

Landfill Allowance Scheme Regulations (2004) Northern Ireland (NILAS)

2005/06 Annual Report

February 2007



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Environment
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Executive Summary

This report covers the first scheme year of the Landfill Allowance Scheme (NI) Regulations 2004 and summarises district council compliance with the scheme.

All 26 district councils in Northern Ireland achieved their 2005/06 landfill allowance obligations by diverting Biodegradable Municipal Waste (BMW) from landfill and transferring allowances.

In 2005/06, the total amount of BMW which was permitted to be sent to landfill was 669,884 tonnes. The total amount reported to have been sent to landfill was 558,009 tonnes, 16.7 % less than the permissible amount. This continues the positive downward trend in the quantity of waste sent to landfill.

The amount of BMW sent to landfill by the arc21 Waste Management Group (WMG) was 316,732 tonnes, 16.74 % less than their permitted amount.

The North West Region Waste Management Group (NWRWMG) sent 95,481 tonnes to landfill, 25.89 % less than their allocated allowances.

In the Southern Waste Management Group (SWaMP), two district councils were involved in the transfer of landfill allowances:

Fermanagh District Council had a deficit of 699 allowances. Therefore, Armagh City and District Council transferred 699 allowances to Fermanagh District Council, which allowed them to meet their requirements under the regulations. This demonstrates the flexibility and the partnership working of the scheme.

The amount of BMW sent to landfill in the SWaMP region was 145,796 tonnes, 9.23% less than their allocated allowances.

At the end of the scheme year, Ballymoney Borough Council, Limavady Borough Council, Down District Council and Castlereagh Borough Council had a surplus of

allowances exceeding 30% of their allocation. There were 4 district councils, Ballymena Borough Council, Dungannon and South Tyrone Borough Council, Belfast City Council and Newry and Mourne District Council, who had less than 10% of their allocation as surplus at the end of the scheme year.

Over the next twenty years the allocations for each district council, and Northern Ireland as a whole, will progressively reduce making it vital for more BMW to be diverted from landfill. In 2006/07, 655,545 tonnes of BMW can be sent to landfill in Northern Ireland, reducing to 641,235 tonnes in 2007/8 and 626,925 tonnes in 2008/09. This amount further reduces to 470,000 tonnes in 2009/10, which is the first Landfill Directive target year.

Moreover, the three Waste Management Groups have revised their Waste Management Plans detailing how they propose to deal with Northern Ireland's waste up to 2020. The plans set out the range of facilities required to deliver both the strategic targets and Northern Ireland Landfill Allowance Scheme (NILAS) targets.

List of Acronyms

AA	Allocating Authority
BMW	Biodegradable Municipal Waste
CIWM	The Chartered Institution of Wastes Management
Defra	Department of Food and Rural Affairs
EHS	Environment and Heritage Service
EWC	European Waste Catalogue
MA	Monitoring Authority
NILAS	Northern Ireland Landfill Allowance Scheme
NWRWMG	North West Region Waste Management Group
SWaMP	Southern Waste Management Partnership
WDF	WasteDataFlow
WET Act	Waste and Emissions Trading Act
WMG	Waste Management Group
WMP	Waste Management Plan

1. Introduction

The NILAS regulations came into operation in Northern Ireland on 1st April 2005 hence, 2005/06 is the first year of the scheme.

The NILAS Regulations, made under the WET Act 2003³, have been designed to ensure that Northern Ireland meets its targets (set out in the Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004) by allocating progressively challenging limits on the amount of BMW which can be landfilled by each district council.

Article 5(2) of the EC Landfill Directive (1999/31/EC)² requires member states to reduce the amount of BMW sent to landfill, setting challenging targets.

The targets for the reduction of BMW landfilled are:

- To reduce by 2010 the quantity of BMW landfilled to 75% of that produced in 1995
- To reduce by 2013 the quantity of BMW landfilled to 50% of that produced in 1995
- To reduce by 2020 the quantity of BMW landfilled to 35% of that produced in 1995

The regulations place a statutory responsibility on district councils, in each scheme year, to landfill only the quantity of BMW they have allowances for. To exceed this may result in financial penalties.

