treatment Cheshire West and Chester
Recycling – current throughput unknown, capacity 1,044,000t
Recycling C&D – current throughput unknown, capacity 250,000t
Metals recycling – current throughput unknown, capacity 155,000t
Composting – current throughput 40,000t, capacity 100,000t

Table E5 Available Capacity in 2010 (using 2008/09 figures) Cheshire East

Cheshire Name	Waste Management Type	Existing Sites	Planned but not operational
Cheshire East	Landfill (non-hazardous)	2	
Cheshire East	Landfill (C&D)	1	
Cheshire East	Landfill(unique)	2	
Cheshire East	Treatment Plant	2	
Cheshire East	Recycling		2
Cheshire East	Composting	5	1
Cheshire East	Recycling C&D	2	1
Cheshire East	Transfer Station	23	3
Cheshire East	Waste Water Treatment	1	
Cheshire East	Metals Recycling	4	

Table E6 Sites with planning permission not operational at the start of the plan period within Cheshire East

SiteName	Op	SiteStatusID	WasteManagemer	AnnualPermitted
Crewe Gates Industrial Estate, Crewe		Has planning permission	Transfer station	
Danes Moss Landfill Site, Congleton Road, Gawsworth,		Has planning permission	Transfer station	8300
Norton Way, Moss Lane Industrial Estate, Sandbach		Has planning permission	Transfer station	120000
Hall Farm, Reaseheath College, Main Road, Worleston,		Has planning permission	Composting	14200
White Moss Quarry, Radway Green, Crewe		Has planning permission	Recycling (non-C+D)	45000
Shed Site on Land off, Brickhill Lane, Ashley		Has planning permission	Recycling (non-C+D)	4750
Cheshire Demolition. 72 Moss Lane, Macclesfield		Has planning permission	Recycling (C+D)	25000

Table E7 Available Capacity in 2010 (using 2008/09 figures) Cheshire West and Chester

Cheshire Name	Waste Management Type	Existing Sites	Planned but not operational
Cheshire West & Chester	Landfill (non-hazardous)	1	1
Cheshire West & Chester	Landfill (C&D)		
Cheshire West & Chester	Landfill (unique)	6	
Cheshire West & Chester	Treatment Plant	1	2
Cheshire West & Chester	Recycling	2	5
Cheshire West & Chester	Composting	4	2
Cheshire West & Chester	Recycling C&D		2
Cheshire West & Chester	Transfer Station	18	1
Cheshire West & Chester	Waste Water Treatment	2	
Cheshire West & Chester	Metals Recycling	2	

Table E8 Sites with planning permission not operational at the start of the plan period within Cheshire West and Chester

Cheshire Name	Site Status ID	Waste Management ID	Annual Permitted	Void at end of 2009
Kinderton Lodge, Cledford Lane, Middlewich	Has planning permission	Composting	10500	
Kinderton Lodge, Cledford Lane, Middlewich	Has planning permission	Recycling (non-C&D)	26000	
Land at Ince Marshes, Cheshire	Has planning permission	Transfer Station	100000	
Land at Ince Marshes, Cheshire	Has planning permission	Recycling (C&D)	100000	
Land at Ince Marshes, Cheshire	Has planning permission	Recycling (non-C&D)	250000	
Land at Ince Marshes, Cheshire	Has planning permission	Recycling (C&D)	150000	
Land at Ince Marshes, Cheshire	Has planning permission	Recycling (non-C&D)	100000	
Land at Ince Marshes, Cheshire	Has planning permission	Incineration with Energy Recovery	600000	
Kinderton Lodge, Cledford Lane, Middlewich	Has planning permission	Landfill (non-hazardous)		2400000
Land at Ince Marshes, Cheshire	Has planning permission	Composting	40000	
Land within Brunner Mond Works, Griffiths Rd	Has planning permission	Recycling (non-C&D)	180000	
Land at Ince Marshes, Cheshire	Has planning permission	Recycling (non-C&D)	100000	
Viridor Lostock	Has planning permission	Residual Waste Treatment	200000	

Conclusions

Disposal to landfill has historically provided the dominant form of waste management. This position is now changing in response to the requirements of the EU Waste Hierarchy and national policy and is backed by legislation, fiscal and producer responsibility initiatives. The annual escalation of Landfill Tax now means that landfill disposal is becoming uncompetitive with alternative management options. These options include recycling, composting and a range of treatment options including various methods of recovering energy from waste and waste treatment products.

