

North West Environmental Statistics 1997-98



ENVIRONMENT AGENCY

The front cover shows 3C Waste Limited's Arpley landfill site in Warrington. It includes an area that has undergone conservation work to return it to nature, and provide a pleasant picnic area for local people.

Environmental Statistics 1997-98

This booklet provides a summary of waste and environment-related statistics for the North West Region during the financial year 1997-98. The Environment Agency regards this publication as part of its ongoing commitment to provide useful information on environmental issues. We hope it will be of value to Local Authorities, operators of waste management facilities, and a wide range of others (individuals and organisations) with an interest in waste planning and environmental issues.

Waste information in this booklet is compiled from site returns collected from licensed waste management facilities. Users should be aware that the information is also primarily deposit rather than arisings data and does not, therefore, include information on waste movements (including waste exported from the region for disposal). Neither does it include information on wastes which are recycled or recovered. Hopefully, data quality is improving year on year as better collection and handling systems are introduced.

Table 1 is broken down by Agency Area in order to allow comparison of key data sets with those published previously; the subsequent tables use a geographical breakdown based on Local Authorities, and the information contained reflects requests from users.

The booklet is the third in a series. It contains more detailed waste information than before, and, for the first time, some additional environmental information on water quality and industrial processes authorised under Integrated Pollution Control (IPC) regulations. Further developments are planned for next year.

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Part 7

Water quality data covering bathing beaches, estuarine and river water quality.

There are two appendices: i) Data on landfill sites licensed to accept inert and construction/demolition waste, and ii) Input/output and recovery data for NW transfer and treatment operations, by local authority district.

INPUTS TO NORTH WEST WASTE MANAGEMENT FACILITIES

Table 1. provides a breakdown of the methods used to handle and dispose of waste in the North West in 1997-98. It shows the distribution of waste-related activities between the three Agency areas, and provides comparative data (where this is available) for 1996-7, in order to give some indication of trends in these activities.

Table 1. *Waste handled and method used. (000's tonnes)*

	South		Central		North		Region	
	1996-7	1997-8	1996-7	1997-8	1996-7	1997-8	1996-7	1997-8
DISPOSAL OPERATIONS								
1. Landfilled	5,937	6,027	2,603	2,678	1,168.0	1,843.0	9,708	10,548
a) degradable	4,177	4,794	1,668	1,493	780.0	606.0	6,625	6,893
b) non-degradable ¹	1,760	1,233	935	1,185	388.0	1,237.0	3,083	3,655
2. Lagoon/borehole²	250	7,582	0	0	0.0	0.0	250	7,582
3. Incinerated³	97	78	0	0	0.1	0.1	97	78
Total for final disposal	6,284	13,687	2,647	2,678	1,119.0	1,843.0	10,055	18,208
4. Recycled	578	625	443	144	21.0	78.0	1,042	847
a) recovery ⁴	n/a	353	n/a	6	n/a	60.0	n/a	419
b) metal recycling sites ⁵	578	272	443	138	21.0	18.0	1,042	428
5. Treated	2,074	1,943	74	28	53.0	56.0	2,201	2,027
6. Handled by transfer station	1,423	2,015	719	1,176	155.0	199.0	2,297	3,390
a) civic amenity sites	306	558	158	8	34.0	44.0	340	610
b) Other transfer	1,117	1,457	561	1,168	121.0	155.0	1,799	2,482
7. Other	40	n/a	23	n/a	0.0	n/a	63	n/a
Total waste disposed by other methods	4,115	4,583	1,259	1,348	229.0	333.0	5,604	6,264

¹ Includes non-degradable waste disposed of at sites licensed for both degradable and non-degradable waste.

² The big increase shown in disposal to lagoons and boreholes is the result of a change in the method of collecting the data; in 1997-98 the disposal weight shown includes water, in 1996-97 an estimate was made of the solids remaining after drainage/evaporation.

³ 'Incinerated' includes waste dealt with at sites authorised under both IPC and waste legislation.

⁴ Data on recovery is currently only available for a limited number of sites; it is included here for indicative purposes.

⁵ 'Metal recycling sites' provides data for licensed waste management sites only. Exempt metal recycling sites are not required to make returns.

ENVIRONMENT AGENCY



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Part 2: Site inputs and remaining landfill capacity

Landfill sites continue to provide the main disposal routes for domestic waste and the majority of non-hazardous industrial and commercial waste. Tables 2, 4 & 5 summarise the remaining voidspace and site inputs for each Local Authority area. The North West, as a whole, currently has about six years' remaining disposal capacity but the level of provision is lower in Lancashire, Merseyside and Greater Manchester.

The region also has a number of other landfill sites licensed for the disposal of industrial and commercial waste, some of which are further restricted to the disposal of wastes produced by single firms.

Lagoons and boreholes are a particular feature of North West waste disposal provision, where they have been the principal method of disposal for the slurries and sludges produced by the region's chemicals sector. These facilities are dedicated to specific waste streams and, like in-house only sites, should not be considered as potentially available for other types of waste.

Table 2. Voidspace and deposits at sites licensed for Mixed and Biodegradable Waste

	Remaining voidspace (000m3)		Permitted deposits ¹ (000 tpa)		Actual deposits (000 tpa)	
	1/4/97	1/4/98	1996-7	1997-8	1996-7	1997-8
<i>Cumbria</i>	3,374	5,731	-	1,922	570	494
<i>Lancashire</i>	8,766	8,609	2,627	2,275	1,279	1,460
<i>Merseyside</i>	2,877	2,320	2,105	2,108	846	930
<i>Greater Manchester</i>	9,750	7,821	2,596	3,667	1,247	1,494
<i>Cheshire</i>	31,225	26,717	-	3,467	2,712	2,717
North West Total	55,992	51,198		13,440	6,654	7,095

Table 3. Deposit of waste at lagoons and boreholes licensed for Industrial Waste²

	Remaining voidspace (000m3)		Actual deposits (000 tpa)	
	1/4/97	1/4/98	1996-7	1997-8
<i>Cheshire (all NW)</i>	35,429	32,025	2,576	7,582

¹ Tables 2, 3, 4, 5 show maximum annual deposits permitted by the site licence.

² Table 3: note change in method of recording borehole inputs explained in footnote to Table 1. N.B. input data for these sites can be misleading, as the solids content of the discharged material can be as low as 5% and the water which is also deposited will subsequently drain or evaporate off.

Table 4.4 Voidspace and deposits at sites licensed for Industrial & Commercial Waste

		Remaining voidspace (000m ³)		Permitted deposits ¹ (000 tpa)	Actual deposits (000 tpa)	
		1/4/97	1/4/98	1997-8	1996-7	1997-8
Cumbria	open gate	3,355	3,068	575	220	293
	in-house only	416	289	790	124	244
Lancashire	open gate	3,592	3,186	2,105	810	777
	in-house only	337	308	364	35	23
Merseyside	open gate	13	4	3	n/a	2
	in-house only	6.2	4.2	2	0	0
G Manchester	open gate	213	658	356	2.2	8
	in-house only	529	405	704	18	13
Cheshire	open gate	5,831	1900	600	398	108
	in-house only	3,781	1,209	494.2	228	123
TOTAL	open gate	13,004	8,816	3,639	1,430	1,188
	in-house only	5,069	4,005	1,840	405	290

Table 5.4 Voidspace and deposits at sites licensed for Industrial & Commercial Waste

		Remaining voidspace (000m ³)		Permitted deposits ¹ (000 tpa)	Actual deposits (000 tpa)	
		1/4/97	1/4/98	1997-8	1996-7	1997-8
Cumbria	open gate	654	1,101	1,341	48	53
	in-house only	676	639	254	6.6	39.9
Lancashire	open gate	313	746	1,060	374	318
	in-house only	139.5	128	137.3	46.9	27.4
Merseyside	open gate	126	104	188	52	19
	in-house only	-	-	-	-	-
G Manchester	open gate	758	202	1,839	203	602
	in-house only	349	404	70.3	4.7	1.9
Cheshire	open gate	769	685	100	86	74
	in-house only	-	-	-	-	5.2
TOTAL	open gate	2,647	2,838	4,528	763	1,066
	in-house only	1,164.5	1,040	294.6	78.2	47.2

* Tables 4 and 5 show inputs for sites handling wastes on a commercial basis (open gate), and for sites dedicated to waste from a single producer (in-house only); these sites are not available for general use and the remaining voidspace and site inputs are not included in the waste breakdown data on pages 6 and 7, or in the calculations of remaining capacity on pages 15, 17 and 19.

