

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

## 2010/11 Annual Report

8<sup>th</sup> December 2011



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This document is also available on the Northern Ireland Environment Agency's website at [http://www.doeni.gov.uk/niea/waste-home/municipal\\_data\\_reporting.htm](http://www.doeni.gov.uk/niea/waste-home/municipal_data_reporting.htm)

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## Executive Summary

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

The Waste and Emissions Trading Act 2003 (Amendment) Regulations 2011 and the Landfill Allowances Scheme (Amendment) Regulations (Northern Ireland) 2011 came into effect. Their main purpose was to provide for the use of the terms “local authority collected municipal waste” and “biodegradable local authority collected municipal waste”. However, this report continues to use the phrases ‘municipal waste’ and ‘biodegradable municipal waste’ as this was the terminology in force during the sixth scheme year i.e. 2010/11 to which this report refers. However, in future this annual report, which only reports on municipal wastes collected by district councils in NI, will use the new terminology above. This change will have no impact on the WasteDataFlow data that is reported.

All 26 district councils in Northern Ireland achieved their 2010/11 landfill allowance obligations by diverting Biodegradable Municipal Waste (BMW) from landfill .

In 2010/11, the total amount of BMW which was permitted to be sent to landfill was 469,937 tonnes. The total amount of BMW reported to have been sent to landfill was 348,674 tonnes i.e. 25.8% of landfill allowances were not utilised. This was an increase of almost 7.36% compared to 2009/10 (18.44%). Since the introduction of the NILAS regulations district councils, operating in three waste management groups (WMGs) have collectively reduced the amount of BMW sent to landfill by 209,335 tonnes. The proportion of municipal waste statutorily defined to be biodegradable (i.e. BMW) decreased from 71% to 64% from 1<sup>st</sup> April 2009 following recent additional research (which included sampling) into the composition of various municipal waste streams.

- The Southern Waste Management Group (SWaMP2008) sent 87,282 tonnes to landfill, 32.45% less than their allocated allowances.
- arc21 sent 191,110 tonnes of BMW to landfill, 23.94% less than their allocated allowances.
- The North West Regional Waste Management Group (NWRWMG) sent 70,282 tonnes of BMW to landfill, 21.44% less than their allocated allowances.

After the final reconciliation, Magherafelt District Council and Craigavon Borough Council both had surplus allowances which exceeded their allocation by at least 50%.

Armagh City & District Council, Banbridge District Council and Castlereagh Borough Council had surplus allowances which exceeded their allocations by at least 40%.

Antrim Borough Council, Ballymoney Borough Council, Limavady Borough Council, Lisburn City Council, Newtownabbey Borough Council and Omagh District Council all had surplus allowances which exceeded their allocation by at least 30%.

Ards Borough Council, Ballymena Borough Council, Carrickfergus Borough Council, Cookstown District Council, Down District Council, Dungannon & South Tyrone Borough Council, Larne Borough Council, Newry & Mourne District Council, and Strabane District Council all had surplus allowances which exceeded their allocation by at least 20%.

Fermanagh District Council, and Moyle District Council had surplus allowances which exceeded their allocation by at least 10%.

Belfast City Council, Coleraine Borough Council, and Derry City Council had surplus allowances which exceeded their allocations by at least 5%.

Over the next 9 years under NILAS the allocations for each district council, and consequently Northern Ireland as a whole, progressively reduce making it vital for more BMW to be diverted from landfill. The previous year, 2009/10, was the first Landfill Directive target year in which all obligated Member States had to reduce their landfilled BMW to 75% of 1995 baseline levels. In Northern Ireland this meant no more than 470,000 tonnes of BMW could be landfilled. For the next Landfill Directive target year, 2012/13, a maximum of 320,000 tonnes of BMW may be sent to landfill in Northern Ireland under NILAS.

The revised Waste Management Plans (WMPs) of the three WMGs detail how they propose to deal with Northern Ireland's municipal waste up to 2020. The plans, due to be updated in 2011, set out the range of facilities required to deliver both the statutory (NILAS) and other strategic targets.

## List of Acronyms

<b>AA</b>	Allocating Authority (EPD)
<b>BMW</b>	Biodegradable Municipal Waste
<b>BLACMW</b>	Biodegradable Local Authority Collected Municipal Waste
<b>CIWM</b>	The Chartered Institution of Wastes Management
<b>CWD</b>	Climate & Waste Division – DoE(NI)
<b>Defra</b>	Department of Environment, Food and Rural Affairs
<b>DoE(NI)</b>	Department of the Environment (Northern Ireland)
<b>EHS</b>	Environment and Heritage Service
<b>EPD</b>	Environmental Policy Division – DoE(NI)
<b>EWC</b>	European Waste Catalogue
<b>LACMW</b>	Local Authority Collected Municipal Waste
<b>MA</b>	Monitoring Authority (NIEA)
<b>MRF</b>	Materials Recovery Facility
<b>NIEA</b>	Northern Ireland Environment Agency
<b>NILAS</b>	Northern Ireland Landfill Allowance Scheme
<b>NWRWMG</b>	North West Regional Waste Management Group
<b>P&amp;EPG</b>	Planning and Environmental Policy Group – DoE(NI)
<b>SWaMP2008</b>	Southern Waste Management Partnership
<b>WDF</b>	WasteDataFlow
<b>WET Act</b>	Waste and Emissions Trading Act
<b>WMG</b>	Waste Management Group
<b>WMP</b>	Waste Management Plan

## 1. Introduction

Council Directive 1999/31/EC, on the Landfill of Waste (the Landfill Directive) became law on the 26th April 1999. The aim of the Landfill Directive is to reduce the pollution from landfilled waste that can impact on surface water, groundwater, soil, air and also climate change. Article 5(2) of the EU Landfill Directive (1999/31/EC) (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0031:EN:HTML>) requires member states to reduce the amount of BMW sent to landfill through 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 Landfill Allowance Scheme (NI) Regulations 2004 (NILAS)

([www.legislation.gov.uk/sr/sr2004/20040416.htm](http://www.legislation.gov.uk/sr/sr2004/20040416.htm)) made under the Waste and Emissions Trading (WET) Act 2003 ([www.legislation.gov.uk/acts/acts2003/ukpga\\_20030033\\_en\\_1](http://www.legislation.gov.uk/acts/acts2003/ukpga_20030033_en_1)), have been designed to ensure that Northern Ireland meets its targets as set out in the Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004 ([www.legislation.gov.uk/si/si2004/20041936.htm](http://www.legislation.gov.uk/si/si2004/20041936.htm)) by allocating progressively challenging limits on the amount of BMW which can be landfilled by each District Council (see Annex B).

The NILAS Regulations came into operation in Northern Ireland on 1st April 2005 hence, 2010/11 is the sixth scheme year. The Regulations place a statutory responsibility on district councils, in each scheme year, to landfill no more than the quantity of BMW for which they have allowances (each allowance represents one tonne of BMW that can be sent to landfill). If the annual limit is exceeded this may result in financial penalties of £150 per exceeded allowance as per the Landfill Allowances Scheme (Amendment) Regulations (Northern Ireland) 2005 ([www.legislation.gov.uk/sr/sr2005/20050588.htm](http://www.legislation.gov.uk/sr/sr2005/20050588.htm))

The scheme facilitates the transfer and borrowing (with restrictions e.g. allowances cannot be borrowed in a target year or in the year preceding a target year) of allowances between district councils which promotes a flexible and partnership working arrangement. The scheme in Northern Ireland does not facilitate the trading of landfill allowances.

The methodology for allocating allowances to each district council was selected following consultation by P&EPG (now EPD), who are designated under NILAS as the allocating authority (AA).

