NORTH WEST REGION WASTE MANAGEMENT GROUP

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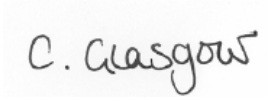
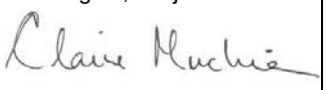
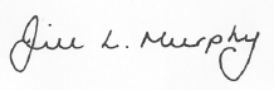
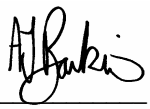
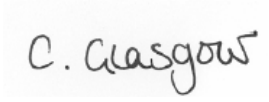
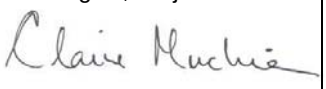
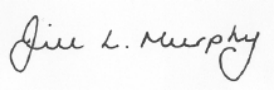
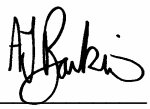
1.0	Draft	 C Glasgow, Project Scientist  C Muckian, Project Scientist	 J Murphy, Senior Scientist	 A J Baskin, Director	19/02/07
1.1	Final	 C Glasgow, Project Scientist  C Muckian, Project Scientist	 J Murphy, Senior Scientist	 A J Baskin, Director	15/03/07

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1.0 INTRODUCTION

This report has been prepared by the North West Region Waste Management Group (NWRWNG) in order to assess the progress that has been made within the sub region towards the implementation of the NWRWMG Waste Management Plan.

This report provides an update on the current waste arisings for the 2005/06 financial year and compares them against those stated within the Waste Arisings Surveys for NI and the 2004/05 Annual Report and Review. As with previous years, it also provides a review of the actions taken by the Group towards implementation of infrastructure and assesses the measures that have been set in place to secure contracts for the collection, reprocessing and delivery to end markets of material collected within the NWRWMG Region. The report also compares current and projected waste arisings against the Waste Management Strategy targets and WET Act diversion targets.

In order to assess the above, various assumptions have been made during the calculation of the projected recovery and diversion rates for the group. It is important that these are taken into account when considering the data within this review. These assumptions are outlined below.

- The biodegradable fraction of municipal waste accounts for 71% of the total municipal waste arisings;
- The Group has set limits for the annual growth in municipal waste over the Plan period, up to 2020, as follows:
  - 1.5% up to 2010
  - 1.0% from 2010 to 2013
  - 0.5% from 2013 to 2020
- Growth of number of occupied households in the region has been estimated at 2% per Council area per year;
- Estimates of biodegradable municipal waste recovered in the NWRWMG from 2003 to 2009/10 have been calculated using a mass balance approach;
- The tonnages from individual Council Household Recycling Centres are based on the data provided in WasteDataFlow and estimates of current and future performance;
- A tonnage for central composting bins for urban areas have been assessed according to individual Council performance, based on data provided in WasteDataFlow and estimates of current performance. A tonnage of 0.09 tonnes/bin/year has been assumed for rural areas;
- The tonnages from Recycling Banks are based on individual Council performance provided in WasteDataFlow and estimates of current performance;
- The tonnages from mixed dry recyclables bins and boxes are based on individual Council performance provided in WasteDataFlow and estimates of current performance;
- In situations where Councils have indicated a borough wide scheme of brown or blue bins, it is assumed that all new builds will be incorporated into the scheme.

2.0 REVIEW OF CURRENT WASTE ARISINGS

Information for this section of the review has been compiled using the verified figures from WasteDataFlow Returns submitted from each of the seven local authorities for data from April 2005 to March 2006. Data from previous years has also been included within this report as a means of allowing comparisons to be made against consecutive years and hence annual performance to be monitored at a glance. The data from 2002, 2003 and 2004 has been obtained from the 2002, 2003/04 and 2004/05 Annual Reports, while the data from 1999/2000 and 2001 has been obtained from the Municipal Waste and Waste Industry Survey, carried out as part of the Northern Ireland Waste Arisings Study and the Waste Arisings Study Phase III, Municipal Waste Survey 2002.

2.1 KEY WASTE MANAGEMENT INDICATORS

Key waste management indicators have been presented below to provide an overview of municipal waste management within the NWRWMG between 1999 & 2005/06.

Key Performance Indicators

	1999/00	2001	2002	2003	2004/05	2005/06
Household Waste						
No of Households[1]	108,393	110,798	113,448	115,999	120,543	122,390
% Growth rate in occupied household no's	-	2.2%	2.3%	2.2%	3.9%	1.5%
Household waste (tpa)[2]	152,430	155,796	174,135	166,521	166,357	163,869
Household waste growth rate	-	2.2%	11.8%	-4.4%	-0.1%	-1.5%
Waste per household (tpa)	1.41	1.41	1.53	1.43	1.38	1.34
Recovery[3] rate of household waste (%)	2.5%	4.1%	4.3%	9.9%	19.3%	27.6%
Municipal Waste						
Municipal waste (tpa)	211,126	200,539	205,103	190,067	190,195	190,741
Municipal waste growth (%)	-	-5.1%	2.3%	-7.4%	0.1%	0.3%
Municipal Waste Landfilled			197,292	173,389	157,169	141,119
Biodegradable Municipal Waste Landfilled			140,109	124,252	113,158	95,481

Notes:
1. No of households taken from The Rate Collection Agency for year ending December 2000, December 2001, March 2002 and March 2003. The figure for 2004/05 has been taken from Housing Statistics- Northern Ireland Housing Bulletin, Department of Social Development.
2. tpa= tonnes per annum
3. Recovery refers to household waste recycling and composting
4. Shaded area- information not available
5. Includes only C&I waste collected by Councils

2.2 CURRENT HOUSEHOLD WASTE ARISINGS

For the basis of this report, the definition of household waste used has been that given in the Municipal Waste Data Monitoring and Reporting: Interim Guidelines 2003. The definition in the Guidelines states household waste means waste arising from a domestic property (i.e. a building or self contained part of a building which is used wholly for the purposes of living accommodation), caravan, residential home, premises forming part of a university or school or other educational establishment and premises forming part of a hospital or nursing home.

2.2.1 Household Waste Production

The household waste arisings for each Council for the full financial year has been presented in the table below.

Household Waste Arisings (tpa)[1]						
	1999/2000	**2001**	**2002**	**2003**	**2004/05**	**2005/06**
Ballymoney Borough Council	13,739	13,203	13,691	14,679	13,268	13,326
Coleraine Borough Council	31,123	34,674	37,793	43,388	44,261	39,157
Derry City Council	48,850	47,738	55,305	43,925	47,335	50,486
Limavady Borough Council	14,527	13,904	14,899	17,033	14,358	15,619
Magherafelt District Council	18,741	20,853	20,632	17,656	18,498	19,473
Moyle District Council	8,866	9,066	9,852	8,639	8,626	7,303
Strabane District Council Council	16,584	16,358	21,964	21,201	20,011	18,505
North West TOTAL	**152,430**	**155,796**	**174,135**	**166,521**	**166,357**	**163,869**

Notes: 1. Calculated to the nearest tonne

The table shows the variation in household waste arisings for the group between 1999 and 2005/06. The Waste Management Plan for the NWRWMG suggested a growth rate for household waste arisings of 1.5% up to 2010. There has been a great deal of variation between years previously, with increases of up to 11.8% being seen between 2001 and 2002, and the growth percentage for the last year has being – 1.5% for the group.