Table 6. Types of waste handled at licensed waste management facilities in North West England, 1997-98¹

	<div><div>Agricultural</div><div>Inert & C/D</div><div>Domestic & ind/comm</div><div>Other (various)</div><div>Special</div><div>Clinical</div><div>Sewage sludge</div></div>							
Cumbria		(000's) tonnes per annum						Total
1. Degradable landfill	0	245	499.4	2.6	39.9	0.5	0	787.4
2. Inert & C/D landfill								
inputs	0	52.5	0	0	0	0	0	52.5
3. Transfer operations								
inputs	0	80.9	66.4	0.2	6.9	0	0	154.7
outputs	0	6.6	37.7	0.1	1.2	0	0	45.9
recovered	0	39.3	6.4	11.3	0.2	0	0	57.2
4. Treatment Plants								
inputs	0	0	8.7	28.7	18.6	0	0	56.0
outputs	0	0	12.0	36.9	5.8	0	0	54.8
recovered	0	0	0.04	0.1	2.3	0	0	2.5
5. Metal recovery operations								
inputs	0	0	0	18.1	0	0	0	18.1
outputs	0	0	0	18.1	0	0	0	18.1
Total to landfill	0	297.5	499.4	2.6	39.9	0.5	0	840.0
Total recovered ²	0	39.3	6.4	11.4	2.5	0.3	0	59.6

Lancashire		(000's) tonnes per annum						Total
1. Degradable landfill								
inputs	0	870	1,264	0	40.6	0	62.4	2,237
2. Inert & C/D landfill								
inputs	0	210.5	107.3	0	0	0	0	317.8
3. Lagoon								
inputs	0	0	0	0	0	0	0	0
4. Transfer operations								
inputs	0	586.7	493.5	76.8	10.7	0	0.2	1,168
outputs	0	477.2	243.3	53.6	6.6	0	0.2	780
recovered	0	4.0	0.1	0	2.3	0	0	6
4. Treatment Plants								
inputs	0	1.6	26.4	0	0.2	0	0	28.2
outputs	0	0.1	0.2	0	0.2	0	0	0.5
5. Metal recovery operations								
inputs	0	0.1	2.8	133.4	1.3	0	0	137.5
outputs	0	0	3.3	132.1	1.9	0	0	137.3
Total to landfill	0	1,080.5	1,371.2	0	40.6	0	62.4	2,555
Total recovered ²	0	4.0	0.1	0	2.3	0	0	6

	Merseyside & G. Manchester							Total
	(000's) tonnes per annum							
	Agricultural	Inert & C/D	Domestic & ind./comm	Other (metals)	Special	Clinical	Sewage Sludge	
1. Degradable landfill								
inputs	0	275.5	2,098.1	0	58.2	1.2	0	2,433
3. Inert & C/D landfill								
inputs	0	455.5	165.6	0	0	0	0	621.1
outputs	0	1.2	0.3	0	0	0	0	1.4
recovered	0	37.7	78.9	0	0	0	0	116.5
4. Transfer operations								
inputs	0.6	315.9	733.7	0	83.6	24.9	0	1,158.7
outputs	0	93.6	484.8	0	60.6	4.7	0	643.7
recovered	0	60.4	57.7	0	58.8	0	0	176.9
5. Treatment Plants								
inputs	0	1.9	1,292	0	479.3	0	0.3	1,773
outputs	0	0	936	0	153.0	0	0	1,089
recovered	0	0.7	40.6	0	9.7	0	0	51
6. Metal recovery operations								
inputs	0	0	3.6	207.9	3	0	0	214.5
outputs	0	0	0.1	10.1	0	0	0	10.2
Total to landfill	0	744.5	2,261.7	0	58.2	1.2	0	3,052
Total recovered²	0	98.8	177.3	0	68.5	0	0	344

	Cheshire							Total
	(000's) tonnes per annum							
1. Degradable landfill								
inputs	0	194.8	2,146	0	492.3	0.8	0	2,833.9
3. Inert & C/D landfill								
inputs	0	68.2	6.0	0	0	0	0	74.2
4. Lagoons & Boreholes								
inputs	0	655.5	27.3	0	6,899.7	0	0	7,582.5
outputs	0	0	0	0	0.2	0	0	0.2
4. Transfer operations								
inputs	0	115	173.1	0	3.1	6.6	0	297.8
outputs	0	55.4	5.9	0	0	0	0	61.3
5. Treatment Plants								
inputs	0	50.3	77.0	0	38.0	38.0	4.8	170.3
6. Metal recovery operations								
inputs	0	9.7	2.4	46	0	0	0	58.1
Total to landfill	0	263	2,152	0	492.3	0.8	0	2,908.1

¹ 1997-98 is the first time data has been available to provide a breakdown by type of waste and type of waste management facility. 1997-8 is also the first time data has been available for sites which treat and handle waste as well as disposing of it.

² Data on recovery is not currently maintained for all sites and areas. Too much reliance should not, therefore, be placed on these recovery totals.

LICENSING ACTIVITIES

Table 7. Licences in Force

	South		Central		North		Region	
	1/4/97	1/4/98	1/4/97	1/4/98	1/4/97	1/4/98	1/4/97	1/4/98
1. Landfill	123	107	99	86	75	77	297	270
a) degradable	43	31	29	25	15	14	87	75
b) inert and C&D	-	48	-	43	-	41	-	132
c) in-house only	15	28	11	18	5	17	31	63
2. Transfer & Civic Amenity	248	194	134	137	33	31	145	362
3. Metal Recovery (MRS) ¹	128	105	67	62	9	9	204	176
4. Treatment Plants	43	45	8	9	3	3	54	57
5. Lagoons	15	16	0	0	0	0	15	16
6. Others	26	10	4	1	1	1	31	12
Total Licences	583	477	311	295	121	121	1016	893

¹ A number of MR sites fall outside the criteria set for licensing and will qualify as exempt activities.

REGISTRATION ACTIVITIES: 1

Table 8. Registered Exemptions²

	South		Central		North		Region	
	1996-7	1997-8	1996-7	1997-8	1996-7	1997-8	1996-7	1997-8
Total Exemptions	3,010	3,613	1,339	1,704	773	1,400	5,122	6,717
a) Landspreading (7)	884	1,028	541	621	7	381	1,432	2,030
b) Metal recycling (44 & 45)	238	183	42	51	1	1	281	235
c) Land deposit (9 & 19)	371	391	94	164	155	216	620	771
d) Other	1,557	1,553	662	868	610	803	2,829	3,223

² The 1994 Waste Management Licensing Regulations introduced exemptions from licensing for a range of activities where disposal was not thought to pose any significant environmental threat and for certain activities involving the recycling or recovery of waste. The Agency is required to maintain a register of these activities. Many exemptions cover activities such as small scale waste storage, and recycling collection points and are unlikely to present any significant environmental threat. Those with the greatest potential for pollution are set out in categories a) to c) above.

REGISTRATION ACTIVITIES: 2

Table 9. Carriers & Brokers³

	South		Central		North		Region	
	1996-7	1997-8	1996-7	1997-8	1996-7	1997-8	1996-7	1997-8
<i>Total Registrations</i>	9,022	7,890	2,433	2,467	1,116	1,136	12,571	11,513
a) Carriers	8,676	7,213	2,391	2,242	1,104	1,140	12,171	10,777
b) Brokers	346	677	42	43	12	16	400	736

³ Anyone carrying waste or arranging for its carriage or disposal as part of their business must be registered with the Agency. The Environment Agency operates a national registration system for carriers and brokers and maintains public registers of relevant information in each of its area offices.

ILLEGAL ACTIVITIES

Table 10. Incidents Notified⁴

	South		Central		North		Region	
	1996-7	1997-8	1996-7	1997-8	1996-7	1997-8	1996-7	1997-8
1. Flytipping	322	474	241	251	101	29	664	754
2. Licenced sites	284	158	4	100	n/a	40	288	298
3. Exempt sites	n/a	18	n/a	0	n/a	0	n/a	18
4. Illegal sites	n/a	47	n/a	122	n/a	4	n/a	173
6. Prosecutions	n/a	136	n/a	52	n/a	9	n/a	197
5. Other illegal activity	7	3	0	258	0	0	7	261

⁴ Enforcement action may arise as a result of complaints from local authorities and other organisations, or from members of the public. All complaints are investigated and, where justified, recorded as incidents. Appropriate action is then taken. This action can range from arranging for the problem to be cleared up to issuing cautions, serving notices, and prosecuting offenders.

FORMER LANDFILL SITES

Table 11. Former Landfill Sites⁵

	South		Central		North		Region	
	1997-8		1997-8		1997-8		1997-8	
<i>No. of notified sites</i>	2,225		732		514		1,499	

⁵ Includes landfill sites previously licensed under COPA and those previously operated by Local Authorities or businesses as waste disposal sites. These sites are potentially contaminated and likely to require remediation work under forthcoming regulations on contaminated land. Such sites can generate methane gas and may present an environmental risk. They are also the subject of legal searches carried out when development is proposed or property changes hands.

Part 3: Tracking of Special Wastes

These are wastes which are hazardous due to their physical and chemical properties; they may be toxic, flammable or hazardous. Special waste is subject to much tighter control; every initial consignment of special waste must be notified to the Agency before it leaves the place where it was produced, and a system of pre-notification ensures that special waste is tracked through every step of transport, treatment and disposal. The Agency has a computerised "cradle to grave" tracking system for this waste (SWaT) into which all data on waste movements and notified tonnages is entered. The system has been in operation for about 18 months and is now able to provide reports on arisings, fates, deposits, and movements of special waste between local authorities.

The table below and facing graphic are examples of the output which can be obtained. The data presented in figures 1, 2, and 3 are estimates based on notifications and, although they should be treated with some caution, they do provide a useful indication of the scale of movements and the disposal and recovery routes used for special waste.

Figure 1 (facing) shows the high levels of imports into the region and gives an indication of the major internal movements. Figures 2 and 3 show the fates of the wastes arising and disposed of in each North West county. Taken together, these graphics clearly show the specialisation which exists within the region, with a concentration of treatment facilities in Greater Manchester, recovery (via special waste incineration) in Cheshire, and recycling (mainly use of solvents as secondary liquid fuels) in Lancashire. The roles which Cheshire and Cumbria play as landfill repositories for special waste is also apparent.