The scheme facilitates the transfer and borrowing (with restrictions) of allowances between district councils which promotes a flexible and partnership working arrangement. One allowance represents one tonne of BMW that can be sent to landfill.

2. Reporting

2.1 District Councils

District councils in Northern Ireland are required to report data on municipal waste each quarter. The data for each quarter must be submitted to the monitoring authority within 2 months after the quarter end. Table 1 shows the NILAS reporting deadlines in each scheme year. District councils must submit their data via the WDF system. WDF is a web based system, initially developed by CIWM.

www.wastedataflow.org

WDF is now owned and operated by Defra and the devolved administrations.

Table 1 NILAS reporting deadlines

Quarter	Period in scheme year	Return MUST be submitted by:
1	1 st April – 30 th June	31 st August
2	1 st July – 30 th September	30 th November
3	1 st October – 31 st December	28 th February
4	1 st January – 31 st March	31 st May

In quarter 1 of the first scheme year 69 % of district councils submitted their returns on time. There has been a continual improvement (illustrated in table 2a and 2b) in the timeliness of returns throughout the year, with 85 % of returns submitted on time in the final quarter.

Table 2a

District Council	Q1	Q2	Q3	Q4
Antrim BC	31/08/05	30/11/05	28/02/06	31/05/06
Ards BC	31/08/05	30/11/05	24/02/06	25/04/06
Armagh C&DC	12/09/05	18/11/05	23/02/06	01/06/06 *
Ballymena BC	31/08/05	30/11/05	16/02/06	15/05/06
Ballymoney BC	31/08/05	06/12/05	23/02/06	11/05/06
Banbridge DC	31/08/05	23/11/05	27/02/06	29/05/06
Belfast CC	31/08/05	08/12/05	01/03/06	18/05/06
Carrickfergus BC	31/08/05	30/11/05	21/02/06	29/05/06
Castlereagh BC	31/08/05	30/11/05	24/02/06	23/05/06
Coleraine BC	31/08/05	18/11/05	28/02/06	19/05/06
Cookstown DC	31/08/05	01/12/05	28/02/06	31/05/06
Craigavon BC	31/08/05	11/01/05	28/02/06	19/05/06
Derry CC	12/09/05	12/01/05	06/03/06	06/06/06 *
Down DC	12/09/05	14/12/05	09/03/06	31/05/06
Dungannon & South Tyrone BC	31/08/05	23/11/05	23/02/06	19/05/06
Fermanagh DC	02/09/05	06/12/05	06/03/06	08/06/06
Larne BC	08/09/05	02/12/05	28/02/06	26/05/06
Limavady BC	12/09/05	30/11/05	23/02/06	13/06/06
Lisburn CC	01/09/05	07/12/05	24/02/06	25/05/06
Magherafelt DC	31/08/05	30/11/05	06/03/06	01/06/06
Moyle DC	31/08/05	30/11/05	28/02/06	29/05/06
Newry & Mourne DC	01/09/05	30/11/05	27/02/06	31/05/06
Newtownabbey BC	31/08/05	30/11/05	14/02/06	26/05/06
North Down BC	01/09/05	07/11/05	27/02/06	31/05/06
Omagh DC	31/08/05	30/11/05	28/02/06	13/06/06
Strabane DC	31/08/05	30/11/05	06/03/06	31/05/06

- red font denotes late return

* significant IT difficulties

Table 2b Date on which all returns received

NWRWVG	12/09/05	12/12/05	06/03/06	13/06/06
SWaMP	12/09/05	06/12/05	06/03/06	13/06/06
Arc21(all submitted)	08/09/05	08/12/05	09/03/06	31/05/06
% received by deadline:	69.23%	61.54%	76.92%	84.62%

2.1.1 Validation Process

When the municipal waste data is submitted the monitoring authority carries out a qualitative assessment of the data in WDF. The validation process involves cross checking figures between questions and any anomalies are queried to ensure data is legitimate.

Also, the monitoring authority looks at where the waste streams are sent for reprocessing and recovery. One of the focus points for future audits will be to ensure final destinations are reported accurately to make sure waste is being:

- reprocessed and recovered appropriately;
- diverted from landfill.