A number of Councils, including Coleraine, Moyle and Strabane have seen a reduction in household waste arisings over the last year while Ballymoney, Derry, Limavady and Magherafelt have recorded increases. Limavady Borough Council has the highest increase in household waste arisings with an increase over the last year of 8.8%.

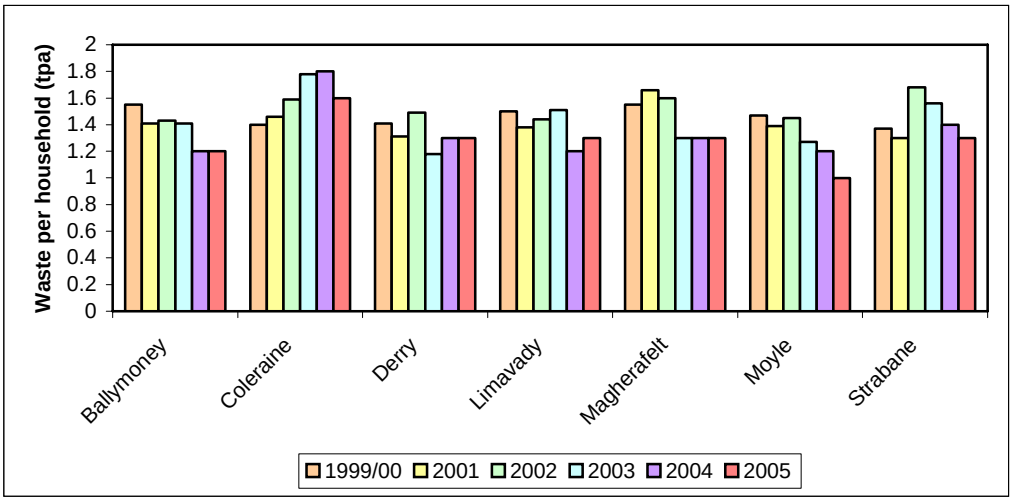
The household waste arisings for each individual Council for 2005/06, recorded on a quarterly basis, are shown in the table below:

Household Waste Arisings 2005/06 Per Quarter (tpa)				
	April - Jun 05	**Jul - Sep 05**	**Oct – Dec 05**	**Jan – March 06**
Ballymoney	3,007	3,589	3,358	3,372
Coleraine	10,607	10,994	8,341	9,216
Derry	12,947	13,058	11,692	12,788
Limavady	4,540	3,579	3,416	4,084
Magherafelt	5,147	4,927	4,729	4,670
Moyle	2,255	2,048	1,568	1,433
Strabane	4,686	4,784	4,666	4,368

2.2.2 Waste Quantities Generated Per Household

The quantity of waste generated per household, calculated as the quantity of household waste produced in a region divided by the number of households, provides an indicator of trends in household waste arisings. The figure can be used to assess the performance of waste reduction activities and evaluate broad trends in household waste generation.

Household Waste Generated per Household



As illustrated in the above figure, the majority of Councils have shown a general reduction in the amount of waste produced per household from 1.38 tonnes per household in 2004/05 to 1.34 tonnes per household in 2005/06.

2.3 CURRENT HOUSEHOLD WASTE RECOVERY RATES

The following table shows a summary of the 2005/06 household recovery rates, as recorded through the verified figures from WasteDataFlow for the NWRWMG.

Household Waste Recovery Rates 2005/06	
Ballymoney Borough Council	24%
Coleraine Borough Council	24%
Derry City Council	28%
Limavady Borough Council	36%
Magherafelt District Council	36%
Moyle District Council	26%
Strabane District Council	21%
Average North West Household Recovery Rate	**28%**

The average household recovery rate for the NWRWMG during 2005/06 was 28%, an increase of over 9% on the 2004/05 waste arisings. A total of 45,280 tonnes of household waste was recovered in the NWRWMG. This rise has been due to the continued efforts of the Councils within the NWRWMG in the implementation and improvement of infrastructure and services.

A breakdown of these rates, illustrated on a quarter to quarter basis, is shown in the following table.

Household Waste Recovery Rates 2005/06 Per Quarter (tpa)				
	April - Jun 05	**Jul - Sep 05**	**Oct – Dec 05**	**Jan – March 06**
Ballymoney	17%	30%	24%	25%
Coleraine	28%	23%	21%	24%
Derry	13%	33%	35%	32%
Limavady	24%	46%	43%	34%
Magherafelt	38%	39%	34%	31%
Moyle	15%	32%	29%	30%
Strabane	21%	25%	20%	20%
NWRWMG Average	**22%**	**31%**	**29%**	**28%**

Note: 1 Estimated to nearest 1.0%

2.3 CURRENT MUNICIPAL WASTE ARISINGS

The quantity of municipal waste, and particularly its biodegradable fraction, is a key indicator of waste management performance given its relationship to landfill diversion targets under the Landfill Directive (1999/31/EC). For the purposes of this report, the definition used for municipal waste has been taken from the Municipal Waste Data Monitoring and Reporting: Interim Guidelines, 2003. The definition in the Guidelines states municipal waste means household waste and any other waste under the control of (i.e. collected by) District Councils or their agents acting on their behalf.

2.3.1 Municipal Waste Production

A summary of the municipal waste produced by each Council has been presented in the table below.

Municipal Waste Arisings (tpa)						
	1999/00	**2001**	**2002**	**2003**	**2004/05**	**2005/06**
Ballymoney Borough Council	18,683	22,244	21,563	18,876	14,778	15,188
Coleraine Borough Council	40,802	42,621	39,965	43,388	46,267	44,962
Derry City Council	73,760	54,911	63,305	51,925	54,922	56,324
Limavady Borough Council	15,567	16,714	16,417	18,556	17,901	18,311
Magherafelt District Council	24,561	25,594	27,204	22,383	22,605	23,817
Moyle District Council	11,066	11,266	10,833	9,666	10,326	10,681
Strabane District Council	26,687	27,189	25,817	25,273	23,396	21,457
NWRWMG TOTAL	**211,126**	**200,539**	**205,103**	**190,067**	**190,194**	**190,741**

The figures in the table above show a large degree of fluctuation in these growth rates. The growth rate over the past year has been calculated as 0.3% compared with 0.1% in the previous reporting period.

A breakdown of these figures per quarter for each individual Council is shown in the following table.

Municipal Waste Arisings 2005/06 Per Quarter (tpa)				
	April - Jun 05	**Jul - Sep 05**	**Oct – Dec 05**	**Jan – March 06**
Ballymoney	3,595	4,165	3,705	3,723
Coleraine	12,140	12,119	9,882	10,821
Derry	14,276	14,673	13,821	13,554
Limavady	5,378	4,461	4,276	4,196
Magherafelt	6,116	6,068	5,690	5,944
Moyle	2,683	3,118	2,524	2,355
Strabane	5,496	5,443	5,330	5,189
NWRWMG Total	**49,684**	**50,048**	**45,228**	**45.781**

2.3.2 Municipal Waste Recycling & Composting Rates

The approximate total amount of municipal waste recycled and composted, measured as a percentage of the total municipal waste arisings during 2005/06 was 49,622 tonnes or 26%. The breakdown of these figures for each Council is shown below. The figures can be calculated as the tonnage of municipal waste recovered divided by the total municipal waste tonnage.