SPECIAL WASTE IN THE NORTH WEST 1997-98

	arisings	imports	exports disposal (tonnes/annum)	local ¹ disposal	total ²
<i>Cumbria</i>	49,500	62,800	25,800	23,700	87,000
<i>Lancashire</i>	110,500	145,800	69,700	40,800	186,600
<i>Greater Manchester</i>	209,500	307,200	122,700	86,800	394,000
<i>Merseyside</i>	192,000	110,900	167,000	25,000	135,900
<i>Cheshire</i>	231,300	268,800	129,700	101,600	370,400

1. Waste produced and disposed of within the same group of local authorities.

2. Total special waste disposed of within that group of local authorities.

Figure 1.

*Special Waste Movement in
North West Region 1997-98*

*Graphic shows imports and
exports from the region and
main internal movements.*



Key

10,000-20,000tpa

>20,000tpa

Arisings and Fates of Special Wastes

Figures 2 & 3 show the different patterns of special waste management in the principle North West Local Authorities. Comparison of the two maps highlights the difference in scale and in disposal/treatment methods for waste arising locally and those being disposed of or treated in each county.

The smaller pie chart on Figure 3 shows the proportion of waste arising in each county which is also disposed of in the same county.

Figure 2.

Special Waste Arising by County of Origin 1997-98

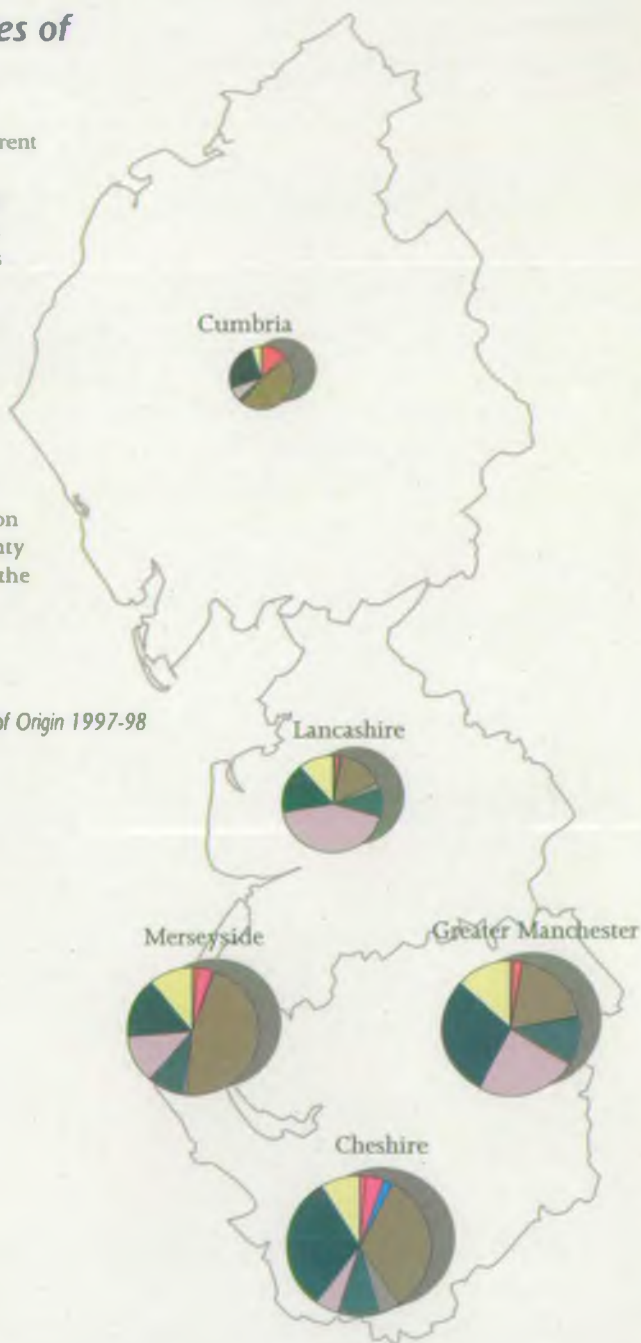
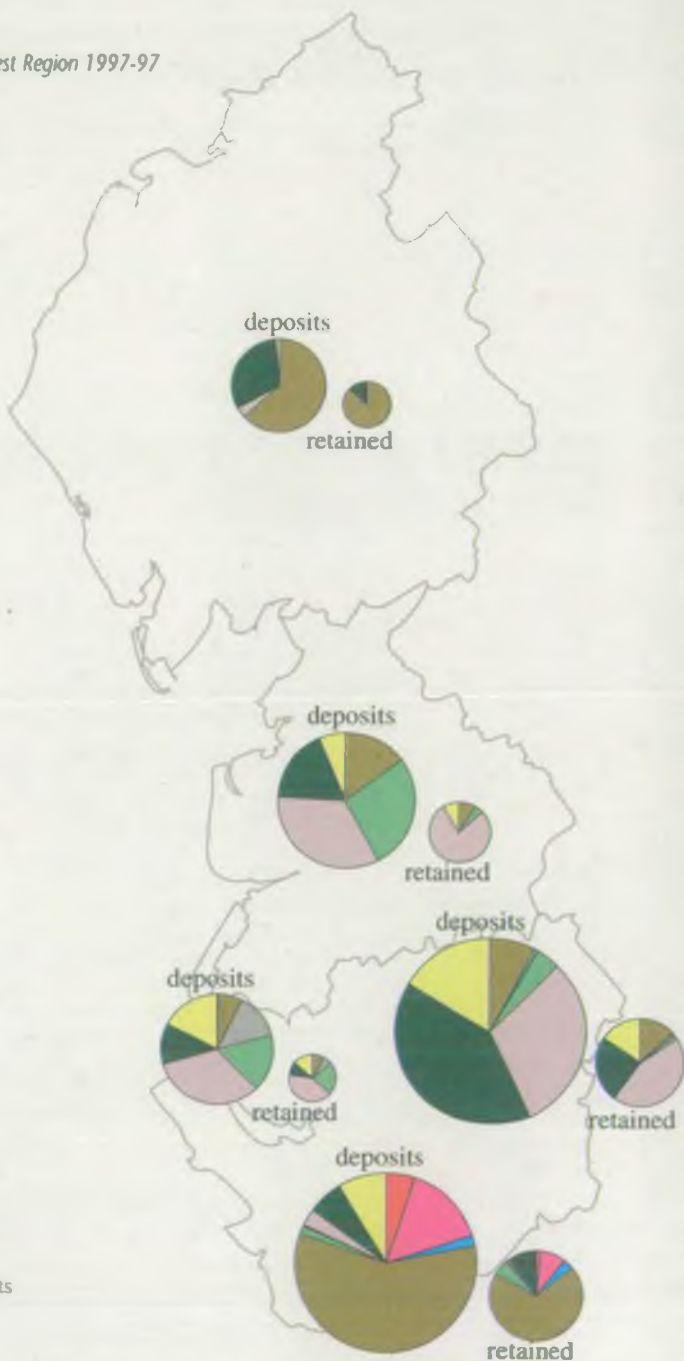


Figure 3.

Special Waste Deposits in North West Region 1997-97



Graphic shows proportional relationship between total deposits including imports (larger pie chart) and deposits of wastes produced locally (smaller pie chart).



Part 4: Input returns and remaining capacities at sites licensed to accept mixed Biodegradable and Industrial & Commercial Wastes

This section provides a site-by-site listing of the inputs and remaining capacities for landfill sites in Cumbria, Lancashire, Merseyside, G. Manchester and Cheshire. The accompanying graphics show the location of each site, scaled to indicate its remaining disposal capacity. Additional information is also provided on the nature of the landfill operation, showing containment sites and those with collection and treatment or recovery of landfill gas. Figures 4, 5, and 6 also provide summaries of the remaining capacity in each county, and give estimates of the life expectation of existing sites¹.

Cumbria Waste Deposit Statistics

Operator	Location	District	void 1/4/97 000m ³	void 1/4/98 000m ³	permitted 000's T	deposits 1996/97 000's T	deposits 1997/98 000's T
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Sites licenced to accept biodegradable waste (co-disposal)