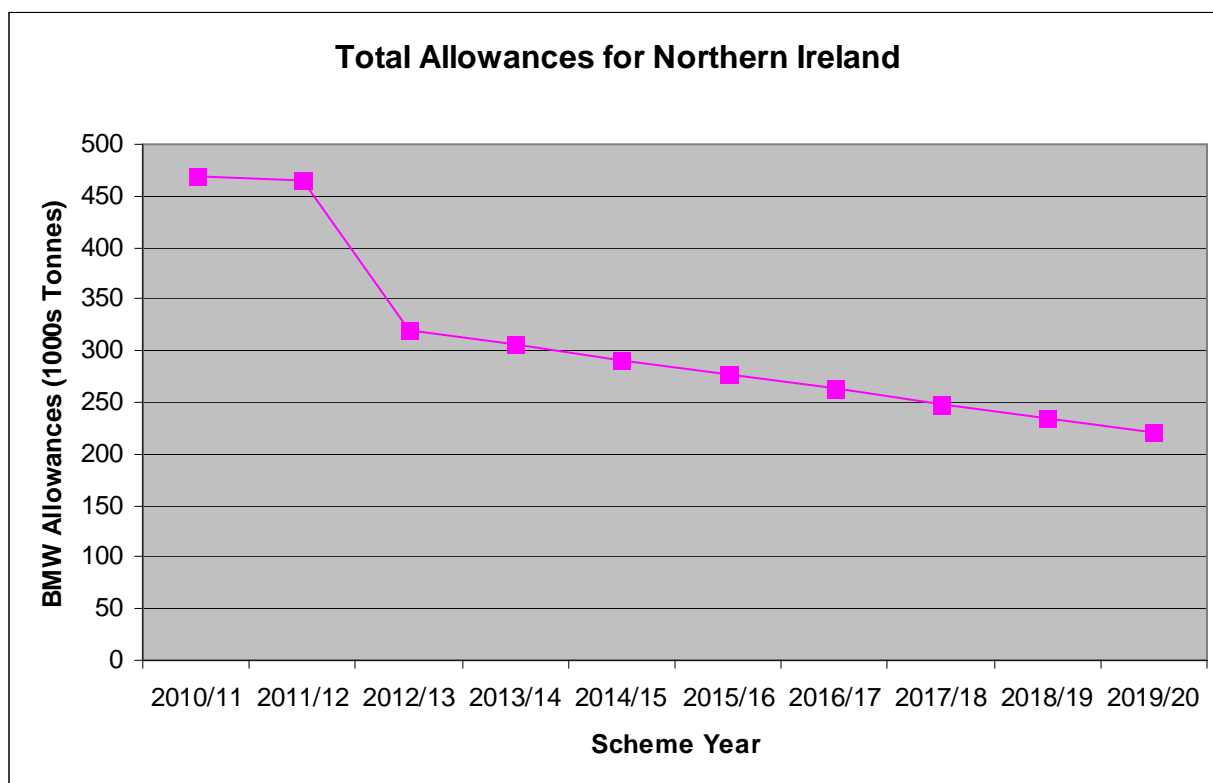
The allocation for the first year of the scheme was chosen so as to reflect as closely as possible the then current landfilling practice. The total amount of BMW sent to landfill in 2002, 669,885 tonnes, was chosen as the start point for the 2005/06 allocations. This total was divided proportionately between the district councils on the basis of landfill practice in 2003 (most up to date data set available). For subsequent years, a proposal for a straight line reduction between 2005/06 and 2009/10 was rejected. Instead the reduction profile was based on the early convergence of simple population model in line with the landfill reduction commitments in the waste management plans of the three waste management groups (<http://applications.doeni.gov.uk/publications/document.asp?docid=7043>).

Consequently the AA, in order to facilitate long term planning, set the maximum allowance for each district council for every year of the scheme as shown in Annex B.

The method used to determine the amount of BMW sent to landfill for a scheme year is the mass balance approach. At its simplest this takes the MSW arisings in a scheme year and converts it to BMW by using the deemed biodegradable percentage (64%). For the purposes of calculating the BMW sent to landfill only, any distinct / separate rubble waste stream collected is excluded on the basis that it is unlike waste from households and is therefore considered to be industrial rather than municipal waste. Biodegradable materials diverted from landfill for recovery or recycling are also subtracted from this figure at either 100% or 50% according to the schedule of the NILAS Regulations in order to determine the remaining BMW sent to landfill. Annex C further details the methodology used in WasteDataFlow throughout 2010/11 in calculating the mass balance.

Figure 1 shows the profile of the total amount of BMW that can be landfilled in Northern Ireland under NILAS until the last Landfill Directive target year. Through their WMPs the three WMGs have detailed a range of processes that will need to be used to meet these targets.

Figure 1: Allowance profile 2010/11 – 2019/20 following the AA consultation exercise



England, Scotland and Wales have their own specific Landfill Allowance Regulations:

**England:** [www.legislation.gov.uk/si/si2004/20043212.htm](http://www.legislation.gov.uk/si/si2004/20043212.htm)

**Scotland:** [www.legislation.gov.uk/legislation/scotland/ssi2005/20050157.htm](http://www.legislation.gov.uk/legislation/scotland/ssi2005/20050157.htm)

**Wales:** [www.legislation.gov.uk/legislation/wales/wsi2004/20041490e.htm](http://www.legislation.gov.uk/legislation/wales/wsi2004/20041490e.htm)

### Consultation paper on meeting EU landfill diversion targets

Following discussions with the European Commission it was agreed that the UK's approach to meeting the Landfill Directives diversion targets should be changed. Consequently on 25 June 2010 the AA issued an initial consultation paper addressing the implications of this change in relation to Northern Ireland (NI).

[www.doeni.gov.uk/catherine-consultation\\_document\\_-\\_meeting\\_eu\\_landfill\\_diversion\\_targets.pdf](http://www.doeni.gov.uk/catherine-consultation_document_-_meeting_eu_landfill_diversion_targets.pdf)

The consultation included setting out the new interpretation of the definition of municipal waste; revisions to the 1995 baseline and targets; and the reporting and monitoring

obligations necessary to enable robust reporting against the targets to the European Commission. It also sought views on the future of the Northern Ireland Landfill Allowance Scheme (NILAS) in addressing both the district council and private sector elements of municipal waste and providing the necessary confidence that Northern Ireland will meet its overall Landfill Directive targets. The revised interpretation will mean that much more commercial and industrial waste than previously will fall within the scope of the term 'municipal waste'. This is because it is proposed that the new definition is based on waste types (as defined by European Waste Catalogue codes) rather than who manages the waste (i.e. district council) as is presently the case.

The consultation closed on the 8 October 2010 and the Department has published a summary of the comments received:

([http://www.doeni.gov.uk/summary\\_of\\_ni\\_responses\\_to\\_the\\_consultation\\_paper\\_on\\_meeting\\_eu\\_landfill\\_diversion\\_targets.pdf](http://www.doeni.gov.uk/summary_of_ni_responses_to_the_consultation_paper_on_meeting_eu_landfill_diversion_targets.pdf) )

The Department subsequently has considered policy options in respect of NILAS on the basis of this consultation and issued a policy position in February 2011 ([http://www.doeni.gov.uk/policy\\_position\\_on\\_the\\_future\\_of\\_nilas-2.pdf](http://www.doeni.gov.uk/policy_position_on_the_future_of_nilas-2.pdf)).

Changes to legislation to incorporate the new definition of municipal waste were made across the UK during 2011/12. On the 21 and 22 November 2011 the Waste and Emissions Trading Act 2003 (Amendment) Regulations 2011

[http://www.legislation.gov.uk/ukxi/2011/2499/pdfs/ukxi\\_20112499\\_en.pdf](http://www.legislation.gov.uk/ukxi/2011/2499/pdfs/ukxi_20112499_en.pdf)

and the Landfill Allowances Scheme (Amendment) Regulations (Northern Ireland) 2011

[http://www.legislation.gov.uk/nisr/2011/373/pdfs/nisr\\_20110373\\_en.pdf](http://www.legislation.gov.uk/nisr/2011/373/pdfs/nisr_20110373_en.pdf)

came into effect. Their main purpose was to provide for the use of the terms "local authority collected municipal waste" and "biodegradable local authority collected municipal waste". However, this report continues to use the phrases 'municipal waste' and 'biodegradable municipal waste' as this was the terminology in force during the sixth scheme year i.e. 2010/11 to which this report refers. However, in future this annual report, which only reports on municipal wastes collected by district councils in NI, will use the new terminology above. These name changes will have no impact on the WDF data that is reported.