The Waste Need Assessment therefore reflects the requirement to develop the new waste management options and facilities to respond to these changes over the next 17- 20 years and provides the implications for management of these waste arisings within the authority boundaries.

The WNA included developing a model through which different option scenarios were run, which predicted capacity gaps and requirements over the plan period for Cheshire East and for Cheshire West and Chester. Scenario 1 provided the optimum result in conformance with the Waste Hierarchy and the available evidence on waste arisings and their management potential by material type.

Cheshire East

Total waste requiring management falls from 827,308 tonnes generated in 2010 to 797,290 tonnes in 2030 applying Scenario 1 for the WNA.

Municipal Waste	**Approx 211,000 tonnes produced in 2009**

In 2009;

- 52.6% (111,000 tonnes) of waste was landfilled at two sites within Cheshire East
- 26.6% (54,000 tonnes) was recycled (inside and external to Cheshire East)
- 21.8% (46,000 tonnes) was composted at open windrow composting sites which may need to be replaced in the medium term (in light of the Environment Agency position on open windrow and bio-aerosols there is uncertainty concerning future conformity).

Currently no waste management facilities involving treatment or incineration exist within Cheshire East to process the residual municipal waste currently going to landfill. Although planning permission to build a Mechanical Biological Treatment Plant (MBT) and other treatment plants has been granted in Cheshire West and Chester, no contractual basis exists to process residual waste through any of these facilities at present.

The two operational landfill sites have a combined remaining capacity of 1.3 million tonnes but also take commercial and industrial waste and are estimated to be full by

2018. Running Scenario 1 there will be a predicted landfill gap from 2018 in the order of 50,000 tonnes per annum.

Commercial and Industrial Waste	**Approx 441,000 tonnes produced in 2009**

In 2009:

- 25% (113,000 tonnes) of waste was landfilled
- 54% (239,000 tonnes) was recycled
- 13% (59,000 tonnes) was composted

Currently the majority of the recycling takes place outside Cheshire East (for example at UPM Shotton) and there is a capacity gap of between 300,000 to 400,000 tonnes per year applying Scenario 1. This is equivalent to 6 to 8 facilities each with a capacity of 50,000[1] tonnes per annum increasing in the later plan life to a further requirement of 2 additional recycling facilities from 2028 to 2030 for complete self sufficiency within Cheshire East.

Although sufficient composting facilities exist, these are open windrow and may need to be replaced over time if they are shown not to comply with the changed position of the Environment Agency or are at landfill sites with time limited planning permissions.

The small capacity gaps in specialist facilities for treatment and Energy from Waste are unlikely to warrant the investment needed for new plant development within Cheshire East to serve Cheshire East arisings alone and these wastes are likely to be exported to regionally significant facilities outside the district boundary (the gaps from Scenario 1 are approx 11,000 tonnes for treatment per annum and 3,500 for EfW and incineration without energy recovery 4,800 per annum).

Construction, Demotion and Excavation Waste	**Approx 181,000 tonnes produced in 2009 (from licensed sites)**

The majority of this waste stream does not get accurately recorded as the data collection has historically been poor and not fully collated and remains so. Whilst data is collected by the Environment Agency for sites subject to environmental permits, CD&E is also managed, recycled and disposed of, through sites and activities that, whilst requiring planning permissions, are exempt from such permits and data from these sites is not collected.

Considerable quantities of this type of waste are also recycled into aggregate, again for which very little information is currently available. It is recommended that Cheshire East should undertake a survey of all sites undertaking such activities to ascertain capacity to enable this report to be updated in the future and also confirm

[1] Figure of 50,000 tonnes for facility size based upon ODPM publication - Planning for Waste Management Facilities (2004) details provided in Appendix 4.

the Revised Waste Framework Directive targets are complied with for these waste types.

Hazardous Waste	**Approx 28,000 tonnes produced in 2008**

This is not additional tonnage, as this type of waste occurs within Municipal, Commercial and Industrial, Construction, Demolition and Excavation wastes and the figures within the report for the wastes include the hazardous elements. Only a small proportion (11%) of hazardous waste is managed within the boundary of both authorities, the majority being exported throughout the UK and it is assumed that this pattern will continue. No facilities are available to treat this waste in Cheshire East and it is therefore exported and it is assumed that this will continue over the lifetime of the plan period.