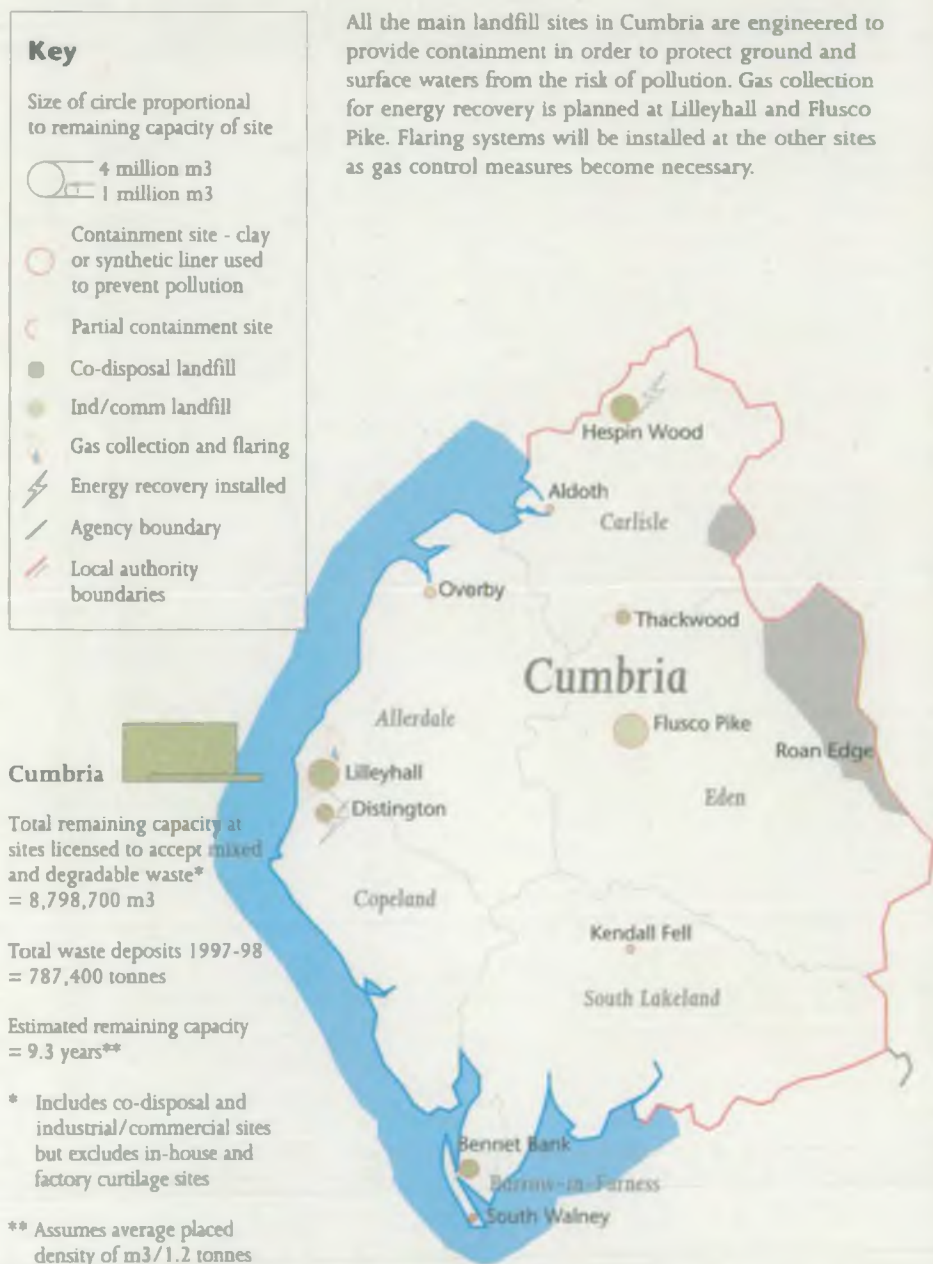
Alco Waste M'ment	Lillyhall, Stage 1	Allerdale	120.0	Non-Operational		81.5	0.0
Alco Waste M'ment	Lillyhall, Stage 2	Allerdale		25.0	200	134.8	145.2
Alco Waste M'ment	Lillyhall, Stage 3	Allerdale		2,000.0	156	0.0	31.1
D A Harrison	Aldoth (2), Sillioth	Allerdale	110.0	92.5	75	19.3	14.6
Hayton Builders	Winbarrow Lane	Allerdale		Non-Operational			
Caird Environmental	Bennet Bank	Barrow	68.0	18.0	584	108.2	58.4
Caird Environmental	Bennet Bank (Phase 5)	Barrow		780.0	Only recently licensed		
Cumbria Waste	Hespin Wood	Carlisle	1,862.0	1,693.2	416	93.8	114.6
H & E Trotter	Thackwood	Carlisle	382.0	448.9	75	29.5	12.8
Fleming & Coulthard	Grange Road, Egremont	Copeland	0.0			0.0	
Cumbria Waste	Distington Landfill	Copeland	540.0	672.9	416	103.0	117.6
	Total		3,082.0	5,730.5	1,922	570.1	494.3

Sites licenced to accept Industrial & Commercial Waste

Peter Greggians	Overby, Aspatria	Allerdale	5.0	288.0	75.0	32.8	16.7
Cumbria Waste	South Walney (S. Ext)	Barrow	201.0	108.2	240.0	72.0	109.0
Nestle UK Ltd	Daleon factory	Carlisle		Non-Operational			144.2
Albright & Wilson	LIPEX Refractory	Copeland	1,000.0	400.0	1,700.0	1,040.0	1,040.0
Lakeland Waste	Flusco Pike, Penrith	Eden	2,753.0	0,803.0	110.0	67.7	96.2
L & W Wilson Ltd	Roan Edge, Sedburgh ²	Eden	292.0	187.6	75.0	10.0	5.5
British Gypsum Ltd	Kirkby Thore, Penrith	Eden	200.0	200.0	15.0	19.1	1.5
Greenways	Kendal Fell (Phase 1)	S. Lakeland	104.0	121.4	75.0	57.2	58.4
Greenways	Kendal Fell (Phase 1b)	S. Lakeland	0.0			0.0	
Greenways	Kendal Fell (Phase 2)	S. Lakeland		Non-Operational			
James Cropper & Co	Burneside	S. Lakeland		voidspace not known		0.0	7.3
	Total open gate		3,355.0	3,068.2	575.0	219.7	293.1
	Total in-house		414.0	100.0	700.0	124.0	104.2

- This estimate is based on a simple comparison of remaining licensed capacity and current inputs. It does not include potential sites (i.e. with planning permission) or make any assumptions about changes in waste arisings or deposit/ disposal methods in future.
- Site licensed for industrial and commercial waste but also able to accept bonded asbestos.

Figure 4. Remaining landfill capacity in Cumbria 1997-98



Lancashire Waste Deposit Statistics

Operator	Site address	district 000m3	void 1/4/97 000m3	void 1/4/98 000tpa	permitted 000T	deposits 1996/97 ¹ 000T	deposits 1997/98
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Sites licensed to accept mixed & biodegradable waste (co-disposal)

<i>Caird Env.</i>	Deerplay Quarry ¹	Burnley	991	990	75.0	7.7	14.5
<i>Biffa Ltd</i>	Withnell	Chorley	1,085	900	250.0	94.3	56.0
<i>LWS Ltd</i>	Ulnes Walton ²	Chorley	103	1,083	200.0	185.2	283.6
<i>3C Waste Ltd</i>	Rugby House Quarry ³	Chorley	1,500	1,500	250.0	pre-operational	
<i>LWS Ltd</i>	Clifton Marsh LFS, Freckleton	Fylde	1,490	1,046	450.0	379.8	497.2
<i>LWS Ltd</i>	Whinney Hill LFS, Altham	Hyndburn	969	673	350.0	294.8	295.7
<i>LWS Ltd</i>	Salt Ayre LFS, Ovangle Road	Lancaster	2,166	2,017	250.0	176.5	148.9
<i>LWS Ltd</i>	Much Hoole LFS, Station Road	S. Ribble	0	closed	150.0	12.5	2.2
<i>LWS Ltd</i>	Jameson Rd LFS, Fleetwood	Wyre	462	400	300.0	128.5	161.6
	TOTAL		8,766	8,609	2,275	1,279.0	1,459.7

Sites licensed to accept industrial and commercial waste

<i>Edmund Proctor</i>	Bent Hall Farm LFS, Darwen	Blackburn	22	20.8	20.8	1.3	0.9
<i>Thomas Graveson</i>	Goosehouse Quarry, Darwen	Blackburn	8	closed	15.0	59.6	97.5
<i>William Blythe</i>	Pedford Moss, Hapton	Burnley	2.1	2.1	1.0	0.8	0.7
<i>LWS Ltd</i>	Rowley ¹	Burnley	161	450.0	250.0	198.1	78.8
<i>Neales Waste</i>	Clayton Hall, Whittle-le-Woods	Chorley	1,459	1,300.0	740.0	29.8	29.1
<i>Mr M Woods</i>	Westhy LFS, Annas Road	Fylde	278	278.0	100.8	142.0	193.1
<i>William Blythe</i>	Holland Bank Mill, Church	Hyndburn	19	0.0	10.0	1.1	1.0
<i>R Townsend</i>	Duckworth Hall	Hyndburn		closed	24.5	11.0	15.4
<i>LWS Ltd</i>	Cotestones, Warton	Lancaster	13	closed	75.0	24.2	22.1
<i>LWS Ltd</i>	Henthorn Road, Clitheroe	Ribble Valley	554	471.0	75.0	55.2	50.8
<i>LWS Ltd</i>	Duckworth Clough	Rossendale	9	0.0	n/a	47.0	0.0
<i>LWS Ltd</i>	Rakehead Lane, Bacup	Rossendale	142	97.0	75.0	85.2	98.7
<i>Park Pit Landfill</i>	Horncliffe Quarry	Rossendale	470	n/a	600.0	104.4	126.6
<i>J Routledge</i>	White Moss Road	West Lancs	652	590.0	150.0	53.2	65.2
<i>ICI Ltd</i>	Littlebourne Works, Thornton	Wyre	100	211.0	90.1	10.4	10.7
	Total open gate		3,592	3,186.0	2,105.0	810.0	777.3
	Total in-house only		117	200.8	60.8	11.0	11.0