## 2. Reporting

### 2.1 District Councils

District councils in Northern Ireland are required to report data on municipal waste arisings on a quarterly basis as per NILAS Regulation 10 (5). The data for each quarter must be submitted to the Monitoring Authority within 2 months after the relevant quarter end. Table 1 shows the NILAS reporting deadlines in each scheme year. District councils must submit their data via the WasteDataFlow (WDF) system ([www.wastedataflow.org](http://www.wastedataflow.org)).

Initially developed in 2004 by the Chartered Institution of Waste Management (CIWM) WDF is now owned, operated, and managed by Defra in partnership with the UK's devolved administrations through an Operational Group and Programme Management Board who support the maintenance and development of the system via an IT contractor (currently SKM Consulting Ltd).

Northern Ireland district councils began formally reporting municipal waste data via WDF from January 2005. Data is managed within the system through various user levels representing district councils, WMGs, NIEA and public access. After the final reconciliations and annual report have been issued by NIEA, the raw data for the relevant scheme year is made publically available on WDF.

Table 1: NILAS reporting deadlines

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

Table 2a shows when data was submitted to NIEA during the scheme year. For comparison, the date when the data was submitted to the WMG is also shown.

During the course of the 2007/08 scheme year an 'e-mail notification alert' was introduced aimed at improving the timeliness of returns. The relevant users, at each submission level,

are informed by an automatically generated email that data is awaiting their approval and submission to the next level. This measure and the issue of further guidance from NIEA in February 2010 (see 2.1.1) have continued to improve data submission times.

Table 2a: Date on which district council returns were submitted to WMG and NIEA in 2010/11

District Council	Q1 due 31/08/10		Q2 due 30/11/10		Q3 due 28/02/11		Q4 due 31/05/11	
	WMG	NIEA	WMG	NIEA	WMG	NIEA	WMG	NIEA
Antrim BC	31/08/10	31/08/10	30/11/10	30/11/10	28/02/11	28/02/11	31/05/11	31/05/11
Ards BC	27/08/10	27/08/10	22/11/10	23/11/10	23/02/11	23/02/11	24/05/11	25/05/11
Armagh C&DC	11/08/10	12/08/10	22/11/10	24/11/10	07/02/11	08/02/11	28/05/11	31/05/11
Ballymena BC	18/08/10	23/08/10	30/11/10	30/11/10	08/02/11	08/02/11	16/05/11	16/05/11
Ballymoney BC	27/08/10	27/08/10	12/11/10	15/11/10	23/02/11	24/02/11	27/05/11	27/05/11
Banbridge DC	16/08/10	24/08/10	22/11/10	24/11/10	25/02/11	25/02/11	31/05/11	31/05/11
Belfast CC	27/08/10	31/08/10	30/11/10	30/11/10	28/02/11	28/02/11	31/05/11	31/05/11
Carrickfergus BC	13/08/10	16/08/10	16/11/10	23/11/10	22/02/11	23/02/11	26/05/11	26/05/11
Castlereagh BC	25/08/10	27/08/10	22/11/10	23/11/10	22/02/11	23/02/11	26/05/11	26/05/11
Coleraine BC	17/08/10	23/08/10	30/11/10	30/11/10	24/02/11	25/02/11	28/04/11	29/04/11
Cookstown DC	27/08/10	31/08/10	30/11/10	30/11/10	28/02/11	28/02/11	31/05/11	31/05/11
Craigavon BC	27/08/10	31/08/10	29/11/10	30/11/10	28/02/11	28/02/11	31/05/11	31/05/11
Derry CC	27/08/10	27/08/10	30/11/10	30/11/10	25/02/11	25/02/11	31/05/11	31/05/11
Down DC	30/08/10	31/08/10	29/11/10	30/11/10	28/02/11	28/02/11	31/05/11	31/05/11
Dungannon & South Tyrone BC	31/08/10	31/08/10	24/11/10	25/11/10	2/01/11	31/01/11	16/05/11	24/05/11
Fermanagh DC	25/08/10	25/08/10	29/11/10	30/11/10	25/02/11	25/02/11	31/05/11	31/05/11
Larne BC	31/08/10	31/08/10	30/11/10	30/11/10	01/03/11	01/03/11	31/05/11	31/05/11
Limavady BC	24/08/10	24/08/10	29/11/10	30/11/10	25/02/11	25/02/11	31/05/11	31/05/11
Lisburn CC	24/08/10	27/08/10	25/11/10	29/11/10	16/02/11	23/02/11	24/05/11	24/05/11
Magherafelt DC	28/08/10	30/08/10	30/11/10	30/11/10	28/02/11	01/03/11	30/05/11	30/05/11
Moyle DC	21/08/10	23/08/10	19/11/10	19/11/10	11/02/11	11/02/11	27/05/11	27/05/11
Newry & Mourne DC	31/08/10	31/08/10	26/11/10	26/11/10	25/02/11	25/02/11	27/05/11	27/05/11
Newtownabbey BC	24/08/10	27/08/10	29/11/10	29/11/10	18/02/11	18/02/11	27/05/11	27/05/11
North Down BC	24/08/10	24/08/10	24/11/10	24/11/10	24/02/11	25/02/11	17/05/11	27/05/11
Omagh DC	03/08/10	11/08/10	12/11/10	12/11/10	28/01/11	28/01/11	11/05/11	25/05/11
Strabane DC	23/08/10	23/08/10	17/11/10	17/11/10	22/02/11	22/02/11	24/05/11	27/05/11
% received by WMG / NIEA by due date	100%	100%	100%	100%	96%	94%	100%	100%

- Blue font denotes return received one day after deadline.
- Green font denotes return made on or before deadline.

## 2.1.1 Penalty Guidance

In February 2010 NIEA, as NILAS Monitoring Authority in conjunction with the AA, introduced penalty guidance for district councils and landfill operators

([www.ni-environment.gov.uk/late\\_returns\\_penalty\\_guidance\\_for\\_dc\\_and\\_landfill\\_.pdf](http://www.ni-environment.gov.uk/late_returns_penalty_guidance_for_dc_and_landfill_.pdf))

The purpose of the guidance was to improve the timeliness of WDF returns from district councils and from landfill operators submitting landfill operator returns. The guidance provides a framework by which procedures can be implemented to impose fines where late returns are an issue. The guidance details the transparent, proportionate and fair process by which any fines would be applied.

The introduction of the guidance has improved the timeliness of all returns since its introduction in the second half of the 2009/10 scheme year as can be seen in table 2a.

Table 2b shows which district councils met the 5 working day turnaround time in relation to NIEA WDF queries for each quarterly return for the 2010/11 scheme year.

Table 2b: Date by which district councils had responded to NIEA queries in 2010/11