Municipal Waste Recovery Rates 2005/06	
Ballymoney Borough Council	21%
Coleraine Borough Council	24%
Derry City Council	28%
Limavady Borough Council	33%
Magherafelt District Council	32%
Moyle District Council	18%
Strabane District Council	19%
Average North West Municipal Recovery Rate	**26%**

A break down of these figures for individual Councils, reported on a quarter to quarter basis, is shown in the table below.

Municipal Waste Recovery Rates 2005/06 Per Quarter (%)[1]				
	April - Jun 05	**Jul - Sep 05**	**Oct – Dec 05**	**Jan – March 06**
Ballymoney	14%	26%	22%	23%
Coleraine	25%	24%	22%	25%
Derry	12%	30%	36%	36%
Limavady	22%	40%	37%	36%
Magherafelt	35%	36%	31%	27%
Moyle	12%	22%	19%	19%
Strabane	18%	22%	18%	17%

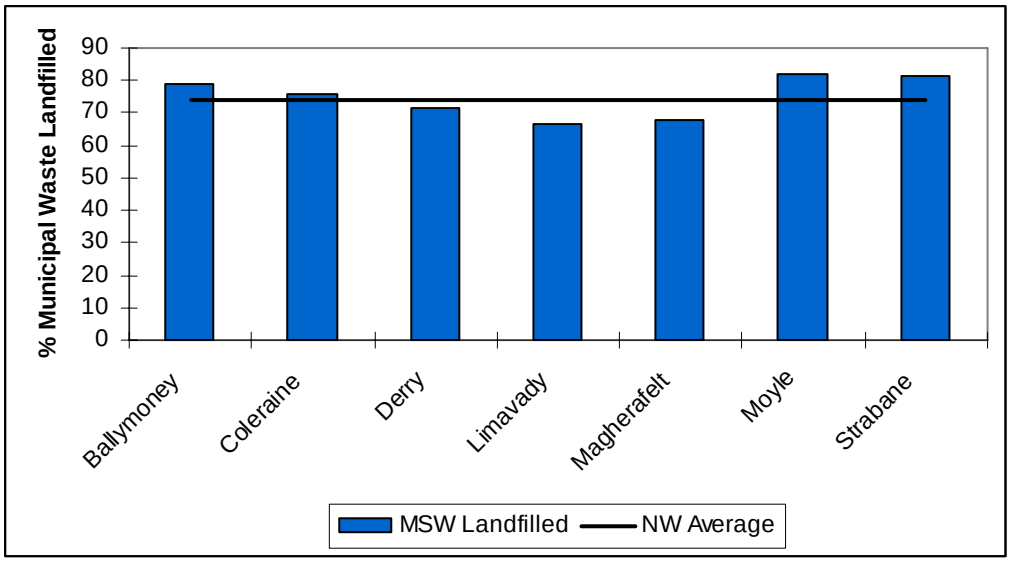
Note: 1. Calculated to the nearest 0.1%

The majority of Councils have experienced a notable increase in the municipal recovery rates between 2004/05 and 2005/06 due to the continued implementation and improvement of infrastructure and services.

2.3.3 Municipal Waste Landfilled

The approximate percentage of municipal waste landfilled, as a percentage of total municipal waste arisings in the NWRWMG during 2005/06 was 74% or 141,119 tonnes. This figure represents a decrease of 8.6% on last year's total. The figures were calculated as the tonnage of municipal waste landfilled during 2005/06 divided by the total municipal waste arisings and are illustrated below.

% Municipal Waste Landfilled



2.3.4 Biodegradable Municipal Waste Landfilled

The approximate tonnage of Biodegradable Municipal Waste (BMW) landfilled in the NWRWMG in 2005/06 is estimated to be 95,481 tonnes or 84% of the total BMW in the Region. This figure represents a decrease of 17,677 tonnes from 2004/05. The table below shows the tonnages of BMW for the individual Councils within the NWRWMG and compares current BMW landfilled tonnages against the 2005/06 NILAS Allowances. These figures show that both the NWRWMG and every Council within the Group met their 2005/06 NILAS District Council allowance.

BMW Landfilled			
	NILAS Allowances 2005/06	**BMW landfilled 2005/06**	**Difference**
Ballymoney Borough Council	12,968	8,119	4,849
Coleraine Borough Council	28,812	22,604	6,208
Derry City Council	36,273	27,909	8,364
Limavady Borough Council	12,255	8,016	4,239
Magherafelt District Council	14,230	10,445	3,785
Moyle District Council	6,889	6,043	846
Strabane District Council	17,412	12,345	5,067
North West TOTAL	**128,839**	**95,481**	**33,358**

The increase in waste recovery rates and hence the decrease in waste being landfilled have shown that there has been some progression in the past year towards meeting the BMW targets. There is a need however to not only ensure continued implementation of the Waste Management plan, but also to strive towards a decrease in waste arisings, in order to ensure that the WET Act targets can be met.

3.0 CURRENT PERFORMANCE

The implementation of the Waste Management Plan for the NWRWMG required the continued provision of a range of enhanced services and facilities over the specified period of the Plan.

This section of the review compares and contrasts the infrastructure and facilities that have been implemented during 2005/06 or that are proposed for 2007 & 2008 with what was contained within the North West Waste Management Plan and highlights areas in which further development is required.

3.1 HOME COMPOSTING

To date Councils have issued a small number of home composting bins to households throughout the Region as summarised below (reported in the WasteDataFlow).

Home Composting Units	
Ballymoney	Approximately 365 issued.
Coleraine	Issued on demand – approximately 1,315 issued.
Derry	Issued on demand – approximately 4,000 issued.
Limavady	Approximately 3 issued.
Magherafelt	Approximately 700 issued.
Moyle	Issued on demand – approximately 429 issued.
Strabane	Issued on demand – approximately 736 issued.
Total Units Issued	Approximately 7,548 issued.

Although the number of composting units issued by each Council on a quarterly basis is recorded within WasteDataFlow, there remains to be no accurate way of measuring and recording performance of home composting units. For this reason therefore, home composting, although considered to be a good means of reducing residual waste within the home environment, remains to be excluded from the current recovery rates.

3.2 COMMUNICATIONS PLAN

A joint Communications Plan has been prepared by the Councils of the NWRWMG, which is contained in Appendix D of the North West Waste Management Plan submitted to the Department of the Environment in June 2006. This Communication Plan sets out the joint communications activities which could be delivered on a collaborative basis within the Group with the aim of:

- Encouraging waste prevention and encouraging participation in waste prevention initiatives.

- Increasing participation for District Councils recycling collections and bring facilities.
- Reducing contamination.
- Increasing awareness of sustainable waste management in the North West Region Waste Management Group area.

3.3 IMPLEMENTATION ACTION PLAN PROGRESS

As part of the review of the Plan, an Implementation Action Plan (IAP) is currently being developed. The IAP will be updated annually and has been designed to sit below the Waste Management Plan in the hierarchy of waste documents.

3.4 SERVICE CONTRACTS

All councils within the NWRWMG have secured short to medium term contracts for the collection, transfer and reprocessing of mixed dry recyclables. These have been secured through a number of individual or joint contracts. The Group as a whole also intends to procure services for the collection and treatment of compostable waste collected through kerbside collection (which Magherafelt, the only Council with rolling kerbside collection for compostables, is presently doing).

In addition to this, the Group have recently procured a service contract for the provision of landfill capacity to serve the waste disposal needs of the Region for 20 years. Details of the service providers for each Council are provided in the table below.

