

Cheshire East Waste Needs Assessment

Presentation to
Environment and Prosperity & Scrutiny
Committee
13th September 2011

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Content

- Objective of WNA
- Process
- Results

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Why producing WNA?

- Part of an evidence base of studies
 - 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
 - Assessment which is able to simulate future waste facility requirements under a range of scenarios
- All waste streams;
- Municipal,
 - Commercial and industrial (C&I)
 - Construction and demolition and excavation (CD&E)
 - Hazardous waste
 - Sewage sludge
 - Agricultural
 - Low level nuclear/non nuclear

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Process

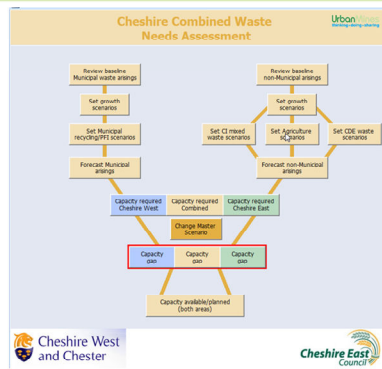
- WNA produced jointly with Cheshire West and Chester
- Consultants & staff identified all current active waste management facilities in Borough
- Using most up to date information assessed current waste arisings across Cheshire East, how much waste imported to CE for treatment and how much exported for treatment
- Developed bespoke model to predict waste arisings over next 10 years (economic/fiscal/growth measures) and to match against the capacity of existing facilities and those with planning permission (estimating when become active) to identify the "gap" for internal self sufficiency waste management.

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Process

Screenshot
Of Bespoke
Model



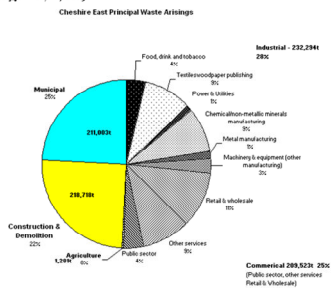
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Results

Where we are now?

Total Arisings: 872,810



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Where are we now?

Current waste arisings for Cheshire East (09), 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

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Where we want to be?

In order to predict where we want to be, a number of influencing scenarios were developed to represent economic, legal, and policy responses

Change Master Scenario

☒ Scenario 1: Optimum

Growth with population (both areas) CI and CDE growth, Agriculture no growth

Cheshire East contract changes, with Treatment Cheshire West collection contract, with Treatment

75% diversion by 2020 (CI Head) 75% diversion by 2020 (CDE)

50% diversion by 2020 (Agriculture) Treatment plus sites with permission, start date

☐ Scenario 2: No growth (both areas)

No growth across all sectors

Cheshire East contract changes, with Treatment Cheshire West collection contract, with Treatment

75% diversion by 2020 (CI Head) 75% diversion by 2020 (CDE)

50% diversion by 2020 (Agriculture) Treatment plus sites with permission, start date

☐ Scenario 3: Worst Case

Growth with population (both areas) CI and CDE growth, Agriculture no growth

Treatment not agreed no food waste collection Treatment not agreed no food waste collection

No additional recycling (CI) No additional recycling (CDE)

No additional recycling (Agriculture) Sites with permission, start date and capacity

☐ Scenario 4: Alternative to PFI

Growth with population (both areas) CI and CDE growth, Agriculture no growth

Treatment not agreed no food waste collection (CI) Treatment not agreed no food waste collection (CDE)

75% diversion by 2020 (CI Head) 75% diversion by 2020 (CDE)

50% diversion by 2020 (Agriculture) Sites with permission, start date and capacity

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Where we want to be?

Scenario 1 chosen ; **Optimum.**

- a successful outcome to the authorities' municipal waste management strategies,
- accords with National & EU waste management policy with respect to the waste hierarchy for non-municipal waste arisings.
- recycling targets for municipal waste set by the Council, as unitary waste collection & disposal authorities, are achieved
- recycling potential identified through analysis of the North West Regional Commercial & Industrial waste survey 2009 and Environment Agency data (2008) on deposited construction & demolition waste & for the agricultural sector are also achieved.

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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%			

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Available Capacity

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&E)	1	
Cheshire East	Landfill (inert)	2	
Cheshire East	Treatment Plant	2	
Cheshire East	Recycling		2
Cheshire East	Composting	5	1
Cheshire East	Recycling C&E	2	1
Cheshire East	Transfer Station	19	2
Cheshire East	Waste Water Treatment	1	
Cheshire East	Metals Recycling	4	

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

SiteName	Op. / SiteStatus	WasteManagement	AnnualPermitted
Crewe Gates Industrial Estate, Crewe	Has planning permission	Transfer station	8300
Brown Moss Landfill site, Conderton Road, Garswood	Has planning permission	Transfer station	120000
Horton Way, Moss Lane Industrial Estate, Sandbach	Has planning permission	Transfer station	14200
Hall Farm, Ryehead Heath College, Main Road, Worleston	Has planning permission	Composting	45000
White Moss Quarry, Radway Green, Crewe	Has planning permission	Recycling (non-C&E)	4750
Red Site on Land off, Brookfield Lane, Ashley	Has planning permission	Recycling (non-C&E)	2000
Cheshire Demolition, 22 Moss Lane, Macclesfield	Has planning permission	Recycling (C&E)	

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Headline Results

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

Waste Management Treatment Type	Capacity gap (tonnes) per annum	Comments
Landfill (Non-hazardous)	Gap from 2018 in the order of 50,000t	1 landfill or extension to provide 50,000t capacity per annum required from 2018
Landfill (Inert)	No gap	No additional requirements
Recycling (Non-hazardous)	Gap - 300,000t - 400,000t whole plan period	Immediate 6 - 8 facilities (assuming 50,000t capacity each) from 2010 required to 2028. Further 2 facilities required 2028 - 30
Recycling (Inert)	Gap 135,000 - 180,000t 2010 - 30	Immediate 3 facilities (assuming 25,000t capacity each facility) from 2010 - 28, additional 2 facilities required from 2028 - 30
Composting*	No gap	No additional requirements

*Current composting facilities are all windrow. In light of the Environment Agency position on open windrow & bio-screens, there is however uncertainty concerning future conformity & these sites may need to be replaced.

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Headline Results

Waste Management Treatment Type	Capacity gap (tonnes) per annum	Comments
Residual municipal waste treatment	No gap (providing plant becomes operational to provide for in the order of 100,000 t arisings from 2014 & joint operation with CW&C goes ahead)	200,000t MBT facility given planning permission to Viridor (Lostock Site, CW&C) required to become operational by 2014 for use by CE
Treatment (MSW/C&I)	Gap 11,000t per annum reducing down to 6,000t by 2030	Additional specialist treatment capacity of 11,000t per annum required reducing to 6,000t per annum by 2030
Energy from waste (MSW/C&I)	Gap ~ 3,500t whole plan period	Requirement of capacity of approx 3,500t per annum over the whole plan period
Incineration without energy recovery (MSW/C&I)	Gap ~ 4,800t whole plan period	Requirement of capacity of approx 4,800t per annum over the whole plan period
Incineration (specialist)	Gap ~ 4,000t per annum reducing to 2,100t over the whole plan period	Requirement of capacity of approx 4,000t in 2010 reducing to 2,100t in 2030
Waste water treatment	No gap	No additional requirements

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Next Steps

- The model and its database should be kept up to date as and when new capacity comes on stream.
- It 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.

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Questions

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