District Council	Q1 (Apr – Jun 2010) queries		Q2 (Jul – Sep 2010) queries		Q3 (Oct - Dec 2010) queries		Q4 (Jan – Mar 2011) queries	
	issue	response	issue	response	issue	response	issue	response
Antrim BC	10/09/10	10/09/10	16/12/10	21/12/10	04/03/11	07/03/11	06/06/11	14/06/11
Ards BC	07/09/10	09/09/10	16/12/10	16/12/10	01/03/11	01/03/11	08/06/11	09/06/11
Armagh C&DC	01/09/10	02/09/10	09/12/10	13/12/10	01/03/10	07/03/10	03/03/11	09/06/11
Ballymena BC	08/09/10	09/09/10	16/12/10	17/12/10	08/03/11	16/03/11	08/06/11	10/06/11
Ballymoney BC	03/09/10	03/09/10	10/12/10	17/12/10	03/03/11	08/03/11	02/06/11	03/06/11
Banbridge DC	01/09/10	09/09/10	10/12/10	15/12/10	03/03/11	09/03/11	07/06/11	10/06/11
Belfast CC	14/09/10	24/09/10	16/12/10	20/12/10	09/03/11	16/03/11	06/06/11	14/06/11
Carrickfergus BC	01/09/10	02/09/10	16/12/10	20/12/10	08/03/11	14/03/11	08/06/11	15/06/11
Castlereagh BC	N/A	N/A	16/12/10	22/12/10	01/03/11	02/03/11	08/06/11	13/06/11
Coleraine BC	02/09/10	02/09/10	17/12/10	22/12/10	04/03/11	23/03/11	01/06/11	09/06/11
Cookstown DC	10/09/10	16/09/10	13/12/10	22/12/10	04/03/11	11/03/11	07/06/11	15/06/11
Craigavon BC	13/09/10	24/09/10	13/12/10	23/12/10	08/03/11	14/03/11	08/06/11	15/06/11
Derry CC	09/09/10	17/09/10	17/12/10	21/12/10	07/03/11	14/03/11	06/06/11	08/06/11
Down DC	14/09/10	22/09/10	16/12/10	22/12/10	04/03/11	11/03/11	10/06/11	20/06/11
Dungannon & South Tyrone BC	10/09/10	17/09/10	09/12/10	10/12/10	01/03/11	10/03/11	01/06/11	06/06/11
Fermanagh DC	07/09/10	09/09/10	10/12/10	20/12/10	07/03/11	11/03/11	08/06/11	17/06/11
Larne BC	15/09/10	24/09/10	10/12/10	21/12/10	04/03/11	21/03/11	09/06/11	17/06/11
Limavady BC	07/09/10	14/09/10	10/12/10	16/12/10	08/03/11	15/03/11	06/06/11	14/06/11
Lisburn CC	16/09/10	20/09/10	10/12/10	22/12/10	01/03/11	08/03/11	08/06/11	09/06/11
Magherafelt DC	09/09/10	14/09/10	13/12/10	20/12/10	08/03/11	16/03/11	02/06/11	09/06/11
Moyle DC	06/09/10	09/09/10	08/12/10	10/12/10	01/03/11	07/03/11	03/06/11	08/06/11
Newry & Mourne DC	13/09/10	23/09/10	09/12/10	10/12/10	08/03/11	09/03/11	02/06/11	03/06/11
Newtownabbey BC	14/09/10	27/09/10	10/12/10	14/12/10	01/03/11	07/03/11	09/06/11	15/06/11
North Down BC	08/09/10	09/09/10	10/12/10	14/12/10	04/03/11	09/03/11	08/06/11	09/09/11
Omagh DC	03/09/10	07/09/10	13/12/10	14/12/10	28/02/11	01/03/11	01/06/11	06/06/11
Strabane DC	06/09/10	09/09/10	13/12/10	20/12/10	01/03/11	07/03/11	02/06/11	07/06/11
% received by NIEA by due date		76.92%		84.61%		76.92%		73.07%

N/A – no query generated.

Most district councils are able to meet the five working day turnaround relatively easily, but those who experience difficulties tend to have one person responsible for data entry, and no-one else trained in the compilation of the relevant data. NIEA has recommended from the outset of WasteDataFlow in May 2005 that district councils should have more than one officer trained in the compilation of data and the operation of WasteDataFlow to deal with situations where the main designated officer is unable to deal with the issues concerned.

## 2.1.2 Validation Process

To assist district councils with self validation a summary spreadsheet has been developed within WDF. This enables quick checks to be viewed easily e.g. comparison of reported tonnages collected for recycling with reported tonnages of the waste sent for recycling, BMW diverted etc. Similarly a spreadsheet detailing an indicative mass balance calculation has also been developed to enable district councils to easily review the calculated amount of BMW sent to landfill in any particular quarter and hence monitor their progress towards meeting their obligations under NILAS.

In previous years upon receipt of the district council's data NIEA, as Monitoring Authority, conducted a qualitative assessment of the municipal waste arising data in WDF. The validation process involved cross checking figures between questions and previously submitted quarterly returns. However during the 2009/10 scheme year NIEA were assisted by Central Statistics & Research Branch (CSRB) primarily through a significant automation of the validation process. This involves downloading the relevant quarterly data and processing it through SPSS (Statistical Package for the Social Sciences) to identify trends and potential anomalies which allows a quicker and more detailed data analysis than was previously possible. This information was then used by NIEA to formulate queries to each district council. Queried data for the relevant quarter is rejected back to the WMG who then reject the data to the relevant district council to facilitate, where appropriate, any amendments. The data can normally only be entered and amended at district council level.

NIEA aims to complete the validation of all returns within one month of the relevant deadline and therefore requests that a response is made to all validation queries within 5 working days to ensure the production of timely and accurate municipal waste statistics. As the year progressed the number and size of queries regarding most district council returns remained relatively constant. The new validation process picked up a number of errors in the data which was sent back to the district councils concerned for rectification. This was in addition to data amendments required as a result of audits.

Data for the 2010/11 scheme year was validated, as in previous scheme years, by NIEA in its role as the Monitoring Authority but the responsibility for the compilation and publication of the reports passed to CSRB from April 2009. CSRB published the quarterly reports to a specified timetable in line with the Official Statistics Order (Northern Ireland) 2009. These

Official Statistics were compiled in accordance with National Statistic Protocols and subsequently published on both the NIEA

[http://www.doeni.gov.uk/niea/waste-home/municipal\\_data\\_reporting.htm](http://www.doeni.gov.uk/niea/waste-home/municipal_data_reporting.htm)

and CSRB websites

<http://www.doeni.gov.uk/index/information/asb.htm>

Until March 2011 CSRB had been a branch within the Department for Regional Development (DRD) providing services to DoE(NI). In April 2011 CSRB became Analytical Services Branch (ASB) within DoE(NI).

### **2.1.3 WasteDataFlow Northern Ireland User Group**

On 10<sup>th</sup> July 2007 NIEA hosted the inaugural Northern Ireland WasteDataFlow User Group with the overall aim of contributing to making WasteDataFlow a successful data capture and reporting system with a high level of timely good quality data returns from district councils in Northern Ireland.

The main objective is to provide an accurate database of waste management information, with reporting functions available for district councils, WMGs and regional government.

The Group aims to achieve this by:

- identifying barriers to the effective use of the WDF system by district councils
- proposing practical solutions to these barriers. For example through specific proposals on contents of on-line help, Guidance Manual, revisions to questions, adjustments to web-based data screens, reporting functionality etc.
- identifying and sharing good practices in waste data management.
- Facilitating communication within the WasteDataFlow community
- Providing input to reporting developments.

The User Group also enables NIEA to provide a forum for dialogue between the three parties as well as an element of training to district council users involved in the entry of data through demonstrations of the reporting functionality etc.

No meetings took place during the 2010/11 scheme year. Minutes of the User Group are available after ratification by the members on the NIEA website:

[http://www.doeni.gov.uk/niea/waste-home/municipal\\_data\\_reporting.htm](http://www.doeni.gov.uk/niea/waste-home/municipal_data_reporting.htm)

#### **2.1.4 WasteDataFlow Training**

NIEA has conducted a number of ad hoc training events to update district councils and to provide training opportunities for any new staff on an 'as needed basis' during the course of the 2010/11 scheme year.

#### **2.1.5 WasteDataFlow Guidance**

No formal guidance was issued by NIEA during the 2010/11 scheme year.

#### **2.1.6 WasteDataFlow Developments**

NIEA have been involved in some items of development work with WasteDataFlow over the 2010/11 scheme year including refinements to the mass balance calculation and the work to automate the calculation of the capture rate data for household kerbside collections.

Additionally NIEA has been working with three district councils, one from each WMG, to test the functionality of an new all inclusive waste question (Q100) using live data for the January to March 2011 period, and to replicate the KPIs currently generated by the system. The aim of Q100 is allow greater functionality than is presently available within the confines of the existing system by allowing users to "grow trees" which reflect the various collection systems and treatment systems in place to deal with particular wastes. This flexibility will be important to both user & regulator as new infrastructure, such as Mechanical Biological Treatment (MBT) and thermal treatment options, becomes more important in diverting biodegradable waste.

The facility lists for WasteDataFlow for Northern Ireland licensed waste facilities were also reviewed in relation to site name, address, licence number etc. as they appear on the NIEA public registers

[http://www.doeni.gov.uk/niea/waste-home/public\\_reg.htm](http://www.doeni.gov.uk/niea/waste-home/public_reg.htm)

NIEA itself now has the ability to update the facility list for Northern Ireland on an on-going basis so improving the ability of district councils to accurately report the destinations of their waste streams.