The monitoring authority aims to complete validation of all returns within one month of relevant deadline. All validation queries must be answered within 5 working days to ensure this deadline is met.

At the beginning of the scheme year the validation procedure was quite slow. This can be attributed to a number of factors:

- lack of familiarity with WDF and the process;
- the need for WMGs to roll data back from level 30 on WDF;
- district councils not being aware of the need to respond to queries within 5 days;
- lack of understanding as to why data is required in the level of detail requested i.e for mass balance equation.

In response to the above, EHS conducted a number of training events to update district councils and to provide training opportunities for any new staff. All district council WDF users had training prior to the launch of WDF in NI. Senior Officers were provided with training on the reporting functions of WDF.

As the year progressed the number of queries regarding district council returns reduced, as officers became more familiar and confident with the operation of the WDF system.

2.2 Landfill Operators

Under the NILAS regulations, landfill operators are required to report, in each year, the amount of municipal waste sent to landfill at their sites. In 2005/06, 18 landfills in Northern Ireland reported accepting municipal waste.

Landfill operators are required to report their municipal waste data within 2 months of the quarter end.

Landfill operator returns are submitted using the 'Landfill Operator – Municipal Waste Data Return Form (NILAS 001)'. The return includes the following information:

- Weight of each load (to the nearest tonne);
- EWC code;
- District council area where the waste originates.
-

Landfill operators reported that almost 800,000 tonnes of municipal waste was sent to landfill by district councils.

2.2.1 Validation Process

The waste reported by landfill operators is cross checked with the returns from district councils submitted via WDF.

When there is a variation of +/- 1% **and** more than 10 tonnes difference in the amounts reported between the landfill operator return and the district council return, the monitoring authority will query both returns until the source of the error can be identified and rectified.

Some variation between the amounts of municipal waste reported as sent to landfill by landfill operators and by district councils will be attributable to:

- Rounding errors – landfill operators report the weight of each load which are rounded to the nearest tonne;
- Private contractors may take municipal waste to landfill in the same collection vehicle as non-municipal waste and therefore estimated apportionment is used;
- EHS do not receive a return from landfill operators outside Northern Ireland.
- Accurate reporting by landfill operators is dependent on them knowing the origin of the waste. This can be difficult when waste arrives via intermediate stages.

3. Data Audit

During August and September 2006 the monitoring authority completed, six pilot audits. The audits were conducted under regulation 10 (6)(a) of the NILAS regulations. Three district councils were selected from each WMG, two for a 'full' audit and one for a 'mini' audit. The district councils selected were contacted by e-mail informing them of EHS' intention to audit.

3.1 'Full' audit

The full audit involved checking and confirming selected data which was submitted as a NILAS return to the monitoring authority via WDF.

This audit inspected records relating to all waste arisings for:

- Quantities of municipal waste sent to landfill;
- Quantities of waste recycled.

The audit also sought evidence demonstrating the final destination of selected waste streams.

Two quarters (Q1-April to June and Q2-October to December) were checked in each full audit, a 'growing' and a 'non-growing' quarter.

Records were requested to confirm the data entered into WDF for the recycling questions. These questions related to household and non-household kerbside collections of recyclables and organic wastes; recycling from civic amenity and bring sites; and landfill disposal.

All records including weighbridge dockets and invoices were inspected and totalled for comparison with the figures entered in WasteDataFlow. Where minor discrepancies were discovered these were pointed out to the council officers concerned and rectified on the WDF system before the close of the audit.

Two of the audits were completed within one day, while the third audit required two days.

The councils audited during the full audit were: Fermanagh District Council (SWaMP); Limavady Borough Council (NWRWMG); and Larne BC (arc21).

3.2 'Mini' audit

The mini audit inspected records relating to the recycling and recovery of specific wastes from:

- household and non-household kerbside collections;
- civic amenity sites
- bring sites.

The mini audits were completed in less than four hours.

The councils audited during the mini audit were: Omagh District Council (SWaMP); Derry City Council (NWRWMG); and Down District Council (arc21).

Conclusions:

Generally the auditors were able to confirm the data provided via WDF in the quarterly data submissions.

