

Bradford Waste Needs Assessment 2016 Errata Sheet

Following the publication of the 2016 needs assessment, a decision was made to change how some information was presented regarding secondary waste. The secondary waste is produced following processing of LACW, and as such re-enters the waste stream as commercial waste. An additional 35,000 of commercial waste had previously been included in this figure, but this has now been removed.

The following tables have been updated to remove secondary waste. In addition, the figure for CD&E waste within this report contained an error and this has been updated to reflect that, the data presented in Table 1 now reflects the same information as shown in Table 29 of the Part A report. The correct figure should be 440,000.

Table 1 City of Bradford Waste Arisings (tonnes rounded)

Principal Waste Arisings Year 2013	Tonnes (rounded)
Commercial Waste	254,314
Industrial Waste	219,773
CD&E	440,000
Hazardous	19,084
LACW	226,085
Total arisings	1,159,256

In addition, changes have been made to Table 4 to separate out the LACW secondary fraction and show this arising as a separate waste stream. The changes to table 4 are shown below. Additional text has also been included in paragraph 1.4.4 explaining the changes, this is shown below.

Table 4 shows the forecast size of the principal streams under the Growth and Minimised Growth scenarios before assumptions about recycling, recovery and landfill performance are applied. Table 4 also provides details of the split between LACW collected from households (LACW primary) and LACW which goes through a secondary processing stage to produce RDF and recyclates (LACW Secondary). The secondary element is included in the overall arisings forecast as Bradford is committed to finding a local solution to managing LACW and has indicated the need to account for secondary processing of waste going forward in order that the contracts awarded account for this need.

Table 4 Annual Arisings Forecasts Under the Growth and Minimised Growth Assumptions¹

Growth	2015	2016	2017	2018	2019	2020	2021
C&I	498,621	503,216	507,858	512,549	517,288	522,078	526,920
LACW Primary	200,419	205,018	212,056	218,277	224,613	226,684	228,747
LACW Secondary	145,648	148,990	154,104	158,625	163,229	164,735	166,235
Hazardous	19,338	19,595	19,856	20,119	20,386	20,657	20,932
CD&E	443,504	446,166	448,843	451,536	454,246	456,971	459,712
Agricultural	296,902	296,902	296,902	296,902	296,902	296,902	296,902
TOTAL	1,604,432	1,619,887	1,639,619	1,658,008	1,676,664	1,688,027	1,699,448

Growth	2022	2023	2024	2025	2026	2027	2028	2029	2030
C&I	531,811	536,753	541,749	546,797	551,900	557,058	562,269	567,539	572,863
LACW Primary	200,419	205,018	212,056	218,277	224,613	226,684	228,747	243,995	245,629
LACW Secondary	167,730	169,061	170,385	171,793	173,196	174,594	175,958	177,317	178,504
Hazardous	21,209	21,491	21,776	22,066	22,359	22,656	22,957	23,261	23,570
CD&E	462,471	465,245	468,036	470,844	473,670	476,512	479,372	482,248	485,141
Agricultural	296,902	296,902	296,902	296,902	296,902	296,902	296,902	296,902	296,902
TOTAL	1,710,928	1,722,089	1,733,307	1,744,798	1,756,354	1,767,971	1,779,582	1,791,262	1,802,609

¹ N.b. LACW figures remain the same under all growth scenarios because these are based on figures provided by the Waste Disposal Authority

Minimised Growth	2015	2016	2017	2018	2019	2020	2021
C&I	492,030	490,002	487,995	486,007	484,039	482,092	480,164
LACW Primary	200,419	205,018	212,056	218,277	224,613	226,684	228,747
LACW Secondary	145,648	148,990	154,104	158,625	163,229	164,735	166,235
Hazardous	18,893	18,705	18,518	18,333	18,151	17,969	17,790
CD&E	440,858	440,858	440,858	440,858	440,858	440,858	440,858
Agricultural	296,902	296,902	296,902	296,902	296,902	296,902	296,902
TOTAL	1,594,750	1,600,475	1,610,433	1,619,002	1,627,792	1,629,240	1,630,696

Minimised Growth	2022	2023	2024	2025	2026	2027	2028	2029	2030
C&I	478,256	476,365	474,495	472,643	470,811	468,996	467,199	465,420	463,658
LACW Primary	230,805	232,637	234,459	236,396	238,327	240,249	242,124	243,995	245,629
LACW Secondary	167,730	169,061	170,385	171,793	173,196	174,594	175,958	177,317	178,504
Hazardous	17,612	17,437	17,263	17,091	16,921	16,752	16,585	16,420	16,256
CD&E	440,858	440,858	440,858	440,858	440,858	440,858	440,858	440,858	440,858
Agricultural	296,902	296,902	296,902	296,902	296,902	296,902	296,902	296,902	296,902
TOTAL	1,632,163	1,633,260	1,634,362	1,635,683	1,637,015	1,638,351	1,639,626	1,640,912	1,641,807

To ease use of tables 13-15 and highlight the estimated total land take, changes have been made to the tables as shown below.