## 2.2 Landfill Operators

Under NILAS Regulation 11 (4), landfill operators are required to report, in each year, the amount of municipal waste sent to landfill at their sites. In 2010/11, 13 landfills in Northern Ireland reported accepting municipal waste. Municipal waste data from landfill operators is required within 2 months of the quarter end, corresponding with the district councils' submissions of data via WDF.

Landfill operator returns are submitted electronically to NIEA using the 'Landfill Operator – Municipal Waste Data Return Form (NILAS 001)'

[http://www.doeni.gov.uk/niea/nilas\\_landfilloperatorreturnssheet\\_220610.xls](http://www.doeni.gov.uk/niea/nilas_landfilloperatorreturnssheet_220610.xls)

The return includes the following information:

- Weight of each load (to the nearest tonne);
- EWC code;
- District council area where the waste originates;
- Name of transfer station, where applicable;
- Any treatment applied to waste prior to its landfill.

### 2.2.1 Validation Process

The amount of waste reported by landfill operators was cross checked with the returns from district councils submitted via WasteDataFlow.

Where there was more than 10 tonnes difference and this variation exceeded +/- 1% of the total between the landfill operator return and the district council return, NIEA as the Monitoring Authority queried both sets of returns to establish the reason, and if appropriate to enable one or both sets of data to be corrected.

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 is rounded to the nearest tonne;

- Private contractors may deal with both commercial and municipal waste streams within the same facility and take the residue to landfill in the same collection vehicle and therefore an estimated apportionment is used;
- NIEA do not receive returns 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 such as transfer stations or material recovery facilities; this has increasingly become a factor in establishing an audit trail between the waste disposed of by district councils and landfill operators. Additionally, both municipal and non-municipal waste may be handled by such facilities and the outputs are based on the proportion of inputs from each source.

In the 2010/11 scheme year in addition to the cross checks with WasteDataFlow data checks were also carried out on waste summary returns submitted to NIEA by permit holders to monitor compliance with their permits.

### **2.2.2 Guidance to Landfill Operators**

No guidance was issued to landfill operators during the 2010/11 scheme year.

### **2.2.3 Landfill Operator Data Audit**

During the sixth scheme year ten landfill sites accepting municipal waste were audited (see Table 3).

The returns submitted by the landfill operator were compared with actual weighbridge dockets to validate the submissions made via the operator returns under the NILAS regulations. Records kept by landfill operators were in both paper and electronic form.

A sample of submitted data was selected from each landfill site to be audited. A random one week period for each month within the quarter was audited. Any discrepancies found were discussed and resolved with the operator prior to the close of the audit, and resolved through an audit report agreed with the landfill operator.

Table 3: Landfill operators audited in 2010/11

<b>Landfill Operator</b>	<b>Date of Audit</b>	<b>Quarter audited</b>
<b>Craigahulliar</b> , Portrush (Coleraine Borough Council)	21/09/10	Apr - Jun 10
<b>Craigmore</b> , Ringsend (Coleraine Skip Hire & Recycling)	20/10/10	Apr - Jun 10
<b>Cottonmount</b> , Baird's Brae (Biffa)	28/01/11	Jul – Sep 10
<b>Tullyvar</b> (Dungannon & South Tyrone Borough Council)	16/02/11	Jul – Sep 10
<b>Ballymacombs</b> , Bellaghy (Magherafelt District Council)	31/03/11	Oct – Dec 10
<b>Drumnakelly</b> , Seaforde (Down District Council)	18/05/11	Oct – Dec 10
<b>Lisbane</b> , Tandragee (Sean Quinn Group)	18/05/11	Oct – Dec 10
<b>Drumree</b> , Enniskillen (Fermanagh District Council)	22/06/11	Jan – Mar 11
<b>Magheraglass</b> (Cookstown District Council)	27/07/11	Jan – Mar 11
<b>Aughnagun</b> , Mayobridge (Newry & Mourne District Council)	11/08/11	Jan – Mar 11

Each of the ten landfills audited presented satisfactory records e.g. waste transfer notes, invoices and weighbridge printouts which were generally well ordered and readily available. The documentation matched or agreed closely with landfill return figures sent to NIEA. There were, on occasions, some missing waste transfer notes, however it was still possible to track the tonnages using the weighbridge printouts or data.

During the scheme year NIEA continued to seek data on municipal waste sent to landfill via transfer stations. This work has enabled the capture of data for these waste material streams and helped to create a more robust audit and correlation between the data reported by district councils and that reported by landfill operators.

### 3. District Council Data Audits

Between October 2010 and September 2011, the Monitoring Authority carried out 16 audits of district councils' municipal waste data submitted via WDF during the scheme year. The audits were conducted under Regulation 10 (6) (a) of the NILAS Regulations. The district councils selected from each WMG were contacted by telephone, letter and e-mail informing them of NIEA's intention to audit. Table 4 lists the district councils selected and the dates of the audits.

Table 4: District councils audited in 2010/11

<b>District council:</b>	<b>Date of Audit:</b>	<b>Quarter audited</b>
Omagh District Council	11/10/10	Apr - Jun 10
Limavady Borough Council	27/10/10	Apr - Jun 10
Larne Borough Council	05/11/10	Apr - Jun 10
Ards Borough Council	12/01/11	Jul – Sep 10
Castlereagh Borough Council	18/01/11	Jul – Sep 10
Ballymoney Borough Council	19/01/11	Jul – Sep 10
Newtownabbey Borough Council	26/01/11	Jul – Sep 10
Banbridge Borough Council	14/03/11	Oct – Dec 10
Armagh City & District Council	23/03/11	Oct – Dec 10
Magherafelt District Council	31/03/11	Oct – Dec 10
Limavady Borough Council	14/04/11	Oct – Dec 10
Craigavon Borough Council	20/05/11	Oct – Dec 10
North Down Borough Council	03/08/11	Jan – Mar 11
Coleraine Borough Council	10/08/11	Jan – Mar 11
Lisburn City Council	15/08/11	Jan – Mar 11
Derry City Council	21/09/11	Jan – Mar 11

The audit involved checking and confirming relevant data which was submitted as a NILAS return to the Monitoring Authority (NIEA) via WDF. One quarter of each district council's municipal waste returns was selected, generally the most recent submission. The areas inspected related to:-

1. Landfilling of municipal waste.
2. Collection, recycling, reuse and recovery of municipal waste.
3. The standard of reporting / evidence for end destinations of recycled materials.

In each case documentation was requested relating to each waste stream. The documentation requested had to provide robust evidence of reported figures (e.g. waste transfer notes, invoices) and was compared against figures entered in WDF, and from landfill operator returns. The type of documentation used to compile returns was noted as were the names of any intermediate facilities used. Where facilities had been used which were not considered to be final destinations, information on the final destination of the waste stream was also requested.

Records were requested to confirm the data entered for household and non-household residual waste collections e.g. regular household collections and civic amenity site skips. Evidence was sought as to the composition of and origin of components in the final residual waste stream as well as the methodology used to determine these respective tonnages. A similar methodology to the landfill operators was employed for the inspection of the residual waste tonnages i.e. one week in each of the months in the relevant quarter was inspected and compared with the landfill operator return. Any discrepancies were resolved through dialogue with both district council and landfill operator, and amendments were made if required.

All records for recycling, including weighbridge dockets and invoices, were inspected and totalled for comparison with the figures entered in WDF. Where minor discrepancies were discovered these were pointed out to the council officers concerned and rejected by NIEA for rectification on the WDF system accordingly.

The majority of the audits were completed within one working day. On occasions additional material was e-mailed to the NILAS Team subsequent to the audit.

The systems used by district councils for the collection and storage of data varied. The majority of data was held in a paper format, with relatively little being held in electronic form. Most of the data was easily, and readily, accessible. However, in the majority of cases the collection and storing of data was managed by one person thereby considerably increasing the risk to the district council of a failure to make a timely submission should that person be unavailable for whatever reason e.g. sickness or leave etc.