From the 'full' audits conducted, one district council produced satisfactory evidence of the final destinations of the materials sent for recycling/recovery.

Over the coming years the focus of our audits will be on tracking the final destinations of the materials sent for recycling/recovery to ensure waste is being:

- reprocessed and recovered appropriately;
- diverted from landfill.

4. Reconciliation Process

The monitoring authority has a duty under the NILAS regulations to calculate the amount of BMW sent to landfill by each district council for the scheme year and prepare a draft reconciliation. This must be completed no later than 5 months after the end of the scheme year.

EHS delivered the draft reconciliation to each district council on the 31st August 2006 and the final reconciliation was sent to each district council, waste management group and the allocating authority on the 22nd November 2006.

There was one query from a district council following the issuing of the draft reconciliation. The discrepancy between figures was resolved and EHS amended the district council's figures.

There were no queries following the final reconciliation.

5. District Council Performance

The scheme year 2005/06 was the first year of the scheme. In 2005/06 the total number of allowances allocated was 669,884. Each allowance permits the landfilling of one tonne of BMW.

The total amount of BMW sent to landfill in NI was 558,009 tonnes, 16.7% less than the permitted amount.

The percentage of allowances utilised by each district council is shown in table 3 ranked according to the allowance allocation remaining at the end of the scheme year.

From the 26 district councils, 25 had a surplus of allowances. One district council had a deficit of allowances and had to transfer allowances to meet their target for 2005/06. All 26 district councils achieved their allowance obligations for the first scheme year.

Table 3: Landfill Allowance Utilisation for 2005/06

District Council	BMW allowance 2005/06	BMW landfilled 2005/06	Surplus allowances in 2005/06
Ballymoney Borough Council	12968	8119	37.4%
Limavady Borough Council	12255	8016	34.6%
Down District Council	25736	17262	32.9%
Castlereagh Borough Council	23103	15496	32.9%
Strabane District Council	17412	12345	29.1%
Antrim Borough Council	17288	12635	26.9%
Magherafelt District Council	14230	10445	26.6%
Lisburn City Council	48719	37242	23.6%
Derry City Council	36273	27909	23.1%
Coleraine Borough Council	28812	22604	21.5%
Banbridge District Council	12896	10213	20.8%
Ards Borough Council	31842	25851	18.8%
Larne Borough Council	13526	11345	16.1%
Armagh City + District Council	17091*	14296	15.7%
North Down Borough Council	33588	28503	15.1%
Carrickfergus Borough Council	17114	14935	12.7%
Omagh District Council	19155	16722	12.7%
Moyle District Council	6889	6043	12.3%
Newtownabbey Borough Council	31180	27599	11.5%
Cookstown District Council	11681	10402	10.9%
Craigavon Borough Council	30961	27624	10.8%
Ballymena Borough Council	21453	19355	9.8%
Dungannon + South Tyrone BC	18375	16694	9.1%
Belfast City Council	116877	106509	8.9%
Newry + Mourne District Council	28720	28105	2.1%
Fermanagh District Council	21740*	21740	0.0%