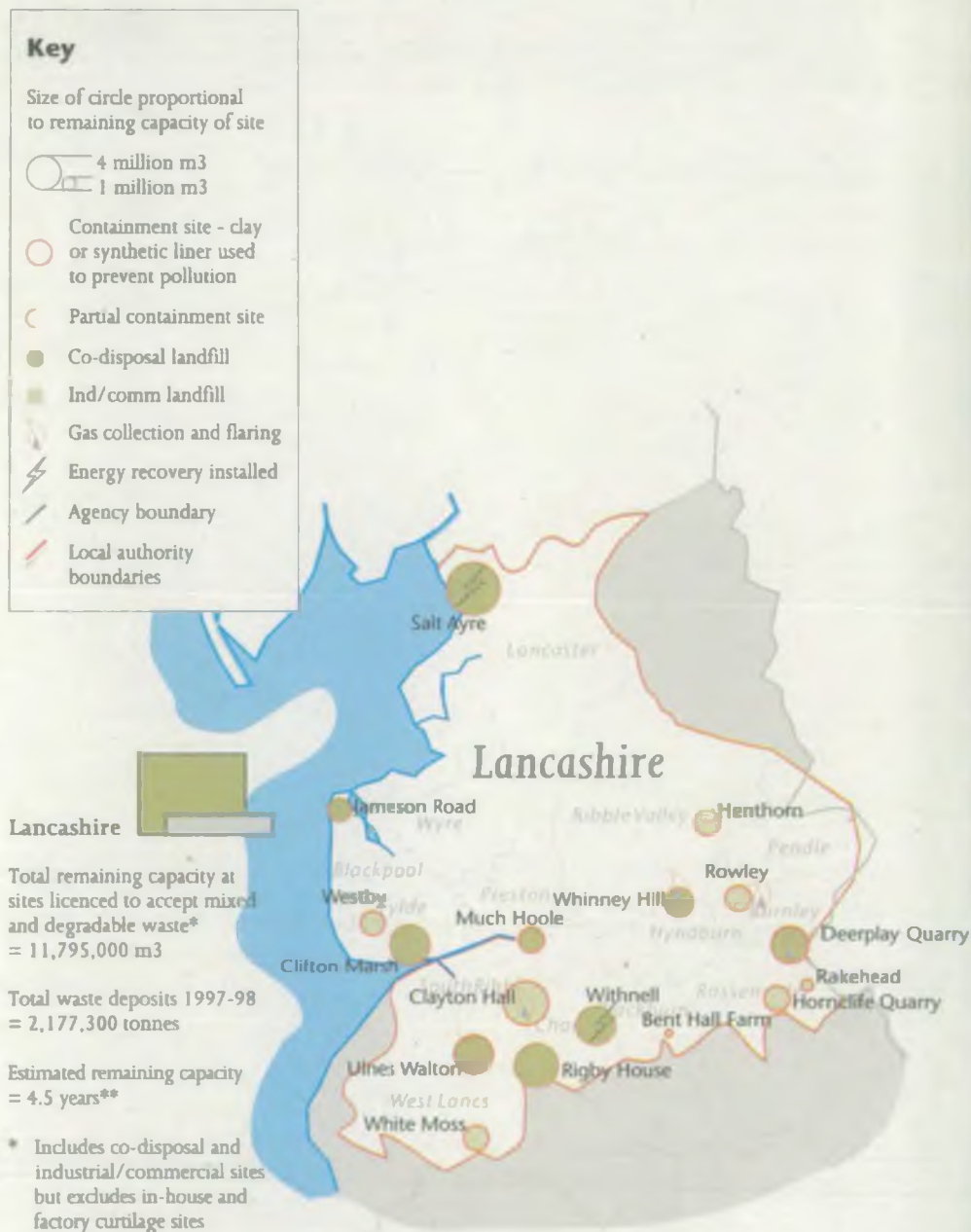
¹ The site formerly known as Ford Quarry changed its name to Deerplay during 1997-98.

² New site or phase came on stream during year.

³ The site formerly known as Houghton House Quarry changed its name to Rugby House Quarry during 1997-98.

* Due to an error in data collection, the input tonnages for 1996/97 were incorrect in last year's publication; the corrected data is included here.

Figure 5. Remaining landfill capacity in Lancashire 1997-98



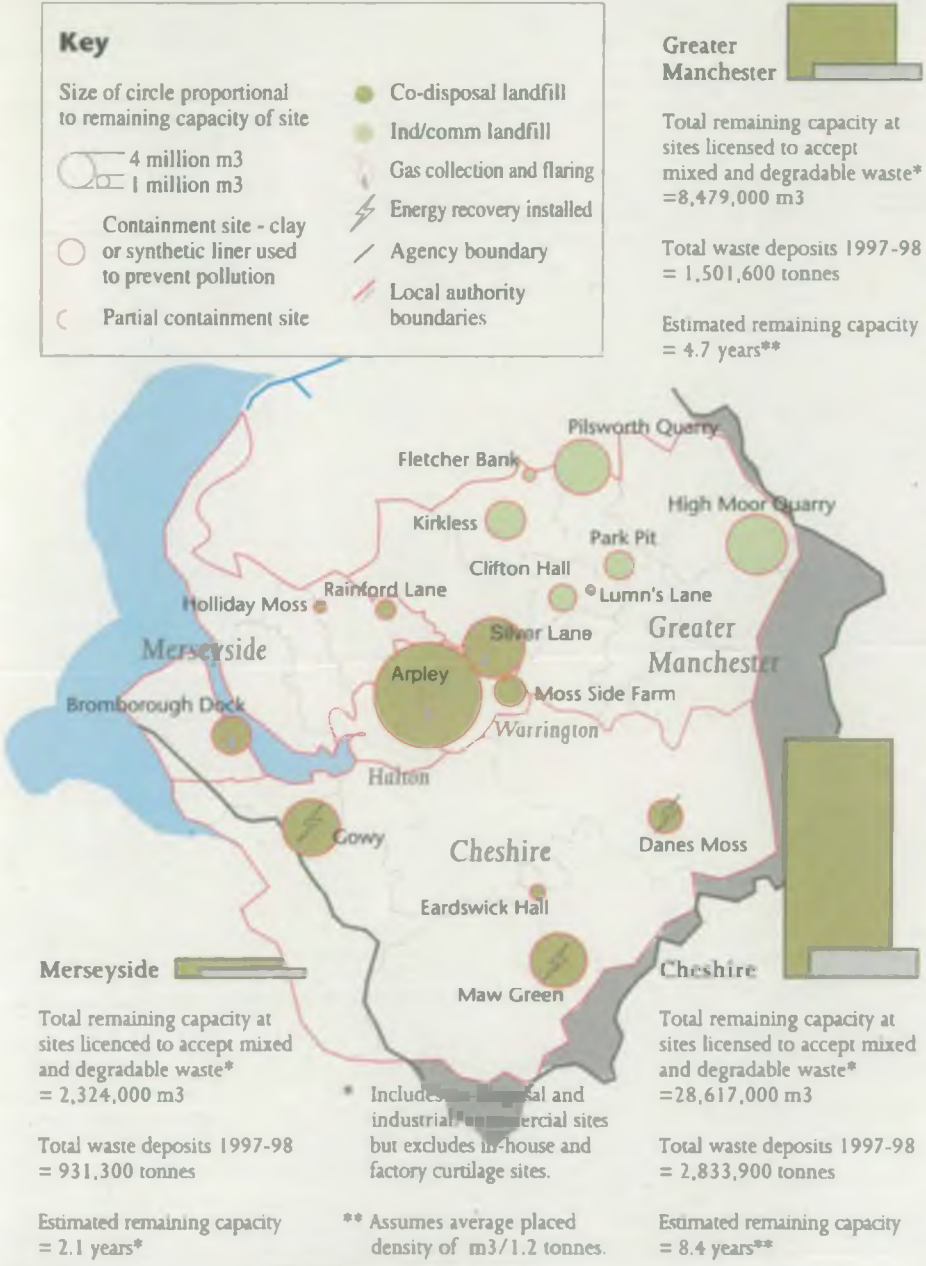
Merseyside, Greater Manchester & Cheshire Waste Deposit Statistics: Co-Disposal landfill sites

Operator	Site address	district	void 1/4 '97 000m3	void 1/4 '98 000m3	permitted 000tpa	deposits 1996/97 000T	deposits 1997/98 000T
MERSEYSIDE							
UK Waste M'gement	Holiday Moss	St Helens	n/a	170	340	335.4	424.4
Mersey Waste	Rainford Lane, Billinge	St Helens	587	450	468	94.0	137.5
UK Waste M'gement	Bromborough Dock North	Wirral	2,290	1,700	800	416.2	367.6
	TOTAL		2,877	2,320	2,108	846	929.5
G. MANCHESTER							
Terry Adams	Pilsworth Quarry	Bury	3,500	2,500	1,716	788.3	901.2
Leigh Bardon	High Moor, Scouthead	Oldham	4,400	4,000	480	45.1	189.4
Biffa Waste	Clifton Hall	Salford	950	800	400	0	110.2
Terry Adams	Peaks Nook, Carrington	Trafford		surrender	0	0	0
Terry Adams	Lower Green Lane	Wigan		new site	0	0	0
L'fill M'gement	Kirkless	Wigan	900	521	1,071	413.9	292.8
	TOTAL		9,750	7,821	3,667	1,247	1,493.6
CHESHIRE							
3C Waste	Gowry Landfill	Chester	4,300	3,700	300	243.2	231.8
Brock plc	Eardswick Hall	Crewe	300	250	75	27.8	142.0
3C Waste	Maw Green Road	Crewe	4,300	3,400	360	259.9	236.5
3C Waste	Danes Moss	Macclesfield	1,800	1,300	180	172.1	151.8
Collier Industrial Waste	Moss Side Farm, Rixton	Warrington	1,300	1,010	180	95.6	94.7
3C Waste	Arpley Landfill Site	Warrington	14,300	13,000	1,412	1,053.4	970.9
UK Waste M'gement.	Silver Lane, Risley	Warrington	4,925	4,057	960	859.6	888.9
	TOTAL		31,225	26,717	3,467	2,712	2,717