Although clinical waste can be classified as hazardous, there is very little data available on the amount of waste generated or its final destination for management, although its is known that waste requiring incineration is exported and it is assumed that this will also continue over the plan period.

Agricultural Wastes – Cheshire East	**Approx 694,000 tonnes generated Only 1200 tonnes leaving farm holdings (based on 2003 DEFRA agricultural waste survey and 08 farm holding survey)**

Although a large volume of Agricultural waste is generated in Cheshire East, very little leaves the farm for management. No specific new facilities are required to deal with this waste.

Sewage Sludge	**483,000 tonnes 2009**

No new facilities are required over and above the planned operational asset plans at the existing facility at Crewe WWTW.

Cheshire West and Chester

Total Waste requiring management rises from 747,635 tonnes in 2010 to 763,036 in 2028, applying Scenario 1 for the WNA.

Municipal Waste	**Approx. 189,000 tonnes produced in 2009**

In 2009:

- 50% (95,000 tonnes) of waste was landfilled at the single non-hazardous landfill within Cheshire West and Chester
- 31% (58,000 tonnes) was recycled (inside and external to Cheshire West and Chester)
- 19% (36,000 tonnes) was composted at open windrow composting sites mostly associated with landfill sites.

Currently no waste management facilities for treatment or incineration are operational within Cheshire West and Chester to process the residual municipal waste currently going to landfill. Although planning permission to build a Mechanical Biological Treatment plant (MBT) and other treatment facilities has been granted, no contractual basis exists to process residual waste through any of these facilities. MBT does not completely treat wastes and requires a secondary treatment process involving incineration, landfill or land spreading dependent upon the wastes involved.

The single operational landfill has capacity of approx 2.5 million tonnes but also takes industrial and commercial wastes and the planning permission currently expires in 2017 (although on current inputs is unlikely to have been filled to its consented capacity by this date). An additional landfill was granted planning consent in 2007 but has not been started and the void space generation is dependent upon mineral extraction. Any delay in the commencement could have consequences for the future waste management of both municipal and commercial and industrial wastes.

Commercial and Industrial Waste	**Approx 345,000 tonnes produced in 2009**

In 2009:

- 28.7% (99,000 tonnes) of waste was landfilled
- 56.8% (196,000 tonnes) was recycled
- 6.1% (21,000 tonnes) was composted
- 3.7% (13,000 tonnes) was treated
- 3.1% (11,000 tonnes) was incinerated

Commercial waste is currently landfilled with municipal waste at the Gowy Landfill, which has a time limited consent until 2017 when a new landfill will be required unless the consented but not yet operational site at Kinderton Lodge commences operation, deferring the need for a new landfill until approx 2025.

Currently the majority of the recycling takes place outside Cheshire West and Chester authority boundaries and there is therefore a recycling capacity gap of 93,000 tonnes per annum, equivalent to 2 facilities (with a capacity of 50,000 tonnes per annum). However a number of facilities have been granted planning permission which, if implemented, would create a surplus local capacity over and above the direct needs of Cheshire West and Chester.

Although sufficient composting facilities exist, these are all open windrow sites and may need to be replaced over time if they are shown not to comply with the changed position of the Environment Agency.

Surplus capacity exists for treatment by incineration without energy recovery due to the presence of the regionally significant site located within the authority's boundary, Ellesmere Port Incinerator.

The small capacity gap for Energy from Waste facilities would in itself be unlikely to warrant investment in facilities, but should any of the plants already with planning permission but not yet operational be built they would provide capacity for this waste (subject to pre-treatment).

Construction, Demolition and Excavation Waste	**Approx 218,000 tonnes produced in 2009 from licensed sites**

The majority of this waste stream does not get accurately recorded as the data collection has historically been poor, not fully collated and remains so. Whist data is collected by the Environment Agency for sites subject to environmental permits, CD&E is also managed, recycled and disposed of, through sites and activities that, whilst they may require planning permissions, are exempt from such permits and data from these sites is not collected.