It was noted that that there was variability in the standard of collation of information on the collection of waste streams both for disposal and recycling. The majority of district councils keep records in a paper based system with varying degrees of IT usage. In many cases

the relevant information is well ordered and stored separately in easily accessible files. However several councils' documentation proved more difficult to access thus requiring more time for the audit.

Although, the information recorded regarding final destinations has improved considerably over the course of the six scheme years more effort is urgently required by some District Councils to determine this information. NIEA from the outset of WDF has advised district councils that MRFs were not considered to be a final destination for the recovery of materials, and that councils should determine this information which is also required to discharge their obligation under NILAS Regulation 10 (1) (c) and their Duty of Care.

NIEA recommends that information on final destinations is obtained on a regular basis of at least once every other quarter, although each quarter would be preferable, to ensure that materials collected are being sent for recovery and that any rejection during these processes are adequately recorded. The minimum adequate evidence for final destinations would be copies of waste transfer notes and / or export certificates.

#### **4. Reconciliation Process**

The Monitoring Authority (NIEA) has a statutory duty under NILAS Regulation 13 to calculate the amount of BMW sent to landfill by each district council for the scheme year and to prepare a draft reconciliation of the tonnages involved and allowances used. This process must be completed no later than 5 months after the end of the scheme year. The BMW sent to landfill is calculated via a mass balance approach as detailed in Annex C.

NIEA delivered a draft reconciliation to each district council, WMG and the Allocating Authority on 20th July 2011. No transfers were required for the 2010/11 scheme year.

The Monitoring Authority has a statutory duty under Regulation 14 to reconcile the allowances available with the amount of BMW as calculated under Regulation 13 as soon as reasonably practicable after the end of the reconciliation period. The final reconciliation was completed on 8<sup>th</sup> December 2011, and issued simultaneously with the annual municipal waste management report, and the publication of the NILAS Register.

## 5. District Council Performance

The scheme year 2010/11 was the sixth year of the scheme. In 2010/11 the total number of landfill allowances allocated under NILAS was 469,937. Each allowance permits the landfilling of one tonne of BMW.

The total amount of BMW reported to have been sent to landfill was 348,674 tonnes, a decrease of 34,655 tonnes from 383,329 tonnes in 2009/10. In 2010/11, 25.8% of landfill allowances were not utilised compared to 18.44% not utilised in 2009/10. Over the past 6 years district councils in Northern Ireland have reduced the amount of BMW sent to landfill by 209,336 tonnes. Although, it should be noted that the deemed BMW percentage in the NILAS Regulations decreased from 71% to 64% from 1<sup>st</sup> April 2009.

The Southern Waste Management Group (SWaMP2008) sent 87,282 tonnes of BMW to landfill, 32.45% less than their allocated allowances.

The amount of BMW sent to landfill by arc21 was 191,109 tonnes, 23.94% less than their allocated allowances.

The amount of BMW sent to landfill in the North West Regional Waste Management Group (NWRWVG) was 70,283 tonnes, 21.44% less than their allocated allowance.

Table 6 shows the percentage of allowances utilised by each district council ranked according to the allowance allocation at the end of the scheme year.

Table 6: Landfill Allowance Utilisation for 2010/11

District council	BMW allowance	BMW reported sent to landfill rounded to the nearest tonne	Allowances used (%)
Magherafelt District Council	11,603	5,213	44.93%
Craigavon Borough Council	22,972	11,264	49.03%
Banbridge District Council	12,412	6,734	54.25%
Castlereagh Borough Council	17,907	10,047	56.11%
Armagh City & District Council	15,441	8,996	58.26%
Omagh District Council	13,793	8,649	62.71%
Lisburn City Council	30,215	19,101	63.22%
Antrim Borough Council	13,607	8,989	66.06%
Limavady Borough Council	9,568	6,347	66.33%
North Down Borough Council	21,030	14,376	68.36%
Ballymoney Borough Council	8,010	5,505	68.72%
Newtownabbey Borough Council	22,014	15,327	69.62%
Ards Borough Council	20,828	14,743	70.79%
Cookstown District Council	9,387	6,778	72.20%
Carrickfergus Borough Council	10,724	7,746	72.23%
Larne Borough Council	8,426	6,389	75.83%
Dungannon & South Tyrone BC	13,614	10,461	76.84%
Strabane District Council	10,736	8,251	76.85%
Ballymena Borough Council	16,380	12,793	78.10%
Down District Council	18,432	14,449	78.39%
Newry & Mourne District Council	25,353	20,131	79.40%
Moyle District Council	4,580	3,976	86.81%
Fermanagh District Council	16,249	14,269	87.81%
Coleraine Borough Council	15,367	13,874	90.29%
Derry City Council	29,596	27,117	91.62%
Belfast City Council	71,692	67,148	93.66%

Figure 2 shows the calculated BMW for the sixth scheme year against the allowances allocated to each of the district councils.

Table 7 and Figure 3 illustrate the differences between the amount of BMW landfilled by each district council in the fifth and sixth scheme years and the % increase or decrease in BMW landfilled over the first six scheme years.

Figure 2: Landfill Allowance Utilisation for 2010/11.