Industrial & Commercial landfill sites

Lever Bros.	Wharfedale St, Port Sunlight	Wirral	13	4	3	n/a	1.8
Lubrizol	Ulrick Road, South	Wirral	4.2	n/a	0	0	0
MERSEYSIDE TOTALS	- open gate		13	4	5	n/a	1.8
	- in known only		4.2	n/a	0	0	0
Charles Turner & Co	Springside Mill	Bolton	n/a	n/a	n/a	n/a	1.8
East Lancs Paper Mill	River Rd, Chorley, A. B.	Bury	4	1.7	18.4	18.4	0.2
Marshalls Mono Ltd	Fletcher Bank Quarry	Bury	96	94	n/a	n/a	3.6
Harwood Quarry Co	Brookfold Lane	Bolton	500	500	54.8	0	0
NWMM (Preston)	Conception, ETW/Henry	Brinsford	221	497	0	n/a	n/a
W. M. Tatham Ltd	Belfield Lane	Rochdale	42	40	184	n/a	1.4
British Aluminium	Lions's Lane, Horwath	Salford	190	190	1.4	n/a	0.2
Mulhane H & Sons	Brownedge Farm, Mossley	Tameside	25	24	116.8	2.2	1.2
Landfill Management	Makerfield Way	Wigan	0	0	0		
G. MANCHESTER TOTALS	- open gate		213	658	355.6	22	8.0
	- in known only		197	497	184	18.4	11.8
Brock plc	Hapsford Landfill	Chester	50	closed	600	n/a	16.4
Asmura Incr Ltd	Green Way, South, Hor	Chester	10	10	100.2	4.2	0.2
Moxy Chemicals Ltd	Boulton Lane, Sandbach	Congleton	n/a	n/a	n/a	n/a	n/a
Caradon Refractories	Trinityville, Berrys, Alton	Congleton	43	30	100.0	4.8	7.8
ICI Ltd	Barlow Road, Alton	Halton	1,700	1,400	400	114.8	100.8
Gaskell Bros	Waterworks Lane	Warrington	2,000	1,900	600	169.2	91.5
Winground	Eastham Rake, Eastham	Ellesmere Port	10	0	25	2.4	9.0
CHESHIRE TOTALS	- open gate		2,100	1,900	625	176.7	116.9
	- in known only		1,710	1,410	400.2	118.4	110.8

Figure 6. Remaining landfill capacity in Merseyside, Greater Manchester and Cheshire 1997-98



Part 5: Other Waste Management Facilities

Figure 7. Landfill sites accepting inert and construction/demolition wastes

The region has a large number of sites licensed to accept inert and construction/demolition waste. Generally speaking, they are smaller and shorter-lived than the sites licensed for biodegradable waste. The volume of waste being disposed of at these sites has declined following an increased use of inert materials for construction projects such as screening mounds, golf courses and equestrian centres (which are exempt from licensing under the 1994 Regulations), and re-use as secondary aggregates.

Summaries of waste tonnages handled in each main local authority area are given on pages 6 & 7; detailed returns for each site are included in appendix 1.

- | | |
|--------------------|----------------|
| 1. Rossendale | 13. St Helens |
| 2. Hyndburn | 14. Warrington |
| 3. Blackburn | 15. Wigan |
| 4. Chorley | 16. Bolton |
| 5. South Ribble | 17. Salford |
| 6. West Lancs | 18. Trafford |
| 7. Sefton | 19. Manchester |
| 8. Liverpool | 20. Bury |
| 9. Wirral | 21. Rochdale |
| 10. Ellesmere Port | 22. Oldham |
| 11. Knowsley | 23. Tameside |
| 12. Halton | 24. Stockport |

Key

- Landfill sites licensed to accept non-degradable waste
- Landfill - non-degradable for owner/operators use only
- Sites licensed but not in use



Figure 8. Other NW facilities covered by waste management licensing regulations

'Other' waste management activities include transfer stations, civic amenity sites, metal recovery sites, waste treatment plants, and waste storage facilities.

These activities tend to reflect the distribution of population and economic activity, showing a clear concentration in Merseyside and Greater Manchester. Summaries of waste tonnages handled at treatment plants, transfer stations, civic amenity sites, and metal recovery sites are given on pages 6 & 7; details of returns for local authority districts are included in appendix 2.

Key

- ◆ Civic amenity site
- ◆ Waste transfer station
- Metal recovery site
- Treatment plant



Part 6: Authorised Industrial Processes

The graphic shows the distribution of North West sites with authorisations to operate processes under Integrated Pollution Control (IPC) legislation or to use or process radio-active substances (RAS). Under the current regulations, authorisation is granted to processes rather than sites. So, in some cases, several processes may be operated on a single site. There are clear concentrations of activity around the Mersey Estuary and along the Cumbrian coast, where the region's heavy chemicals industry is primarily located.

The table (opposite) provides a breakdown of these authorisations by category and by local authority district.



Figure 9.

Location of processes authorised under Integrated Pollution Control legislation

	IPC						RAS					
	fuel & power	metal processing	mineral working	chemicals	waste disposal	other	TOTAL	nuclear authorisations	keeping & use RAS	mobile apparatus	storage & disposal RAS	TOTAL
South Area												
Babina	0	1	0	1	1	1	6	0	28	2	13	49
Bury	1	0	0	0	1	4	10	0	27	7	10	34
Marineport	0	0	0	0	0	0	0	80	7	10	97	197
Oakham	0	0	0	1	0	0	2	0	16	1	1	19
Rockdale	0	1	1	0	0	5	8	0	17	1	1	19
Salford	0	1	0	0	7	4	26	0	18	11	5	34
Seelport	0	1	1	1	0	0	2	0	11	7	5	28
Tenacore	1	0	0	4	0	0	10	0	10	3	1	16
Traford	1	0	0	14	0	0	20	0	10	5	0	39
Wigton	1	1	1	4	0	0	7	0	34	4	1	31
Central Area												
Charn	1	0	0	0	0	0	1	11	15	5	10	41
Congleton	2	1	0	14	0	0	19	0	3	0	0	8
Greve & Niddich	0	1	0	0	7	0	0	0	8	0	0	8
Elton and Norton	0	0	0	18	1	0	2	0	23	9	4	36
Habon	5	2	0	1	39	1	48	0	27	3	6	36
Machinfield	4	1	0	1	0	2	3	0	16	7	4	27
Vale Royal	0	0	0	7	0	0	11	0	19	1	1	23
Warrington	2	0	0	13	0	0	19	0	24	8	4	41
High Peak												
Knowsley	0	1	0	31	0	0	32	0	14	1	0	15
Liverpool	1	0	0	7	0	5	9	0	46	4	4	54
Sefton	0	0	0	0	0	0	0	0	10	1	0	11
St Helens	1	0	3	2	4	0	8	0	17	2	2	21
Warral	3	0	1	10	1	1	17	0	28	2	7	37
Total South Area	31	15	12	285	13	22	296	11	514	82	81	698
North Area												
Engh Peak	0	2	1	4	0	2	9	0	2	0	0	2
Norwood upland	0	0	0	2	0	0	2	0	0	0	0	2
Total	0	2	1	6	0	2	11	0	2	0	0	2
Central Area												
Bolton	1	0	0	4	0	0	5	0	20	0	1	21
Blackpool	0	0	0	1	0	0	1	0	5	0	1	6
Burnley	1	0	0	4	0	2	7	0	11	0	1	11
Clithy	1	0	0	0	0	2	3	0	5	0	1	6
Pills	0	2	0	1	0	0	3	0	7	1	1	9
Hyndburn	0	0	0	12	0	0	13	0	7	0	0	7
Lancaster	0	0	0	3	1	1	13	13	16	1	0	48
Preston	0	0	0	10	0	0	0	7	13	3	0	13
Poulton	1	0	0	0	1	0	2	0	7	23	8	40
Radcliffe Valley	0	0	1	1	0	0	2	0	6	0	1	7
Rossendale	0	0	0	1	0	0	1	0	10	0	0	10
South Pilsle	0	0	0	1	1	5	7	0	4	0	0	4
West Lancashire	0	1	0	1	1	0	2	0	10	0	0	10
Wyre	1	0	0	6	0	0	7	0	10	0	0	10
Total	9	4	2	37	4	11	67	20	147	5	10	181
North Area												
Alderley	4	1	0	4	2	5	16	8	7	1	0	8
Barnor	5	0	0	0	0	1	6	3	6	2	7	18
Cable	0	0	0	0	7	0	0	0	7	0	7	14
Copeland	2	2	0	7	0	0	11	18	31	2	24	53
Ellen	0	0	1	0	1	1	2	0	4	1	1	5
South Lakeland	1	0	0	1	0	0	5	0	4	1	1	7
Total	12	3	1	16	4	4	48	29	42	7	40	108

Part 7: Water Quality

Securing the improvement in bathing water quality needed to meet the standards required by the EC Directive has proved to be a major challenge. Figure 10 below, with its accompanying table, shows the compliance records for bathing water monitoring stations over the last five years.

Estuarine water quality in the region is generally good and even the Mersey, previously one of the most polluted estuaries in Europe, is showing signs of improvement.