Considerable quantities of this type of waste are also recycled into aggregate, again for which very little information is currently available. It is recommended that Cheshire West and Chester should carry out a survey of all sites undertaking such activities to ascertain capacity to enable this report to be updated in the future and also to confirm that the Revised Waste Framework Directive targets is complied with for these waste types. From the information currently available there is a capacity gap of 166,000 tonnes per annum equating to 2 larger facilities or 6/7 smaller facilities being required to provide the additional capacity for management within the boundaries of Cheshire West and Chester.

Cheshire West and Chester has an immediate capacity gap of 42,000 tonnes per year for the landfill of inert CD&E wastes reducing down over the plan period to approx 12,000 tonnes per annum under Scenario 1 (which has a target for 75% diversion by 2020).

Hazardous Waste	**Approx 25,000 tonnes produced in 2008**

This is not additional tonnage as this type of waste occurs within Municipal, Commercial and Industrial, Construction, Demolition and Excavation wastes and the figures within the report for the wastes include the hazardous elements. Only a small proportion (11%) of hazardous waste is managed within the boundary of both authorities, the majority being exported throughout the UK and it is assumed that this pattern will continue.

Facilities exist in Cheshire West and Chester to treat or dispose of some of this waste in national/regionally significant facilities, but because of the specialist nature of hazardous waste, the majority of hazardous waste produced in Cheshire West and Chester is still exported, although a significant amount of hazardous waste is imported to these national/regionally significant sites.

Although clinical waste can be classified as hazardous, there is very little data available on the amount of waste generated or its final destination for management. Cheshire West and Chester has no facilities for treating this waste and it is exported out of the area and it is assumed that this will continue for the plan period of the WNA.

Agricultural Wastes – Cheshire West and Chester	**Approx 516,000 tonnes generated Only 954 tonnes leaving farm holdings (based on 2003 DEFRA agricultural waste survey and 08 farm holding survey)**

Although a large volume of Agricultural waste is generated in Cheshire West and Chester, very little leaves the farm for management. No specific new facilities are required to deal with this waste.

Sewage Sludge	**240,000 tonnes, 2009**

No new facilities are required over and above the planned expansion at the existing facility at Tattenhall Waste Water Treatment Works (WWTW).

Radioactive Waste	**29.5 cubic metres, 2007**

Low level radioactive waste is generated within Cheshire West and Chester by both the nuclear industry and non nuclear industry and is currently landfilled at a site in Lancashire or remains stored on site. It is assumed that material will continue to be encapsulated and/or treated off site over the plan period. However alternative provision may be required post 2015, as the site in Lancashire currently only has planning permission until that year.

Upkeep of Model

The model and its database should be kept up to date as and when new capacity comes on stream and can be reviewed on a regular basis should any of the assumptions used in the scenarios change to reflect policy changes. It is further recommended that it should be reviewed prior to any formal submission of the Local Development Framework Core Strategy Development Plan Document.

QUALITY ASSURANCE

Report Title:	Cheshire East and Cheshire West and Chester Waste Needs Assessment Report
Authors:	Gill Tatum, Peter Greifenberg (Griffin Hill trading as 4Resources Ltd), Mandy Smith
Date:	4th May 2011
Project Delivery:	Gill Tatum (Project Manager/Waste Consultant), Peter Greifenberg (Waste Consultant), Mandy Smith (IT Development)
Prepared For:	Cheshire East and Cheshire West and Chester Councils
Contact(s):	Anne Mosquera, Richard House
Report Status:	March2011 Report

COMMERCIAL IN CONFIDENCE

Quality Approvals	**Name**	**Signature**
Project Director	Gill Tatum	
Quality Reviewer	Peter Scholes	
Quality Review	**Date**	08-06-11

Urban Mines is Accredited under the Customer First Quality Assurance Standard (2010/12)

Urban Mines Ltd
Head Office: The Cobbett Centre for Environmental Enterprise
Village Street, Norwood Green, Halifax, HX3 8QG
Tel: 01274 699400 Fax: 01274 699410
Email: info@urbanmines.org.uk
Web: www.urbanmines.org.uk

Griffin Hill trading as 4Resources Ltd
Barn Cottage, Preston Road, Ribchester Lancashire, PR3 3XL
Tel 01254 820507 Fax 01254 820506
Email : peter.greifenberg@4resources.co.uk
Web www.4resources.co.uk