Service Contracts		
	MDR	**Compostables**
Ballymoney	Glassdon	No kerbside collection of Compostables.
Coleraine	Glassdon	No kerbside collection of Compostables.
Derry	Glassdon	No kerbside collection of Compostables.
Limavady	Glassdon	No kerbside collection of Compostables.
Magherafelt	Glassdon	MDC invessel plant and Simpro
Moyle	Glassdon	No kerbside collection of Compostables.
Strabane	Glassdon	No kerbside collection of Compostables.

4.0 ASSESSMENT OF PROGRESS TOWARDS TARGETS

4.1 PROJECTED RECOVERY RATES

As previously stated in this review, one of the primary targets of the Waste Management Strategy for Northern Ireland was to recover 25% of household waste (of which 15% must constitute recycling and/or composting) by the end of 2005.

4.1.1 Projected Household Waste Recovery Rates

The following table show the estimated average quantity of household waste recovered (through recycling and composting), along with the target recovery rates as laid out in the Waste Management Plan, for the NWRWMG between 2004/05 and 2009/10. The values shown are calculated based on the information supplied by each of the Councils within the NWRWMG in the Implementation Action Plans. It should be noted however, that the values estimated are based on the full implementation of all infrastructure and services in the timescales identified within each of the individual Councils Implementation Action Plans.

The breakdown of the values for each individual local authority within this period is presented in Appendix A.

Projected Household Waste Recovery Rates					
	2005/06 (Actual)	**2006/07**	**2007/08**	**2008/09**	**2009/10**
Ballymoney Borough Council	24%	24%	33%	33%	33%
Coleraine District Council	24%	34%	37%	36%	36%
Derry City Council	28%	35%	37%	39%	39%
Limavady Borough Council	36%	44%	45%	45%	45%
Magherafelt District Council	36%	40%	45%	45%	44%
Moyle District Council	26%	36%	42%	42%	42%
Strabane District Council	21%	25%	25%	25%	25%
North West Group	**28%**	**34%**	**37%**	**38%**	**38%**

The 2005/2006 figures in the table above are the actual figures recorded for the financial year.

It has been estimated that the projected quantity of household waste recovered (through both recycling and composting) in the NWRWMG for 2006/07 is 34% or 56,632 tonnes.

4.1.2 Projected Municipal Waste Recovery Rates

The following Table shows the estimated average quantity of municipal waste recovered (through recycling and composting) for the NWRWMG between 2005/06 and 2009/10. As with the previous section, this is based on the information supplied in the Implementation Action Plan and is dependent on all infrastructure and services being rolled out in the timescales identified within the Plan.

The breakdown of the values for each individual local authority within this period is presented in Appendix A.

Municipal Waste Recovery (through recycling and composting)					
	2005/06 (Actual)	**2006/07**	**2007/08**	**2008/09**	**2009/10**
Ballymoney Borough Council	21%	22%	30%	30%	30%
Coleraine District Council	24%	30%	32%	32%	32%
Derry City Council	28%	31%	33%	35%	35%
Limavady Borough Council	33%	39%	41%	40%	40%
Magherafelt District Council	32%	34%	38%	38%	38%
Moyle District Council	18%	25%	29%	29%	29%
Strabane District Council	19%	22%	22%	22%	22%
North West Group	**26%**	**30%**	**32%**	**33%**	**33%**

It has been estimated that the projected quantity of municipal waste recovered (through recycling and composting) for the NWRWMG for 2006/07 is 57,454 tonnes or 30%. The majority of Councils in the NWRWMG have a projected further increase in their recovery rates between 2006/07 and 2009/10.

4.2 WET ACT TARGETS

One of the targets set out for Northern Ireland is the Waste and Emissions Trading (WET) Act. The WET Act target for the United Kingdom sets out a series of targets for the diversion of Biodegradable Municipal Waste (BMW) from landfills as well as provision of a Northern Ireland Allowance Scheme, which will allocate landfill allowances to local authorities.

This Act will provide a cost effective and efficient way of helping the UK to meet its obligations under the Landfill Directive. This section provides details of the projected municipal and BMW landfilled quantities and assesses the BMW values against the current NI Allowances Scheme Targets.

4.2.1 Projected Municipal Waste Landfilled

The following table shows the projected amounts of municipal waste landfilled between 2005/06 and 2009/10 in the NWRWMG. A more detailed breakdown of the values for each individual local authority within the NWRWMG for this period is presented in Appendix A.

Municipal Waste Landfilled[1]					
	2005/06 (Actual)	**2006/07**	**2007/08**	**2008/09**	**2009/10**
Ballymoney Borough Council	11,932	12,072	11,001	11,184	11,369
Coleraine District Council	34,166	32,201	31,588	32,141	32,701
Derry City Council	40,402	39,406	38,869	38,395	39,032
Limavady Borough Council	12,238	11,354	11,235	11,448	11,664
Magherafelt District Council	16,175	15,896	15,212	15,502	15,797
Moyle District Council	8,758	8,168	7,836	7,961	8,088
Strabane District Council	17,447	17,049	17,297	17,548	17,803
North West Group	**141,118**	**136,147**	**133,037**	**134,179**	**136,454**

Note 1. Municipal waste calculated to the nearest tonne.

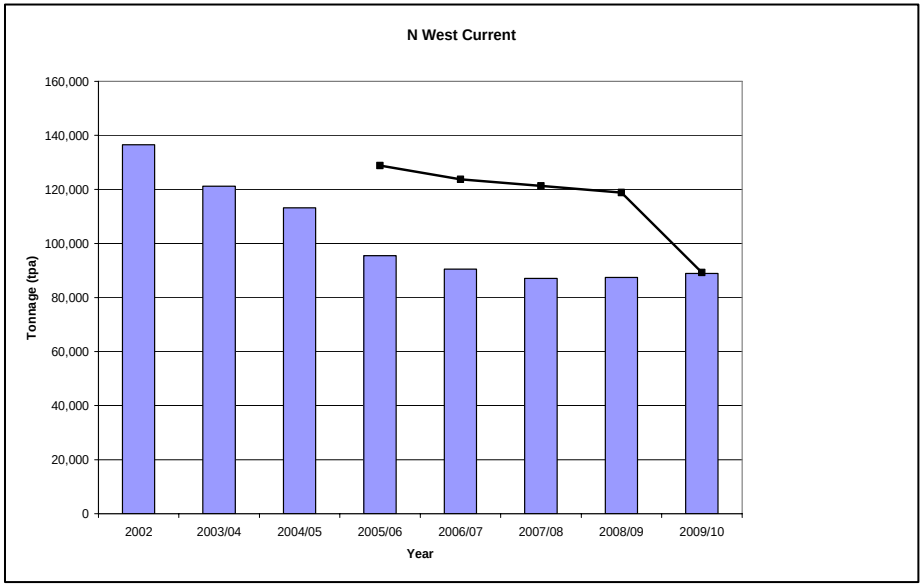
4.2.2 Projected Biodegradable Municipal Waste (BMW) Landfilled