Figures 11, 12, and 13 provide information on the region's river water quality, with maps to show distribution, and bar charts to give a visual impression of how water quality in each Area has changed over the last five years.

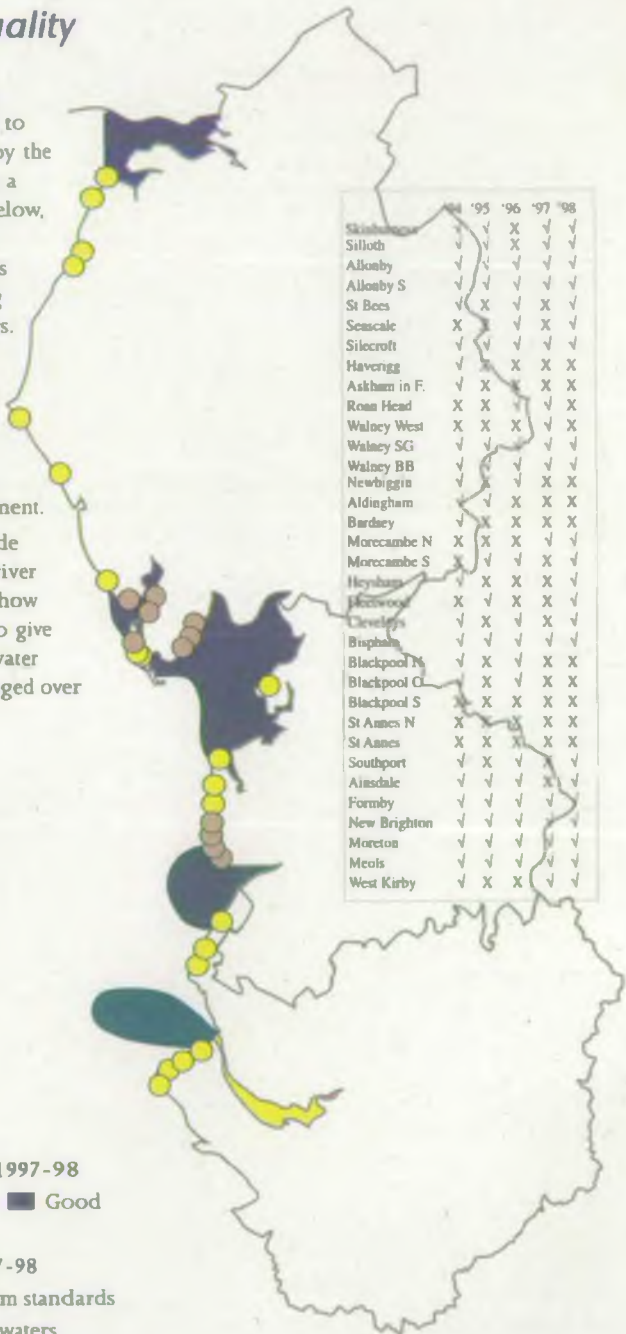
Figure 10.

Quality of Estuarine Water 1997-98

■ Bad ■ Poor ■ Fair ■ Good

Bathing Water Quality 1997-98

● ✓ Meets mandatory coliform standards
● x Non-compliant bathing waters



	'95	'96	'97	'98
Skidmore	✓	✓	X	✓
Silloth	✓	✓	X	✓
Altonby	✓	✓	✓	✓
Altonby S	✓	✓	✓	✓
St Bees	✓	X	✓	X
Sensale	X	✓	✓	✓
Silcroft	✓	✓	✓	✓
Havergill	✓	X	X	X
Askham in F.	✓	X	X	X
Ross Head	X	X	✓	X
Walney West	X	X	X	✓
Walney SG	✓	✓	✓	✓
Walney BB	✓	✓	✓	✓
Newbiggin	✓	✓	X	X
Aldingham	✓	✓	X	X
Bardsey	✓	X	X	X
Morecambe N	X	X	X	✓
Morecambe S	X	✓	✓	X
Heysham	✓	X	X	✓
Mosswood	X	✓	X	✓
Cleaves	✓	✓	✓	✓
Biisham	✓	✓	✓	✓
Blackpool N	✓	X	✓	X
Blackpool C	X	✓	X	X
Blackpool S	X	X	X	X
St Anne's N	X	X	X	X
St Anne's	X	X	X	X
Southport	✓	X	✓	✓
Ainsdale	✓	✓	✓	✓
Formby	✓	✓	✓	✓
New Brighton	✓	✓	✓	✓
Moreton	✓	✓	✓	✓
Meols	✓	✓	✓	✓
West Kirby	✓	X	X	✓

**Freshwater Quality Indicators: Kilometres of river in each category
North Area 1994-1998**

	A	B	C	D	E	F	O
1994	1116.3	817	293.8	83.4	61.7	7.5	39.4
1995	899.2	979.6	349.6	99.2	67.2	8.9	12.2
1996	903.7	1037.4	305.9	95.3	50.7	13.9	12.2
1997	879.4	1105	277.4	79.5	45.7	19.9	12.2
1998	1172.7	925.9	176.3	68.8	46.3	29.1	0

River Quality in North Area 1994 -1998



Standards for the Chemical GQA			
GQA Grade	Dissolved Oxygen (% saturation) 10 percentile	Biochemical Oxygen Demand (mg/l) 90 percentile	Ammonia (mgN/l) 90 percentile
A	80	2.5	0.25
B	70	4	0.6
C	60	6	1.3
D	50	8	2.5
E	20	15	9.0
F	<20		



Figure 11.
River Quality in
NW North Area, 1997-98

Freshwater Quality Indicators: kilometres of river in each category *Central Area 1994-1998*

	A	B	C	D	E	F	O
1994	341	276.3	250.6	169.4	250.6	52.6	146.7
1995	210.4	434.2	274.8	190.3	318.5	37.5	21.5
1996	201.2	393.9	306.7	179.6	349.4	34.9	21.5
1997	209.2	321.6	379.2	203.2	329	23.7	21.3
1998	274.6	388.2	315.1	193.2	293.2	22.6	0

River Quality in Central Area 1994 -1998

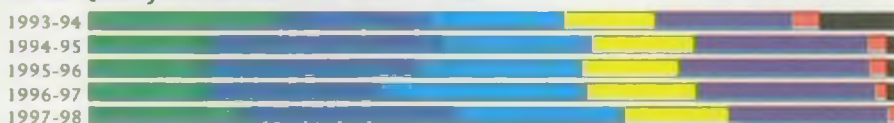


Figure 12.

River Quality in
NW Central Area, 1997-98

Freshwater Quality Indicators: kilometres of river in each category
South Area 1994-1998

	A	B	C	D	E	F	O
1994	21.7	437.4	459	336	392.3	126.8	68.9
1995	43.4	469.8	390.3	461.9	361.9	113.9	4.1
1996	39.7	520.8	418.4	419.6	358	83.1	2.5
1997	61.6	431.8	534.5	336.9	362.9	111.9	2.5
1998	95.2	430.7	500.3	362	333.7	115.6	0.9

River Quality in South Area 1994 -1998



Figure 13.
 River Quality in NW South Area, 1997-98

Appendix 1: Site inputs and remaining capacities at sites licensed to accept inert and construction/demolition waste

Operator	site location	district	void 1/4/97 000m3	void 1/4/98 000m3	permitted 000T	deposits 1996/97 000T	deposits 1997/98 000T
CUMBRIA							
Thomas Armstrong Ltd	New Cowper	Allerdale	426.2	558.2	1,047.0	6.8	4.3
Cumbria CC	Broughton Craggs	Allerdale	64.8	61.4	25.0	4.0	4.5
Cumbria CC	Brocklebank Quarry	Allerdale	15.5	15.0	2.5	0.7	0.4
C Hindle	Longlands	Barrow	n/a	8.2	n/a	n/a	1.6
Calrd Environmental	Todhills	Carlisle	65.0	70.0	75.0	32.0	24.8
Ashbeech Ltd	Calsil Brickworks	Carlisle	-	7.8	-	-	0.5
BG Plc	Rome Street	Carlisle	-	3.9	-	-	1.8
Watsons Sand & Gravel	Peel Place Quarry	Copeland	n/a	3.0	n/a	n/a	2.7
Cumbria CC	Galemirr Quarry	Copeland	21.2	14.3	25.0	0.4	8.6
Cumbria CC	Shore Road, Drigg	Copeland	41.3	40.7	25.0	0.3	0.8
BNFL Ltd	Windscale landfill	Copeland	-	4.9	106	3.0	0.3
BNFL Ltd	North tip ext	Copeland	500	150.0	75	0	753.3
BNFL Ltd	Calder tip ext	Copeland	136	135.3	75	3.6	0.6
Cumbria Stone	Blasterfield Quarry	Eden	40	37.4	-	0	2.2
Cumbria CC	Fairthorns Lane	South Lakeland	17.2	16.5	25.0	0.2	0.9
NWW Ltd	Castle Hill	South Lakeland	1.8	1.0	18.2	1.7	1.1
Priory Building Co	Black Bull Farm	South Lakeland	1.0	0.65	73.0	1.6	2.4
County Contracting	Crag House	South Lakeland	-	312	25	0.3	0.4
LANCASHIRE							
Star Paper Mill	Sappi Europe	Blackburn	19.3	44.0	5.0	1.0	0
W Knowles Ltd	Thorny Height Quarry	Blackburn	pre-operational	-	24.5	-	-
McAlpine/Amec	Spring Guide Farm	Blackburn	45.0	-	500.0	52.2	51.6
Clive Hurt Plant Hire	Gt Knowley	Chorley	-	455.6	225.0	164.1	123.7
Philips components	Close Brow Quarry	Hyndburn	-	99.0	-	6.0	1.9
J W Hartley	Thwaite Gate	Lancaster	15.9	15	10.0	0.3	0.3
J A Jackson	Eller Quarry	Lancaster	50	50.0	5.0	0.5	0.4
Tim Butler Plant	Middleton Road	Lancaster	67.5	52	90.0	24.8	12.8
J A Jackson	Lightfoot Green	Preston	103.0	200.0	103.3	57.0	59.6
Tustin Developments	Red Scar	Preston	pre-operational	-	-	-	-
North West Water	Chapel Hill	Ribble Valley	18.8	15.6	24.0	1.3	2.7
Castle Cement Ltd	Coplow Quarry	Ribble Valley	n/a	n/a	60.0	33.0	23.6
William Pye Ltd	Lords Quarry	Ribble Valley	15.7	8.9	17.0	23.4	1.5
William Pye Ltd	Penwortham GC	South Ribble	17.6	17.2	15.0	0.6	0.3
Shows of Darwin	Darwen	West Lancs	n/a	49.0	1.0	0.7	0.5
Henry Alty Ltd	Hesketh Bank	West Lancs	16.8	n/a	24.0	23.7	39.1
Mainsprint Ltd	Round O Quarry	West Lanc	-	3,000	pre-operational	-	-
Surfforce Ltd	Holland Colliery	West Lancs	not operational	-	2.5	-	-
Ibstock Ltd	Ibstock	West Lancs	85.7	160.0	6.0	1.5	1.2
Hardrock Ltd	Stoney Brow Quarry	West Lancs	10.0	1.5	60.0	49.0	29.3
Kingscourt Develop.	Kingscourt	Wyre	34.2	2.6	5.0	0.4	0.7
Baxter Const	Moss Side Lane	Wyre	3.3	3.3	20.0	1.1	0
Wyre BC	Jameson Road	Wyre	<5,000	<5,000	140.0	122.9	0
ICI Ltd	ICT Mine Sub.	Wyre	not operational	-	18.3	-	-
Brierkrete Ltd	Brierkrete	Wyre	-	-	0.24	0	-