Table 13 Comparison of the capacity gap at year across the 3 scenarios, assuming NO GROWTH (Negative figures indicates no gap), all wastes except Sewage and Low Level Radioactive waste (tonnes) indicating total number of facilities required and land take.

Waste Management	Year	Scenario 1 Baseline	Scenario 2 Max. Recycling	Scenario 3 Med. Recycling	Min no Facilities	est. Land take (ha)
Landfill (non-hazardous C&I and LACW)	2015	97,822	92,111	91,757	N/A	N/A
	2020	97,822	63,589	61,464	N/A	N/A
	2030	97,822	51,310	47,413	N/A	N/A
Landfill (hazardous)	2015	4,076	4,076	4,076	N/A	N/A
	2020	4,076	4,076	4,076	N/A	N/A
	2030	4,076	4,076	4,076	N/A	N/A
Landfill (CD&E)	2015	195,924	174,618	185,969	N/A	N/A
	2020	195,924	68,104	136,207	N/A	N/A
	2030	195,924	68,104	136,207	N/A	N/A
Energy recovery	2015	100,607	99,607	109,685	1	2 – 3 ha
	2020	100,607	86,601	147,073	N/A	N/A
	2030	100,607	86,601	181,218	N/A	N/A

Waste Management	Year	Scenario 1	Scenario 2	Scenario 3	Min no Facilities	est. Land take (ha)
		Baseline	Max. Recycling	Med. Recycling		
Incineration (Specialist High Temp)	2015	861	861	861	<1	N/A
	2020	861	861	861	<1	N/A
	2030	861	861	861	<1	N/A
Recycling (C&I and LACW)	2015	316,756	322,508	313,401	3	3 ha
	2020	316,756	353,920	302,012	N/A	N/A
	2030	316,756	366,199	281,918	N/A	N/A
Recycling (aggregates CD&E)	2015	116,141	147,422	130,757	4	Extant PP in place
	2020	116,141	303,802	203,814	1	Extant PP in place
	2030	116,141	303,802	203,814	N/A	N/A
Recycling (specialist materials– including metal recycling, End of Life Vehicles and WEEE)	2015	-2,322	-2,322	-2,322	Surplus	Surplus
	2020	-2,322	-2,322	-2,322	Surplus	Surplus
	2030	-2,322	-2,322	-2,322	Surplus	Surplus
Composting	2015	-18,457	-17,042	-18,115	Surplus	Surplus
	2020	-18,457	-7,382	-13,821	Surplus	Surplus
	2030	-18,457	-7,382	-13,821	Surplus	Surplus

Waste Management	Year	Scenario 1 Baseline	Scenario 2 Max. Recycling	Scenario 3 Med. Recycling	Min no Facilities	est. Land take (ha)
Residual Mechanical Treatment	2015	17,854	14,730	16,355	1	0.5 -1 ha
	2020	179,500	161,751	171,501	1	1 ha
	2030	179,500	161,751	171,501	N/A	N/A
Treatment Plant (including Anaerobic Digestion, specialised treatment of biodegradable liquids and wastes, organic waste treatment by distillation)	2015	-49,078	-49,078	-49,078	Surplus	Surplus
	2020	-49,078	-49,078	-49,078	Surplus	Surplus
	2030	-49,078	-49,078	-49,078	Surplus	Surplus
Total estimated land take						8 ha

Table 14 Comparison of the capacity gap at year across the 3 scenarios, assuming Minimised Growth (Negative figures indicates no gap), all wastes except Sewage and Low Level Radioactive waste (tonnes) indicating total number of facilities required and land take.

Waste Management	Year	Scenario 1 Baseline	Scenario 2 Max. Recycling	Scenario 3 Med. Recycling	Min no Facilities	Size (ha)
Landfill (non-hazardous)	2015	97,780	92,057	91,710	N/A	N/A
	2020	101,224	64,795	62,907	N/A	N/A
	2030	101,772	53,158	50,364	N/A	N/A
Landfill (hazardous)	2015	4,035	4,035	4,035	N/A	N/A
	2020	3,837	3,837	3,837	N/A	N/A
	2030	3,471	3,471	3,471	N/A	N/A
Landfill (CD&E)	2015	195,924	174,618	185,969	N/A	N/A
	2020	195,924	68,104	136,207	N/A	N/A
	2030	195,924	68,104	136,207	N/A	N/A
Energy recovery	2015	100,908	99,902		1	2 – 3 ha
	2020	107,331	91,365	153,351	N/A	N/A
	2030	111,314	94,015	187,556	N/A	N/A
Incineration (Specialist High Temp)	2015	861	861	861	<1	N/A