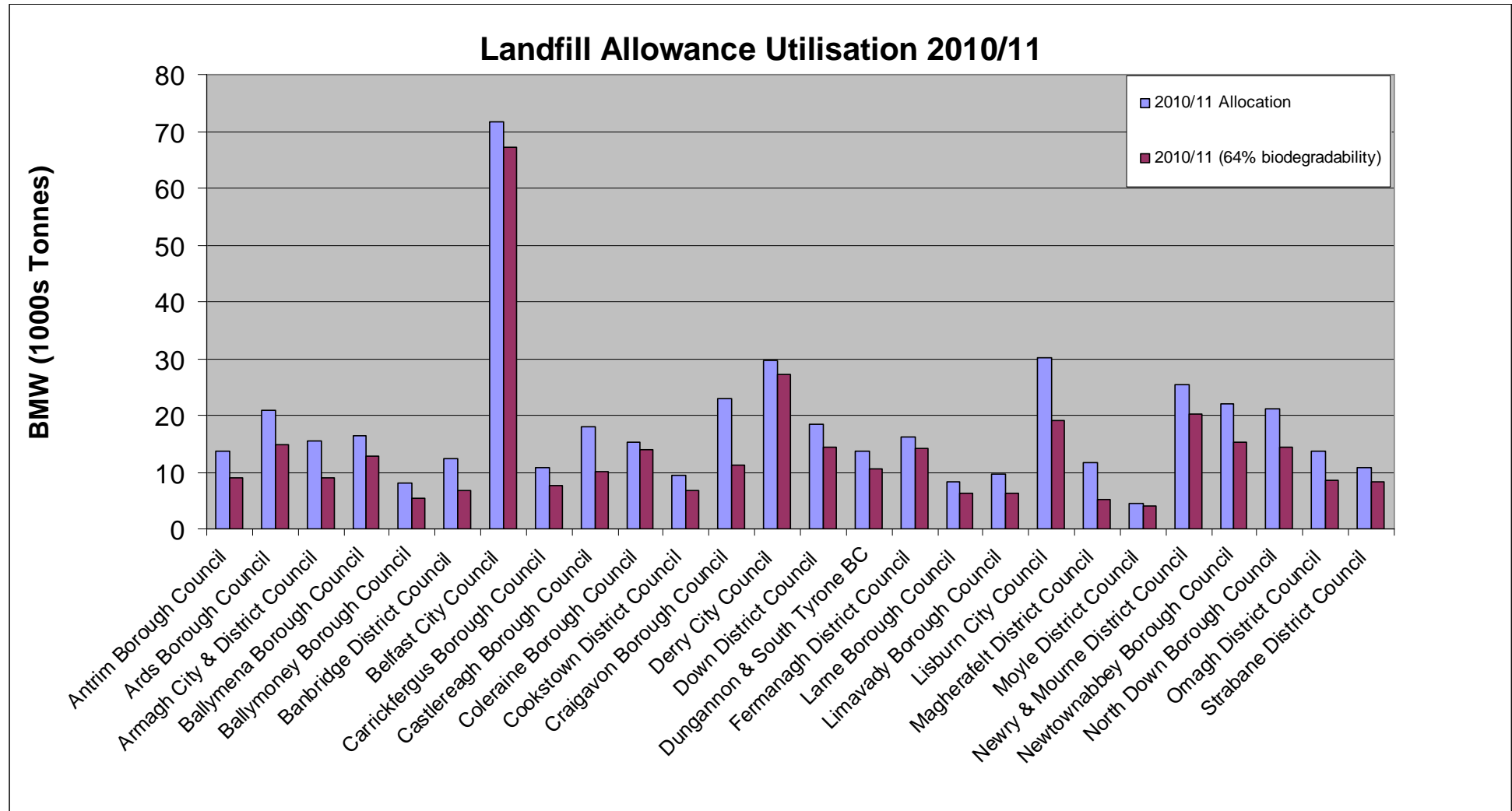
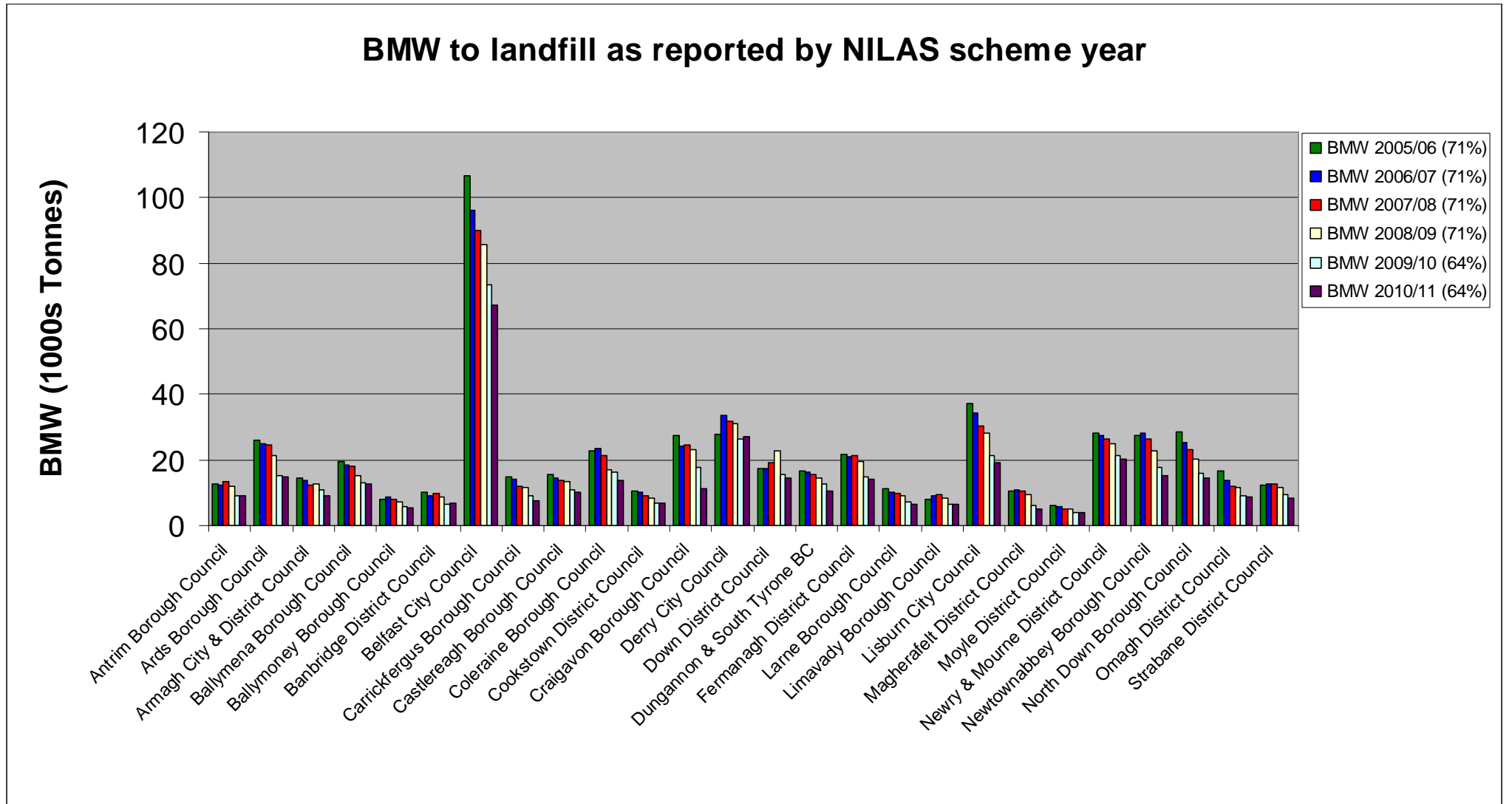


Table 7: Comparison of BMW reported as sent to landfill by district council & WMG by NILAS scheme year.

Waste Management Group:	District Council:	BMW sent to landfill 2005/06 (T)	BMW sent to landfill 2006/07 (T)	BMW sent to landfill 2007/08 (T)	BMW sent to landfill 2008/09 (T)	BMW sent to landfill 2009/10 (T)	BMW sent to landfill 2010/11 (T)	Decrease / Increase from 2009/10 to 2010/11 (T)	Decrease / Increase from 2005/06 to 2010/11 (T)
arc21	Antrim Borough Council	12,635	12,402	13,417	11,911	9,073	8,989	-84	-3,646
	Ards Borough Council	25,851	25,046	24,701	21,156	15,352	14,743	-609	-11,108
	Ballymena Borough Council	19,355	18,439	17,990	15,197	12,894	12,793	-101	-6,562
	Belfast City Council	106,509	96,063	89,939	85,586	73,552	67,148	-6,404	-39,361
	Carrickfergus Borough Council	14,935	14,116	11,802	11,586	9,154	7,746	-1,408	-7,189
	Castlereagh Borough Council	15,496	14,450	13,882	13,369	10,793	10,047	-746	-5,449
	Down District Council	17,262	17,382	19,096	22,726	15,460	14,449	-1,011	-2,813
	Larne Borough Council	11,345	10,259	9,769	9,110	7,381	6,389	-992	-4,956
	Lisburn City Council	37,242	34,186	30,412	28,016	21,236	19,101	-2,135	-18,141
	Newtownabbey Borough Council	27,599	28,024	26,488	22,843	17,833	15,327	-2,506	-12,272
North Down Borough Council	28,503	25,257	23,239	20,221	15,758	14,376	-1,382	-14,127	
	<b>arc21 – Total</b>	<b>316,732</b>	<b>295,622</b>	<b>280,735</b>	<b>261,721</b>	<b>208,486</b>	<b>* 191,110</b>	<b>-17,376</b>	<b>-125,622</b>
NWRWMG	Ballymoney Borough Council	8,119	8,724 <sup>1</sup>	8,048	7,172	5,827	5,505	-322	-2,614
	Coleraine Borough Council	22,604	23,411 <sup>2</sup>	21,203	17,027	16,355	13,874	-2,481	-8,730
	Derry City Council	27,909	33,509	31,900	30,962	26,543	27,117	574	-792
	Limavady Borough Council	8,016	9,200	9,304	8,363	6,646	6,347	-299	-1,669
	Magherafelt District Council	10,445	10,977	10,354	9,438	6,301	5,213	-1,088	-5,232
	Moyle District Council	6,043	5,739	5,211	5,056	3,855	3,976	121	-2,067
	Strabane District Council	12,345	12,697	12,743	11,540	9,431	8,251	-1,180	-4,094
	<b>NWRWMG – Total</b>	<b>95,481</b>	<b>104,258</b>	<b>98,763</b>	<b>89,557</b>	<b>74,958</b>	<b>* 70,282</b>	<b>-4,676</b>	<b>-25,199</b>
SWaMP2008	Armagh City & District Council	14,296	13,715	12,255	12,739	10,843	8,996	-1,847	-5,300
	Banbridge District Council	10,213	9,110	9,753	8,837	6,685	6,734	49	-3,479
	Cookstown District Council	10,402	9,977	9,184	8,415	6,815	6,778	-37	-3,624
	Craigavon Borough Council	27,624	24,191	24,657	23,218	17,659	11,264	-6,395	-16,360
	Dungannon & South Tyrone BC	16,694	16,223	15,386	14,517	12,531	10,461	-2,070	-6,233
	Fermanagh District Council	21,740	21,117	21,209	19,419	14,817	14,269	-548	-7,471
	Newry & Mourne District Council	28,105	27,608	26,259	25,061	21,450	20,131	-1,319	-7,974
	Omagh District Council	16,722	13,894	12,004	11,595	9,085	8,649	-436	-8,073
	<b>SWaMP2008 – Total</b>	<b>145,796</b>	<b>135,835</b>	<b>130,706</b>	<b>123,800</b>	<b>99,885</b>	<b>* 87,282</b>	<b>-12,603</b>	<b>-58,514</b>
	<b>Northern Ireland – Total</b>	<b>558,009</b>	<b>535,715</b>	<b>510,205</b>	<b>475,078</b>	<b>383,329</b>	<b>* 348,674</b>	<b>-34,655</b>	<b>-209,335</b>