*includes 699 allowances transferred from Armagh to Fermanagh

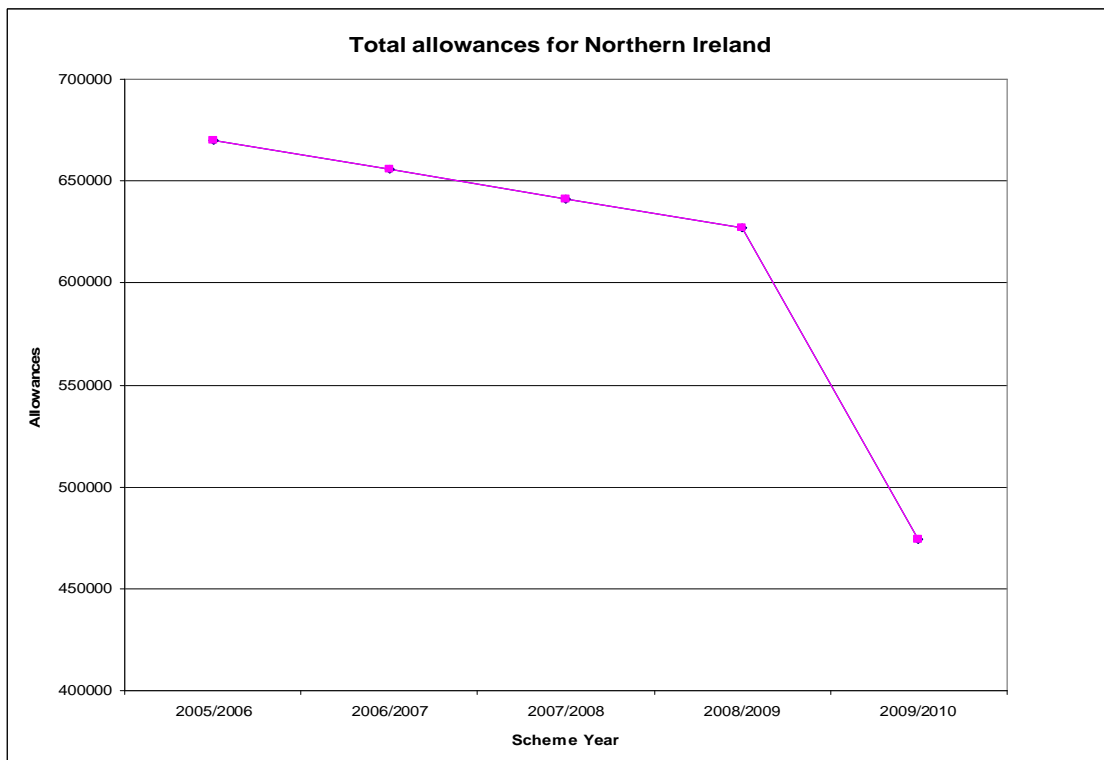
Over the next twenty years the allocations for each district council, and Northern Ireland as a whole, will progressively reduce making it vital for more BMW to be diverted from landfill.

In 2006/07, 655,545 tonnes of BMW can be sent to landfill in Northern Ireland, reducing to 641,235 tonnes in 2007/8 and 626,925 tonnes in 2008/09. This amount further reduces to 470,000 tonnes in 2009/10, which is the first Landfill Directive target year.

The methodology for allocating allowances to each district council was selected after a consultation process. A proposal for a straight line reduction between 2005/06 and 2009/10 was rejected. The allocation for the first year of the scheme was chosen so as to reflect as closely as possible the then current landfilling practice. The total amount of BMW sent to landfill in 2002, 669,885 tonnes, was the chosen as the start point for 2005/06 allocation. This total was divided proportionately between the district councils on the basis of landfill practice in 2003 (most up to date data set available). For subsequent years, the consultation set out two options for allocation: immediate and gradual convergence to a population-based methodology. The method chosen and implemented was 'early convergence applying simple population.

Figure 1 shows the profile of the total amount of BMW that can be landfilled until the first Landfill Directive target year. The three WMGs, through their WMPs, have detailed a range of facilities that will need to be delivered to meet these targets.

Figure 1



5.1 Looking Forward to the first Landfill Directive Target Year 06/07

If we assume the total BMW landfilled remains constant then Northern Ireland as a whole should still meet the landfill allowance target up until 2009/10. However, if this were the case, the deficit of allowances in 2009/10 would be 88,009 tonnes, see table 4. The WMG would have the following deficits:

- arc21 64,852 tonnes
- SWaMP 16,959 tonnes
- NWRWMG 6198 tonnes

To achieve the Landfill Directive target it will be necessary to:

- Increase the diversion of BMW from landfill;
- Reduce the amount of municipal waste generated;
- Adopt a combination of both these options.

The amount of municipal waste arisings increased by 1.2 % between 2004/05 and 2005/06. The recycling rate increased from 18.2% to 23.02% in the same period. This equates to an extra 53,590 tonnes of waste sent for recycling. However, this also included non-biodegradable fractions.