Operator	site location	district	void 1/4/97 000m3	void 1/4/98 000m3	permitted 000T	deposits 1996/97 000T	deposits 1997/98 000T
MERSEYSIDE							
NNQ Ltd	Berrington's Lane	St Helens	126	104	188.0	52.4	18.7
GREATER MANCHESTER							
G & J Seddon	Georges Lane	Bolton	50	10	186.2	71.9	0.0
Park Pit Landfill	Roach Bank	Bury	595	86.9	547.5	n/a	423.4
East Lancs Paper Mill.	Church St East	Bury	7.8	n/a	29.2	-1.8	n/a
SPH Group	Gorton	Manchester	n/a	n/a	n/a	n/a	0.2
F E Blakeman	Ferney Field Farm	Oldham	25	4.5	365.0	25.0	17.1
DEW Group	Higginshaw Lane	Oldham	no data				
Webfell Waste	Huddersfield Road	Oldham			no data		
T Kaberry	Bury New Road	Rochdale	new site	-	-	n/a	24.2
NWW Ltd	Newhey	Rochdale	321	471	0	2.3	0.7
National Power Ltd	Agecroft	Salford	20	20	-	0	0.3
W L Massey	Bong's Farm	Stockport	50	36	375.0	1.1	12.0
R Boothby	Hazel Knoll Farm	Stockport	20	20	20.1	0.5	0.3
Offerton Sand & Gravel	Marple Road	Stockport	n/a	n/a	198.4	104.8	124.9
New Soils Ltd	Greenside & Lowend	Tameside	45	45	146.8	n/a	0.3
Chartrange	Woodend Lane	Tameside			no data		
Redland Roof Tiles	Redland Lid	Wigan			not operational		
CHESHIRE							
British Salt	Cledford Lane	Congleton	n/a	n/a	0	-	5.2
J Barrie (Plant Hire)	Hough Mill Quarry	Crewe	750	669	100	86	67.2
P Goddard	Hollinset Farm	Macclesfield	18.5	16.0	n/a	n/a	4.4
Park skip hire	Endon Quarry	Macclesfield	n/a	n/a	n/a	n/a	2.6

Appendix 2: Inputs, outputs and material recovered at sites licensed for transfer and treatment operations

District	inputs 000tpa	outputs 000tpa	recovered 000tpa				
Cumbria				HYNDBURN			
Household CA				Household CA	n/a		0
Transfer Station				Transfer Station	71.2	70.6	0
ALLERDALE				LANCASTER			
Household CA	6.0	5.0	1.0	Household CA	n/a		0
Transfer Station	7.2	2.6	3.5	Transfer Station	67.6	41.7	0
BARROW IN FURNESS				PENDLE			
Household CA	6.2	5.9	0.3	Household CA	n/a		0
Transfer Station	46.7	18.5	27.9	Transfer Station	31.4	4.7	0
Treatment Plant	53.7	54.8	0.8	Treatment Plant	4.3		
CARLISLE				PRESTON			
Household CA	8.4	5.8	2.6	Household CA	n/a		0
Transfer Station	100.8	24.5	25.8	Transfer Station	74.7	69.9	2.2
COPELAND				RIBBLE VALLEY			
Household CA	14.8	4.2	0.6	Household CA	n/a		0
Transfer Station	0	0	0	Transfer Station	0.6	0.6	0
EDEN				ROSSENDALE			
Household CA	0.5	0.5	0	Household CA	n/a		0
Transfer Station	0	0	0	Transfer Station	0	0	0
Treatment Plant	2.3	0	1.7	Treatment Plant	2.7	0.3	0
SOUTH LAKELAND				SOUTH RIBBLE			
Household CA	8.4	6.8	1.6	Household CA	n/a		0
Transfer Station	0	0	0	Transfer Station	27.8	26.0	0
Lancashire				Treatment Plant	21.4	0.2	0
BLACKBURN				WEST LANCS			
Household CA		7.9	0	Household CA	n/a		0
Transfer Station	94.3	98.2	0	Transfer Station	452.7	275.4	0
BLACKPOOL				WYRE			
Household CA		n/a	0	Household CA	n/a		0
Transfer Station	182.5	40.7	0	Transfer Station	37.3	28.7	0
BURNLEY				Merseyside			
Household CA		n/a	0	LIVERPOOL			
Transfer Station	44.2	43.9	0	Household CA	5.9		0
CHORLEY				Transfer Station	108.9	4.8	0
Household CA		n/a	0	Treatment Plant	44.7	0	0
Transfer Station	61.1	63.7	0	SEFTON			
FYLDE				Household CA	0	0	0
Household CA		n/a	0	Transfer Station	86.2	0	0
Transfer Station	12.6	11.7	0				

KNOWSLEY

Household CA		0	0
Transfer Station	83.7	0	0

ST HELENS

Household CA		12.1	0
Transfer Station	42.6	0	0
Treatment Plant	7.9	0	0.7

WIRRAL

Household CA		18.8	0
Transfer Station	56.2	0	0
Treatment Plant	8.8	0	0

Greater Manchester**BOLTON**

Household CA		39.7	2.8
Transfer Station	10.8	3.0	1.8
Treatment Plant	10.3	10.0	0.1

BURY

Household CA		69.2	0.6
Transfer Station	25.8	24.9	0.3

MANCHESTER

Household CA		24.6	0.3
Transfer Station	89.5	79.8	64.0
Treatment Plant	626.4	418.7	1.4

OLDHAM

Household CA		13.8	0.8
Transfer Station	188.6	174.8	8.5

ROCHDALE

Household CA		90.3	0.9
Transfer Station	88.0	92.6	0.2
Treatment Plant	6.6	0.3	6.3

SALFORD

Household CA		23.5	0.3
Transfer Station	24.1	7.8	10.7
Treatment Plant	158.4	154.2	4.2

STOCKPORT

Household CA		31.2	2.1
Transfer Station	120.2	81.1	15.8

TAMESIDE

Household CA		19.8	0.2
Transfer Station	46.4	23.6	18.4
Treatment Plant	34.2	9.3	3.8

TRAFFORD

Household CA		58.8	1.1
Transfer Station	175.2	115.4	61.0
Treatment Plant	756.0	394.5	25.6

WIGAN

Household CA		38.3	0.2
Transfer Station	108.8	96.8	8.1

Cheshire**CHESTER**

Household CA		n/a	n/a
Transfer Station	8.9	0	0

CONGLETON

Household CA		12.5	n/a
Transfer Station	10.7	0	0
Treatment Plant	36.2	0	0

CREWE & NANTWICH

Household CA		10.5	0
Transfer Station	33.4	0	0

ELLESMERE PORT & NESTON

Household CA		12.2	0
Transfer Station	22.0	0	0
Treatment Plant	51.1	0	0

HALTON

Household CA		11.9	n/a
Transfer Station	122.5	44.7	0
Treatment Plant	14.8	0	0

MACCLESFIELD

Household CA		28.1	0
Transfer Station	38.1	16.5	0

VALE ROYAL

Household CA		10.4	0
Transfer Station	6.2	9.7	0
Treatment Plant	1.8	0	0

WARRINGTON

Household CA		26.3	
Transfer Station	56.1	0	0
Treatment Plant	66.4	0	0

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