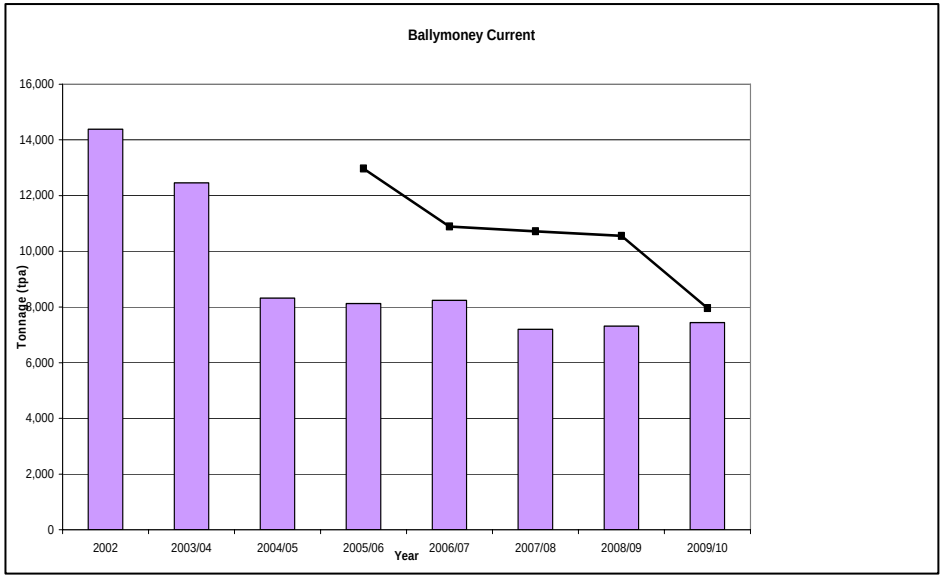
The following table shows the tonnage of BMW allowed to be landfilled and the potential fines faced by Councils in the NWRWMG for non-compliance.

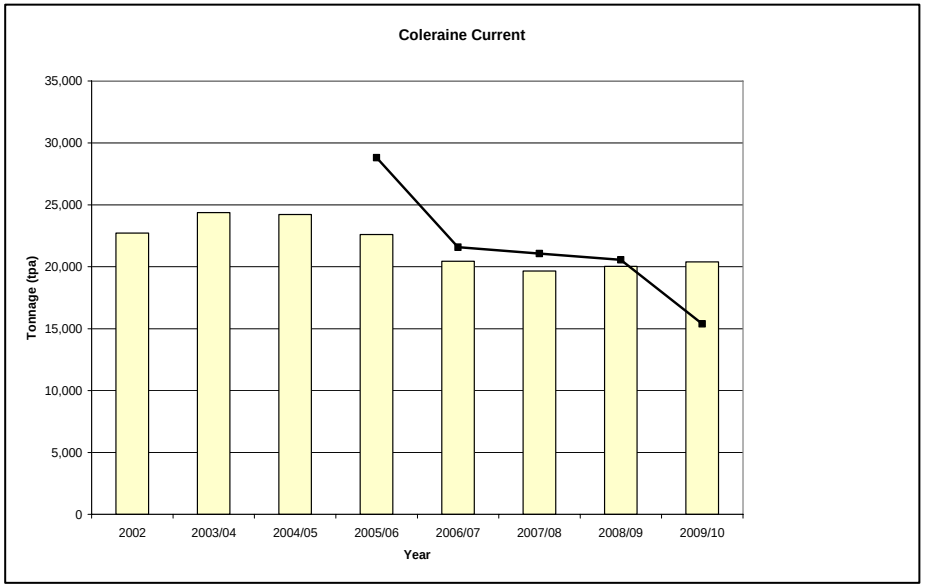
WET ACT TARGETS					
	2005/06	**2006/07**	**2007/08**	**2008/09**	**2009/10**
Tonnage BMW allowed	128,839	123,745	121,307	118,847	89,283
BMW allowed – projected BMW landfilled	33,357	33,230	34,267	31,452	411
Potential fines at £150 per tonne[1]	£0	£0	£0	£0	£0

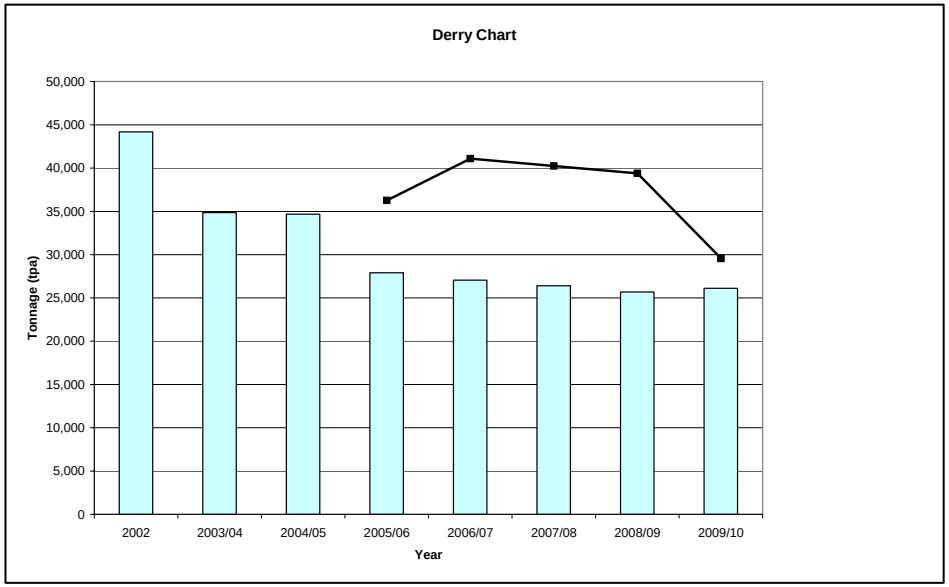
Note: 1. Calculated to nearest £1,000

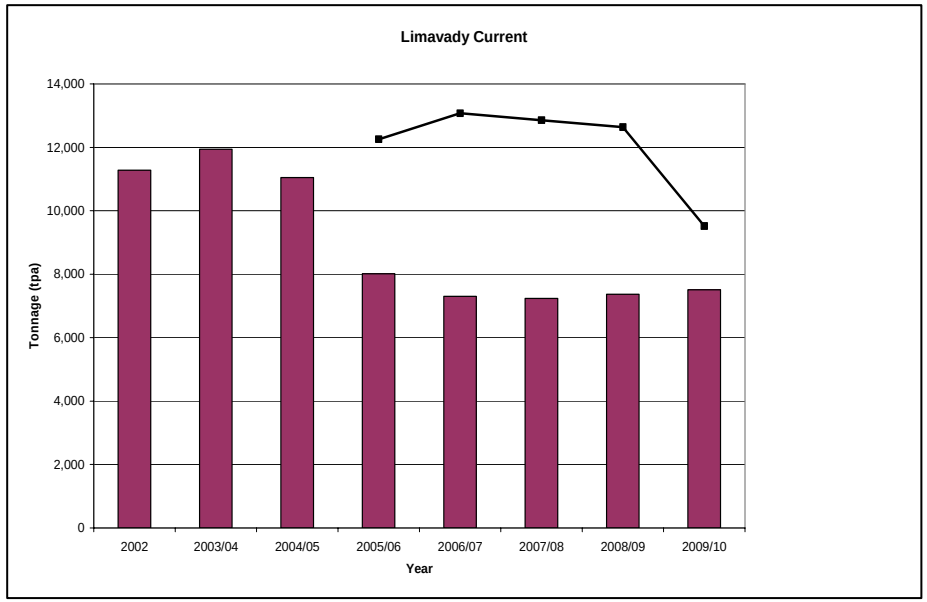
The following Graphs show the quantities of Biodegradable Municipal Waste (BMW) landfilled for NWRWMG between 2002 and 2009/10 and assess the projected tonnages against the NI Landfill Allowances. The breakdown of the values for each individual local authority within the NWRWMG, along with the estimated cost implications associated with non-compliance, for this period is presented within Appendix A.