Table 4: Landfill Allowance Utilisation (if amount of BMW landfilled remains constant)

District Council	BMW landfilled in 2005/06 (tonnes)	2009/2010 allocation	Balance (tonnes)	% surplus / deficit
Antrim	12635	13605	970	7%
Ards	25851	20798	-5053	-24%
Ballymena	19355	16384	-2971	-18%
Belfast	106509	72218	-34291	-47%
Carrickfergus	14935	10705	-4230	-40%
Castlereagh	15496	17987	2491	14%
Down	17262	18368	1106	6%
Larne	11345	8446	-2899	-34%
Lisburn	37242	30233	-7009	-23%
Newtownabbey	27599	22057	-5542	-25%
North Down	28503	21081	-7422	-35%
Arc21	316732	251880	-64852	-26%
Armagh	14296	15420	1124	7%
Banbridge	10213	12324	2111	17%
Cookstown	10402	9356	-1046	-11%
Craigavon	27624	22928	-4696	-20%
Dungannon	16694	13580	-3114	-23%
Fermanagh	21740	16229	-5511	-34%
Newry & Mourne	28105	25240	-2865	-11%
Omagh	16722	13760	-2962	-22%
SWaMP	145796	128837	-16959	-13%
Ballymoney	8119	7960	-159	-2%
Coleraine	22604	15395	-7209	-47%
Derry	27909	29568	1659	6%
Limavady	8016	9521	1505	16%
Magherafelt	10445	11545	1100	10%
Moyle	6043	4569	-1474	-32%
Strabane	12345	10725	-1620	-15%
NWRWMG	95481	89283	-6198	-7%
Northern Ireland	558009	470000	-88009	-19%

Waste Management Group Projections

Partnership Working

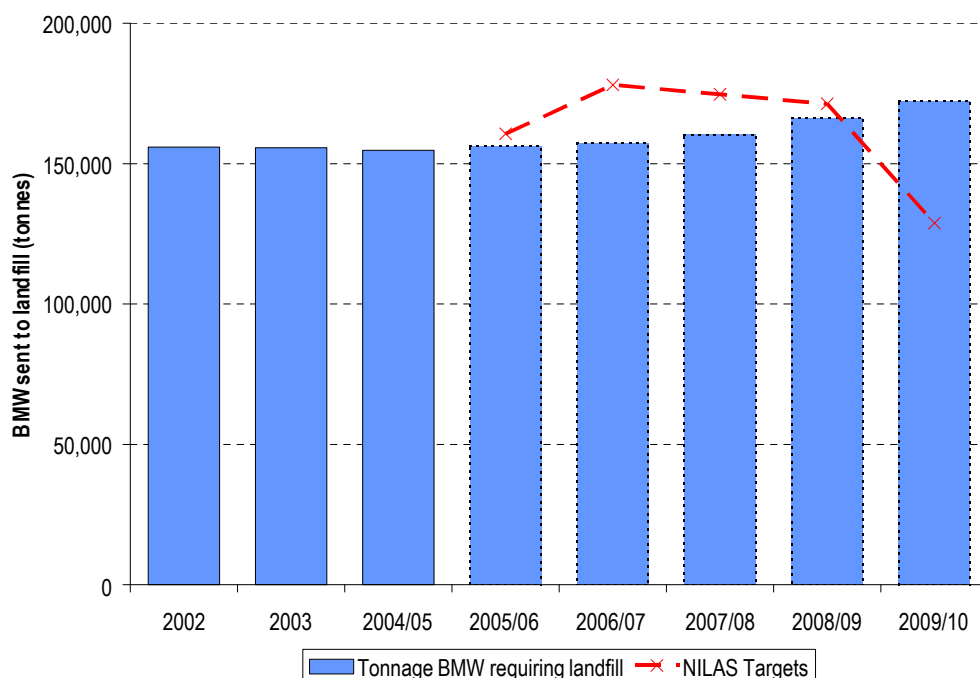
A NILAS Implementation Steering Group, chaired by the Allocating Authority (AA) was set up and one of the primary functions of this group will be to closely monitor the performance of the NILAS and, in particular, the operation of the transfer mechanism, both within and between Waste Management Groups (WMGs). This will include close assessment of performance against Implementation Action Plans (IAPs) and commitments to developing infrastructure. The emphasis will be on co-ownership of the problem (between central and local government) and a sharing of the risk: a partnership focussed on continuous improvement.