Waste Management	Year	Scenario 1 Baseline	Scenario 2 Max. Recycling	Scenario 3 Med. Recycling	Min no Facilities	Size (ha)
	2020	861	861	861	<1	N/A
	2030	861	861	861	<1	N/A
Recycling (C&I and LACW)	2015	315,860	321,162	312,522	3	3 ha
	2020	317,964	357,733	304,976	N/A	N/A
	2030	311,532	363,764	280,973	N/A	N/A
Recycling (aggregates CD&E)	2015	116,171	147,452	130,787	3	Extant PP in place
	2020	116,678	304,339	204,351	N/A	N/A
	2030	117,043	304,339	204,716	N/A	N/A
Recycling (specialist materials– including metal recycling, End of Life Vehicles and WEEE)	2015	-2,322	-2,322	-2,322	Surplus	Surplus
	2020	-2,322	-2,322	-2,322	Surplus	Surplus
	2030	-2,322	-2,322	-2,322	Surplus	Surplus
Composting	2015	-18,236	-16,809	-17,890	Surplus	Surplus
	2020	-13,984	-1,358	-8,699	Surplus	Surplus
	2030	-11,190	2,491	-5,464	<1	N/A

Waste Management	Year	Scenario 1 Baseline	Scenario 2 Max. Recycling	Scenario 3 Med. Recycling	Min no Facilities	Size (ha)
Residual Mechanical Treatment	2015	19,002	15,853	17,490	1	0.5-1 ha
	2020	199,735	179,500	190,616	1	1 ha
	2030	213,504	191,578	203,623	1	1 ha
Treatment Plant (including Anaerobic Digestion, specialised treatment of biodegradable liquids and wastes, organic waste treatment by distillation)	2015	-49,168	-49,168	-49,168	Surplus	Surplus
	2020	-49,604	-49,604	-49,604	Surplus	Surplus
	2030	-50,414	-50,414	-50,414	Surplus	Surplus
Total estimated land take						9 ha

Table 15 Comparison of the capacity gap at year across the 3 scenarios, assuming Growth (Negative figures indicates no gap), all wastes except Sewage and Low Level Radioactive waste (tonnes) indicating total number of facilities required and land take.

Waste Management	Year	Scenario 1 Baseline	Scenario 2 Max. Recycling	Scenario 3 Med. Recycling	Min no Facilities	Size (ha)
Landfill (non-hazardous)	2015	98,749	92,985	92,624	N/A	N/A
	2020	107,094	69,162	66,776	N/A	N/A
	2030	117,785	61,655	56,384	N/A	N/A
Landfill (hazardous)	2015	4,130	4,130	4,130	N/A	N/A
	2020	4,412	4,412	4,412	N/A	N/A
	2030	5,035	5,035	5,035	N/A	N/A
Landfill (CD&E)	2015	197,100	175,666	187,085	N/A	N/A
	2020	203,085	70,593	141,186	N/A	N/A
	2030	215,606	74,945	149,890	N/A	N/A
Energy recovery (LACW & C&I)	2015	101,411	100,404	110,575	1	2 – 3 ha
	2020	110,379	94,412	160,107	N/A	N/A
	2030	119,648	102,346	214,443	N/A	N/A
Incineration (Specialist High)	2015	861	861	861	<1	N/A

Waste Management	Year	Scenario 1	Scenario 2	Scenario 3	Min no Facilities	Size (ha)
		Baseline	Max. Recycling	Med. Recycling		
Temp)	2020	861	861	861	<1	N/A
	2030	861	861	861	<1	N/A
Recycling (C&I and LACW)	2015	320,723	325,611	316,882	3	3 ha
	2020	345,141	385,958	329,990	N/A	N/A
	2030	384,930	444,225	345,355	1	1ha
Recycling (aggregates CD&E)	2015	116,845	148,313	131,549	3	Extant PP in place
	2020	120,782	315,301	211,660	2	N/A
	2030	128,323	334,834	224,804	N/A	N/A
Recycling (specialist materials– including metal recycling, End of Life Vehicles and WEEE	2015	-2,321	-2,321	-2,321	Surplus	Surplus
	2020	-2,316	-2,316	-2,316	Surplus	Surplus
	2030	-2,306	-2,306	-2,306	Surplus	Surplus
Composting	2015	-18,119	-16,692	-17,773	Surplus	Surplus
	2020	-13,275	-649	-7,990	Surplus	Surplus
	2030	-9,260	4,421	-3,534	<1	N/A

Waste Management	Year	Scenario 1 Baseline	Scenario 2 Max. Recycling	Scenario 3 Med. Recycling	Min no Facilities	Size (ha)
Residual Mechanical Treatment	2015	19,222	16,073	17,710	1	0.5-1 ha
	2020	201,079	180,844	191,960	1	1 ha
	2030	217,203	195,277	207,322	1	1 ha
Treatment Plant (including Anaerobic Digestion, specialised treatment of biodegradable liquids and wastes, organic waste treatment by distillation)	2015	-48,939	-48,939	-48,939	Surplus	Surplus
	2020	-48,222	-48,222	-48,222	Surplus	Surplus
	2030	-46,643	-46,643	-46,643	Surplus	Surplus
Total estimate land take						10 ha