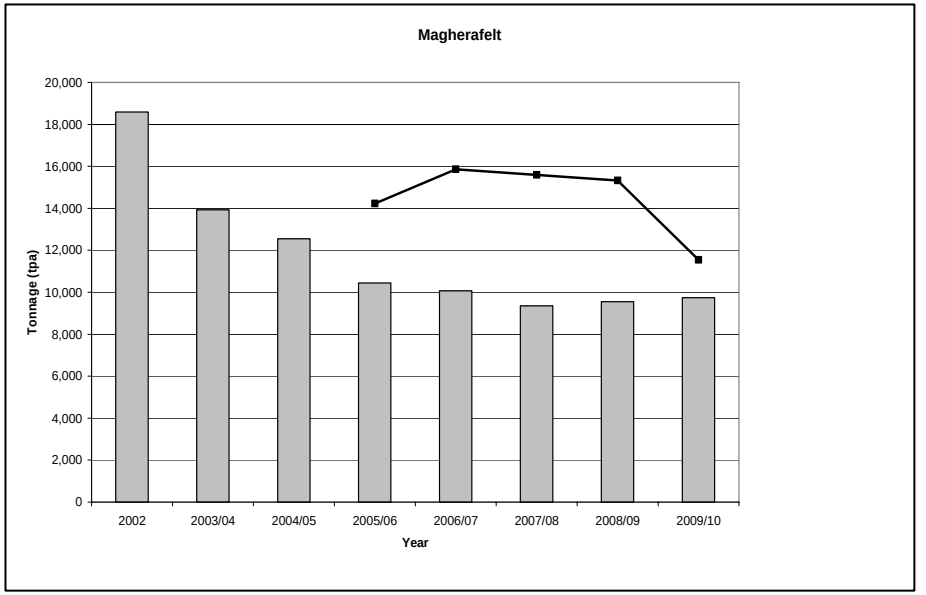

N West Current
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
Tonnage (tpa)
2002
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
Year

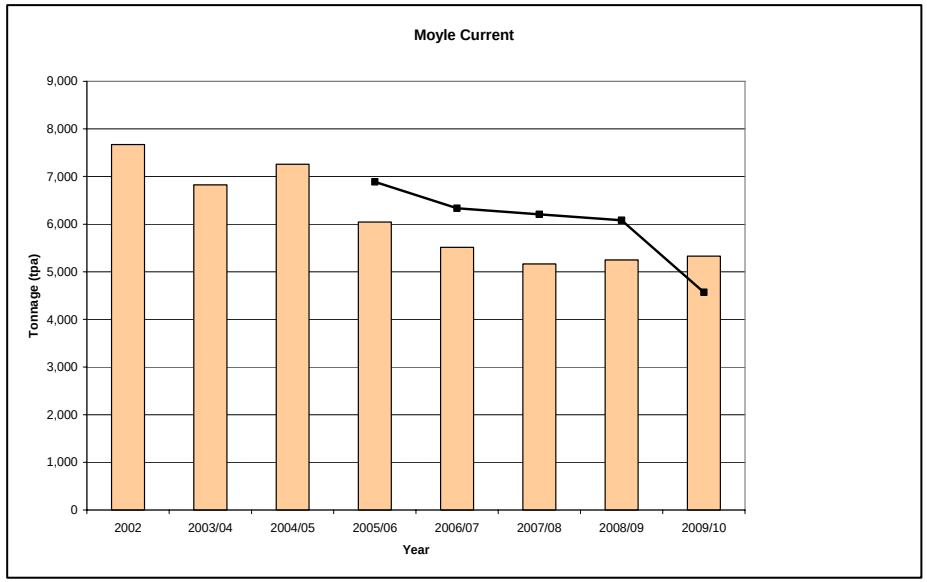

Ballymoney Current
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Tonnage (tpa)
2002
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
Year

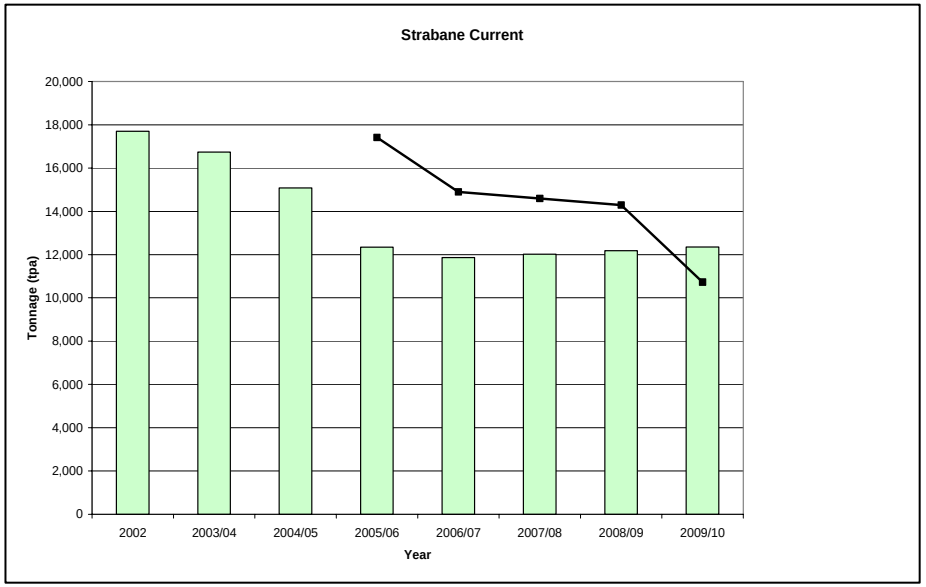

Coleraine Current
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Tonnage (tpa)
2002
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
Year


Derry Chart
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Tonnage (tpa)
2002
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
Year


Limavady Current
Tonnage (tpa)
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2002
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
Year


Magherafelt
Tonnage (tpa)
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2002
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
Year


Moyle Current
Tonnage (tpa)
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
2002
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
Year


Strabane Current
Tonnage (tpa)
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2002
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
Year

The projected BMW landfill projections are calculated on a Mass Balance approach to ensure as accurate data as possible.

It can be seen from the current projections, detailed in Appendix A, that the NWRWMG is expected to meet the NI Landfill Allowances up to 2009/10. This is based on the assumption that there will be free transfer or movement of surplus allowances between the Group. Should this be prohibited, then Coleraine, Moyle and Strabane will fail to meet their targets and hence will incur fines from 2009/10.

5.0 OTHER CONTROLLED WASTE

5.1 COMMERCIAL AND INDUSTRIAL (C&I)

The commercial and industrial sectors produce a significant quantity of wastes, the cost effective management of which will present significant challenges in the future.

The Commercial and Industrial waste arisings for Northern Ireland and the NWRWMG for the reporting year 2004/05 have been extracted from the recently completed EHS Commercial and Industrial Waste Arisings Survey 2004/05. The survey concluded that approximately 1,560,000 tonnes of Commercial and Industrial waste was produced in Northern Ireland in 2004/05. Of this amount, approximately 208,000 tonnes was generated by the NWRWMG.