SWaMP

SWaMP carried out projections, submitted in their the Annual Performance Report (APR) in November 2005, on the quantities of BMW landfilled based on current performance, presented in Figure 1. These suggest that the region as a whole will exceed its 2009/10 (first Landfill Directive year) NILAS target by approximately 43,000 tonnes.

The SWaMP Waste Management Plan (WMP), determined by the Department in December 2006, details infrastructure planning which should address this shortfall.

Figure 1 Projected BMW sent to landfill by SWaMP, versus NILAS targets

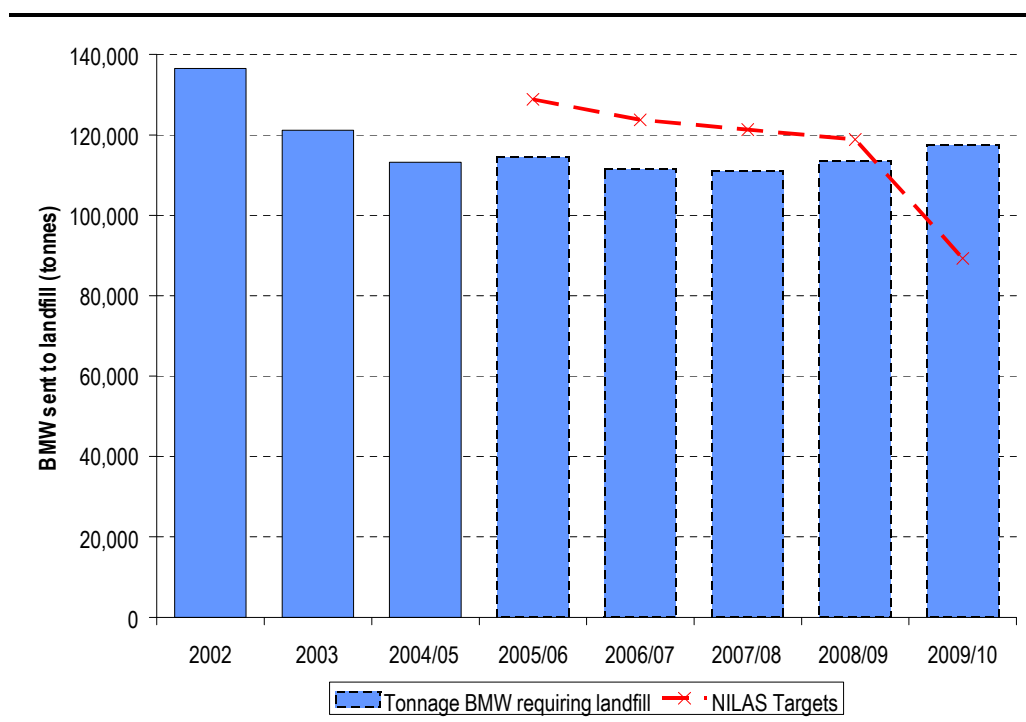


North West Waste Management Group

NWRWVG carried out projections, submitted in their Annual Performance Report (APR) in November 2005, on the quantities of BMW landfilled based on current performance, presented in Figure 2. These suggest that the region as a whole will exceed its 2009/10 (first Landfill Directive year) NILAS target by approximately 28,000 tonnes.

The NWRWVG Waste Management Plan (WMP), determined by the Department in December 2007, details infrastructure planning which should address this shortfall.