The following figures have been obtained from the EHS Commercial and Industrial Waste Arisings Survey 2004/05.

Commercial and Industrial (C&I) Wastes			
	C&I Waste Produced (tonnes)	**Percentage of NWRWMG Total (%)**	**Percentage of NI Total (%)**
Ballymoney Borough Council	11,962	5.7	0.8
Coleraine Borough Council	48,666	23.4	3.1
Derry City Council	86,178	41.4	5.5
Limavady Borough Council	16,409	7.9	1.0
Magherafelt District Council	24,627	11.8	1.6
Moyle District Council	5,211	2.5	0.3
Strabane District Council	15,082	7.2	1.0
Total	**208,135**	**100%**	**13.0%**

Notes:
1. Source: EHS Commercial and Industrial Waste Arisings Survey 2004/05
2. The breakdown by district has been calculated assuming that the number of small businesses (less than 10 staff) is in the same relative proportion as large businesses.

District Councils have a key role to play in delivering the infrastructure, given the synergies identified between the C&I and the municipal waste sectors. Experience in many areas indicates that it is the facilities developed to service municipal waste contracts that provide the foundation to the waste management system, giving service providers the confidence and security to invest for the medium to long term.

Councils are to factor the potential C&I waste arisings into the planning and delivery of the Mechanical Biological Treatment plants proposed within the NWRWMG for the treatment of municipal wastes.

Councils are to allow, where appropriate, a service for the collection or acceptance of C&I wastes at their facilities from SMEs, charged for accordingly, and provided always that the C&I waste is recorded and reported separately from the municipal waste stream, so that it does not add any additional burden or risk to Councils. This includes the acceptance of C&I waste for recycling at a minimum of one civic amenity site per Council area.

In addition, Councils, through their waste prevention and recycling officers, provide advice and guidance to businesses on the more sustainable management of their wastes.

5.2 CONSTRUCTION AND DEMOLITION (C&D)

The construction industry makes a substantial contribution to our quality of life, through the provision and maintenance of essential infrastructure, such as sewage systems, roads and telecommunications, and the provision of buildings for home, leisure, education and work. Construction, building materials and associated professional services together account for about 10% of our Gross Domestic Product and is an important source of employment in Northern Ireland.

The significant contribution to the construction and building sectors is set to continue with the major anticipated infrastructure spend in the coming years coupled with a healthy housing and commercial development sector. As a result, the amount of C, D & E waste generated is expected to increase if measures are not put in place to limit waste growth and promote resource efficiency.

Up-to-date C, D & E waste arisings is limited. However, based on a study carried out by the Symonds Group in October 2003 it is estimated that C, D & E arisings was in the range of 2.5 to 3.75 million tonnes per year in Northern Ireland. Given the uncertainties with the data, the upper value has been taken as a conservative best estimate for C, D & E waste arisings in 2003. Whilst recognising that there is no direct relationship between population and C, D & E waste arisings, this yields a C, D & E waste generation figure of approximately 2 tonnes per person per annum, which is similar to data reported elsewhere.

It is estimated that the NWRWMG generated approximately 630,000 tonnes of C, D & E waste in 2003. Much of this C, D & E waste is recyclable, with the potential to replace virgin raw materials or part supply material to the construction industry.

There is a huge need to decouple C, D & E waste generation from economic growth associated with and the activity of the construction and building sectors.

In terms of future management, BPEO suggests that for C, D & E wastes within the NWRWMG, the priority is waste prevention, followed by materials re-use and recovery. However, there will remain a need for landfill capacity for those wastes that are not recovered or recycled.

Another key area of focus for the future is the development of markets for alternative C, D & E materials, to put waste prevention into action.

5.3 HAZARDOUS

The management of hazardous waste has changed significantly in recent years as a result of more stringent legislation governing its treatment and disposal. This legislation has extended the definition of hazardous waste, as well as the co-disposal of hazardous and non-hazardous waste. The resulting effect of this has been an increase in the potential hazardous waste arisings as well as more stringent controls on disposal.

Due to the fact that the Hazardous Waste Regulations (Northern Ireland) did not come into effect until 2005, the current data relates to “Special Wastes” under the 1998 Regulations. The total hazardous waste arisings for 2002 were 47,432 tonnes. In addition to this, a further 10,797 tonnes was consigned from transfer stations within the Region.

To deal effectively with hazardous waste generated, and to reduce the relatively constant levels of hazardous waste produced from year to year, a Northern Ireland wide Hazardous Waste Forum has been established. The aim of this forum is to produce a strategy to identify the preferred waste management solutions for hazardous waste. The North West Group have been participating in this Forum. The Forum has published its first Action Plan in June 2004, with objectives and Actions focussing on four areas namely:

- Regulatory System
- Communications and awareness raising
- Reduction, Reuse and Recycling
- Provision of Facilities.

There is a requirement for District Councils to provide facilities for the collection of household hazardous waste such as WEEE, paints and batteries at appropriate civic amenity sites within their District, following the implementation of the WEEE Directive, in anticipation that appropriate funding and infrastructure will be made available through Producer Responsibility arrangements.

5.4 PACKAGING

Packaging waste in Northern Ireland arises from two principal sources: the household waste stream and from the commercial and industrial waste stream. The total packaging waste generated from these two sources can be estimated from available data, assuming that the proportion of packaging waste is 22% in the household waste stream (as indicated by the NI2000 Waste Characterisation Study, 2001), and that the quantity and proportion of commercial and industrial waste is as reported in the Commercial and Industrial Waste Survey in 2000. The total packaging waste arising in Northern Ireland is approximately 430,000 tonnes in 2004/05, with approximately half arising from the commercial and industrial sector and half from households.

Packaging waste can be further broken down by material, as illustrated in the Table below.

Total Packaging Waste (tonnes)			
Material	**Commercial and Industrial (Tonnes)**	**Household (Tonnes)**	**Total Tonnage Estimated**
Paper and cardboard	124,000	63,000	187,000
Glass	19,000	73,00	92,000
Aluminium	1,000	4,000	5,000
Ferrous metals	12,000	21,000	33,000
Plastic	34,000	41,000	75,000
Wood	37,000	0	37,000
Other	2,000	0	2,000
Total	**229,000**	**202,000**	**430,000**

Within the NWRWMG, the total packaging waste is approximately 69,000 tonnes, with approximately 32,000 tonnes being from commercial and industrial waste and 37,000 tonnes from household waste.

In Northern Ireland, the Producer Responsibility Obligations (Packaging Waste) (Amendment) Regulations (Northern Ireland) 2004, sets out a number of recovery and packaging targets which relate to the recovery and recycling of used packaging. These are summarised as follows:

Packaging Material	2005	2006	2007	2008 onwards
Overall Recovery	65	67	69	70
Min % by Recycling	94	94	95	95

In 2005, 380 businesses were registered with the EHS, of which 78 companies were Directly Registered and 302 were registered through compliance schemes.

Although the Packaging Regulations impose specific obligations on certain businesses, reprocessors and exporters, it is clear that all sectors have a role to play, if the quantities of packaging waste recycled and recovered is to increase significantly. Future actions to improve the collection of packaging waste by Councils in the NWRWMG includes:

- Maximise collection of waste packaging materials from the household waste stream
- Increased collection of packaging materials from bring sites and civic amenity sites
- Provide access for businesses to civic amenity sites for the recycling of packaging wastes.
- Provide a separate collection service for packaging waste from local business and industry.

5.5 PRIORITY WASTE STREAMS

Priority waste streams have been identified on account of one or more of the following: their volume, hazardous nature, potential for recycling, potential to create an economic benefit or the fact that legislation is changing the way in which these materials have traditionally been managed. The priority waste streams include:

- Tyres
- Waste Electronic and Eelectronic Equipment
- End of Life Vehicles (ELVs)
- Batteries

In addition, consideration has also been given to other waste streams namely:

- Sewage Sludge
- Healthcare wastes

5.5.1 Tyres

The Landfill Directive (99/31/EC) prohibited the landfilling of whole tyres from 2003 and shredded tyres from 2006.

The Northern Ireland Used Tyre Survey, 2000, estimated the total quantity of wastes produced annually in Northern Ireland to be 16,100 tonnes or 1,738,100 tyres.

Within the NWRWMG, the Used Tyres Working Group in 2001 stated that the amount of tyres being produced can be estimated based on arisings per capita of 2,246 tonnes per year in 2001, therefore the current arisings are estimated to be approximately 2,360 tonnes.

In terms of future management, the Waste Management Industry are encouraged to further develop local collection and reprocessing infrastructure within Northern Ireland, utilising relevant business support and funding available (e.g. Invest NI, WRAP, EU Structural Funds).

5.5.2 Waste Electrical and Electronic Equipment (WEEE)

The total WEEE arisings in Northern Ireland were estimated to be in the range of 25,000 – 30,000 (EHS Survey, 2001). A pilot study initiated in 2004 estimated the annual household arisings to be lower, between 6,500 and 20,000 tonnes.

Within the NWRWMG, these arisings equate to between 1,195 tonnes and 5,570 tonnes.

The roles and responsibilities on District Councils for the management of WEEE are as follows:

- The British Retail Consortium is consulting with District Councils on the registration of household recycling centres as Designated Collection Facilities for WEEE. These would form part of the adequate network that retailers must provide.
- Follow WEEE Producer Responsibility Requirements.

5.5.3 End of Life Vehicles (ELV)

The estimated total number of ELVs arisings in Northern Ireland for 2000 was 69,800 vehicles, equating to 56,900 tonnes of ELV material. Of these, 69,800 vehicles, 11.3% were premature, 4.1% were abandoned natural old ELVs and 84% were non-abandoned natural ELVs.

Within the NWRWMG therefore, based on population statistics, there are approximately 18,500 vehicles equating to approximately 12,850 tonnes of ELV material.

The roles and responsibilities for District Councils with regard to the management of ELVs are:

- Waste management arrangements for abandoned vehicles
- Take account of producer networks for ELV collection and treatment.

5.5.4 Batteries

There have not been any surveys directly estimating waste battery arisings within Northern Ireland. However, in the UK in 2001, it is known that approximately 680 million batteries were bought, most of which (89%) were general purpose batteries. UK data estimates that the annual rate of consumer battery arisings is 0.3Kg per person, which would translate into a Northern Ireland figure of 550 tonnes per year.

For the NWRWMG therefore, based on an approximate population of 314,658 this would equate to approximately 95 tonnes of batteries per year.

In terms of future management, there is a need for all stakeholders to work together to assess the implications of the forthcoming Batteries Directive. As a result of this, the key infrastructural requirements include systems for the source segregated collection of batteries from households, schools and commercial premises as well as facilities for the bulking, sorting, storage, treatment and reprocessing of battery waste arisings.

5.5.5 Sewage Sludge

It is estimated that Northern Ireland currently produces around 35,000 tonnes of sewage sludge per year. Of this tonnage, approximately 20,000 tonnes is treated by the existing incinerator in Belfast.

Responsibility for the management and control of sewage sludge falls with Department for Regional Development (DRD) Water Service. Water Service has overall responsibility for the operation and maintenance of Northern Ireland's sewage systems and wastewater treatment works, including the management of sewage sludge produced.

5.5.6 Clinical Wastes

The two main sources of clinical wastes are hospitals and community healthcare; including nursing homes, health centres, veterinary surgeries, dental surgeries, GP surgeries, blood transfusion centres, health laboratories and teaching and research establishments.

Hospital waste arisings are estimated at approximately 650 tonnes per annum for the NWRWMG while community clinical waste is estimated to be between 325 and 650 tonnes

per annum. Therefore, clinical waste arisings for the NWRWMG are estimated to be between 975 and 1,300 tonnes per annum.

Management options must provide for waste to be appropriately treated and disposed of in licensed facilities in accordance with legislative requirements.

There is currently one single treatment and incineration facility in Northern Ireland at Antrim Area Hospital. This facility processes around 78-80 tonnes of clinical waste (including sharps) per week. The facility also acts as a waste transfer facility for other pharmaceutical, anatomical and pathological wastes which are transferred to an incinerator in England.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The annual report for the NWRWMG for 2005/06 has shown an encouraging increase in performance within the Group as a whole over the past twelve months. All seven of the Councils within the Group experienced a notable increase in household waste recovery rates with the result of this being that the NWRWMG Household Recovery rate has risen from 19% in 2004/05 to 28% in 2005/06. There has been a similar rise in municipal waste performance between the two consecutive years with the recovery rate rising from 17% in 2004/05 to 26% in 2005/06. These increases in recovery have been due, in large, to the continued implementation of infrastructure and services, as outlined within the Implementation Action Plans. This implementation however needs to be maintained to ensure that the NWRWMG and the individual District Councils continue to strive towards the meeting of waste management targets.

It should also be noted that the NWRWMG as a whole have also met the 2005/06 NILAS target, with every Council landfilling biodegradable municipal waste within their NILAS District Council Allowance.

The Group as a whole have successfully met the 2005/06 household waste recovery target, as outlined in the Northern Ireland Waste Management Strategy, and this represents a significant achievement in the roll out of waste programmes and services by individual Councils. There is a requirement however to ensure that any planned services and facilities are implemented to ensure that each individual Council and the Group as a whole meet the stringent waste minimisation targets as set out in the North West Region Waste Management Group Waste Management Plan.

Two Councils in the Group, Coleraine Borough Council and Strabane District Council, have recorded a decrease in both municipal and household waste arisings over the previous year, and there has been a slight increase in municipal waste arisings within the Group as a whole with a 0.3% increase, although there has been an overall decrease of 1.5% in household waste arisings. These decreases can be attributed to the implementation of an Education and Awareness Communications Plan within the NWRWMG and the continued sustained efforts of the recycling officers within the Group.

Despite this significant achievement, it is vitally important therefore that Councils implement any missing infrastructure and services and strive towards reducing their overall waste arisings in order to maximise their recovery rates.

In terms of progression towards meeting the targets set out in the Landfill Directive for the diversion of biodegradable waste from landfill, the Region as a whole are anticipated to meet the Landfill Allowance targets up to 2009/10. This is however on the assumption that there

will be free transfer or movement of surplus allowances between the Region. Should this be prohibited, then it has been shown that there are a number of Councils that are not anticipated to meet their targets from 2009/10.

In summary therefore, although there has been a marked increase in the recovery rates of both household and municipal waste, this increase has been curbed slightly by an increase in municipal waste arisings over the past year, within the Group as a whole. There is a need to ensure that current education and awareness initiatives continue and as a result of this, positive actions taken towards minimising waste across all sectors.