Figure 2 Projected BMW sent to landfill by NWRWVG, versus NILAS targets

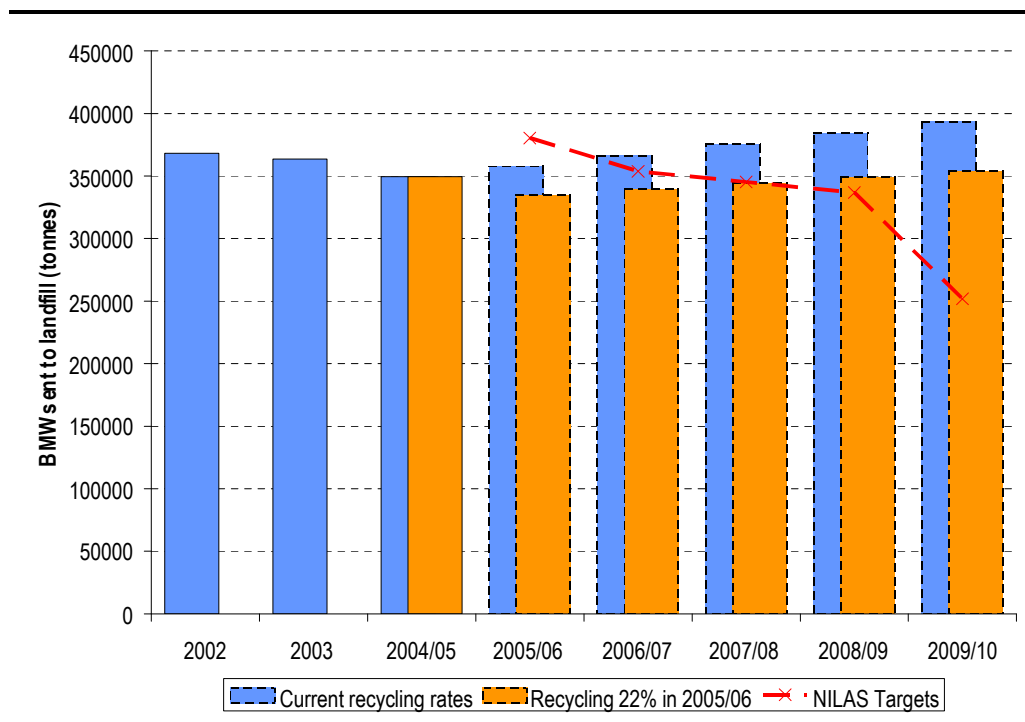


arc21

As part of the 2004/05 APR Review ERM consultants generated three possible scenarios, plotted in figure 3. The graph shows that if no further efforts are made to improve recycling and composting rates, the group would not meet their NILAS target for 2006/07. ERM projected that if a 22% recycling and recovery rate is achieved in 2005/06 increasing to 25% in 2009/10, arc21 as a group will meet their NILAS targets up until 2008/09. arc21 have achieved a recycling and recovery rate of 22.9% in 2005/06.

The arc21 Waste Management Plan (WMP), determined by the Department in December 2006, details infrastructure planning which should address any shortfall for the 2009/10 scheme year and beyond.

Figure 3. Projected BMW sent to landfill by arc21, versus NILAS targets



ANNEX A

District Council	BMW landfilled in 2005/06 (tonnes)	2009/2010 allocation	Balance (tonnes)	% surplus / deficit
Antrim	12635	13605	970	7%
Ards	25851	20798	-5053	-24%
Ballymena	19355	16384	-2971	-18%
Belfast	106509	72218	-34291	-47%
Carrickfergus	14935	10705	-4230	-40%
Castlereagh	15496	17987	2491	14%
Down	17262	18368	1106	6%
Larne	11345	8446	-2899	-34%
Lisburn	37242	30233	-7009	-23%
Newtownabbey	27599	22057	-5542	-25%
North Down	28503	21081	-7422	-35%
Arc21	316732	251880	-64852	-26%
Armagh	14296	15420	1124	7%
Banbridge	10213	12324	2111	17%
Cookstown	10402	9356	-1046	-11%
Craigavon	27624	22928	-4696	-20%
Dungannon	16694	13580	-3114	-23%
Fermanagh	21740	16229	-5511	-34%
Newry & Mourne	28105	25240	-2865	-11%
Omagh	16722	13760	-2962	-22%
SWaMP	145796	128837	-16959	-13%
Ballymoney	8119	7960	-159	-2%
Coleraine	22604	15395	-7209	-47%
Derry	27909	29568	1659	6%
Limavady	8016	9521	1505	16%
Magherafelt	10445	11545	1100	10%
Moyle	6043	4569	-1474	-32%
Strabane	12345	10725	-1620	-15%
NWRWVG	95481	89283	-6198	-7%
Total Northern Ireland	558009	470000	-88009	-19%