\* These totals are calculated on exact values for each District Council from WasteDataFlow which are subsequently rounded rather than the already rounded values that appear in the table above.

Figure 3: Comparison of BMW sent to landfill broken down by district council and NILAS Scheme Year



## **5.1 Northern Ireland Waste Compositional Study 2007/08**

NIEA as Monitoring Authority have an obligation under Regulation 9(2) to keep under review the assumed amount of biodegradable waste in collected municipal waste.

Regulation 12(2) deemed the biodegradable content of collected municipal waste to be 71% as determined in 2000 by the Northern Ireland Waste Characterisation Study conducted by NI2000.

The results of the new 2007/08 Northern Ireland Waste compositional study were made public in February 2008. The main finding of this study was the determination that at this time 64% was a more representative figure for the biodegradable content of collected municipal waste within Northern Ireland. The executive summary and full study, respectively, can be found at:

[http://www.doeni.gov.uk/niea/waste\\_compositional\\_study\\_2007-08\\_executive\\_summary.pdf](http://www.doeni.gov.uk/niea/waste_compositional_study_2007-08_executive_summary.pdf)

[http://www.doeni.gov.uk/niea/waste\\_compositional\\_study\\_2007-08\\_full\\_report.pdf](http://www.doeni.gov.uk/niea/waste_compositional_study_2007-08_full_report.pdf)

## **5.2 The Landfill Allowances Scheme (Amendment) Regulations (NI) 2008**

In September 2008 P&EPG issued a consultation paper on proposed amendments to the NILAS Regulations with a view to amending NILAS Regulation 12 (2)(a) from 71% to 64% in relation to the deemed biodegradable content in collected municipal waste.

The Landfill Allowances Scheme (Amendment) Regulations (Northern Ireland) 2009 ([www.legislation.gov.uk/sr/sr2009/nisr\\_20090046\\_en\\_1](http://www.legislation.gov.uk/sr/sr2009/nisr_20090046_en_1)) were made on 11<sup>th</sup> February 2009 to come into operation on 1<sup>st</sup> April 2009 changing the deemed statutory BMW percentage to 64% for the 2009/10 scheme year onwards. This change reflects the current levels of biodegradability of municipal waste collected in Northern Ireland and is comparable to levels in England (68%), Wales (61%) and Scotland (63%).

Assessment of the impact of the reduction in the BMW percentage must be seen in the context of the mass balance calculation, rather than a straightforward 7% reduction. Therefore, impact of the figures for the BMW at 64% may appear greater than originally anticipated.

### 5.3 Looking Forward to 2012/13

The second Landfill Directive target year will come in 2012/13. The UK will report to the European Commission on the basis of the new definition of municipal waste, but it is expected that NILAS will play its part in helping to meet overall Landfill Directive targets. The following projections are based on the assumption that NILAS will continue in operation until at least 2012/13.

#### Static basis

Forecasts / estimates of BMW landfilled for each council & WMG in 2012/13, using only the latest available data and assuming that the total amount of municipal waste collected & its biodegradable content (64%) remain constant, are shown in Table 8 and Figure 4. Under this model, whilst Northern Ireland as a whole would have a deficit of 28,673 allowances, Antrim, Castlereagh, Lisburn, Ballymoney, Limavady, Magherafelt, Armagh, Banbridge and Craigavon councils would meet their 2012/13 NILAS targets.

#### Trend basis

However it can be seen from Figure 3 that there has been a general decrease in the amount of BMW landfilled in NI as a whole over the last 5 years. This was true even before the step change of the biodegradability factor at the beginning of the 2009/10 scheme year. Therefore it was decided to forecast / estimate the BMW to be landfilled in 2012/13 for each council using their historical trends. These were calculated from the average slope of the linear regression line for the scheme years 2005/06 – 2008/09 (i.e. where the biodegradability factor was a constant 71%) subsequently rebased (as the biodegradability factor was reduced to 64%) and that from 2009/10 to 2010/11 (biodegradability factor 64%). Most of the resulting individual council forecasts show decreases although Down and Derry councils do not due to some fluctuations in the early scheme years. However, as the amount of historical data is limited and to keep the dataset consistent, all available data has been used for each council and the resulting forecasts / estimates are shown in Table 9 and Figure 5. Under this model whilst Northern Ireland as a whole would have a surplus of 30,418 allowances, Belfast, Down, Derry, Moyle, Fermanagh and Newry & Mourne councils would not meet their 2012/13 NILAS targets.

Table 8: Landfill Allowance Utilisation for 2012/13 (using 64% biodegradability) assuming amount of BMW landfilled remains constant at 2010/11 levels.

Waste Management Group	District Council	BMW estimate sent to landfill in 2012/13 (T)	Allocation 2012/13 (T)	Balance (T)	surplus / deficit (%)
<b>arc21</b>	Antrim BC	8,989	9,261	272	2.94%
	Ards BC	14,743	14,230	-513	-3.60%
	Ballymena BC	12,793	11,156	-1,637	-14.68%
	Belfast CC	67,148	48,123	-19,025	-39.53%
	Carrickfergus BC	7,746	7,328	-418	-5.70%
	Castlereagh BC	10,047	12,079	2,032	16.83%
	Down DC	14,449	12,645	-1,804	-14.27%
	Larne BC	6,389	5,710	-679	-11.89%
	Lisburn BC	19,101	20,551	1,450	7.06%
	Newtownabbey BC	15,327	14,934	-393	-2.63%
	North Down BC	14,376	14,259	-117	-0.82%
	<b>arc21</b>	<b>* 191,110</b>	<b>170,277</b>	<b>-20,833</b>	<b>-12.23%</b>
<b>NWRWVG</b>	Ballymoney BC	5,505	5,525	20	0.36%
	Coleraine BC	13,874	10,426	-3,448	-33.08%
	Derry CC	27,117	20,192	-6,925	-34.29%
	Limavady BC	6,347	6,582	235	3.57%
	Magherafelt BC	5,213	7,983	2,770	34.70%
	Moyle DC	3,976	3,134	-842	-26.87%
	Strabane DC	8,251	7,330	-921	-12.56%
	<b>NWRWVG</b>	<b>* 70,282</b>	<b>61,172</b>	<b>-9,110</b>	<b>-14.89%</b>
<b>SWaMP2008</b>	Armagh C&DC	8,996	10,546	1,550	14.70%
	Banbridge DC	6,734	8,573	1,839	21.45%
	Cookstown DC	6,778	6,440	-338	-5.25%
	Craigavon BC	11,264	15,708	4,444	28.29%
	Dungannon & South Tyrone BC	10,461	9,320	-1,141	-12.24%
	Fermanagh DC	14,269	11,101	-3,168	-28.54%
	Newry & Mourne	20,131	17,422	-2,709	-15.55%
	Omagh DC	8,649	9,442	793	8.39%
	<b>SWaMP2008</b>	<b>* 87,282</b>	<b>88,552</b>	<b>1,269</b>	<b>1.43%</b>
	<b>Northern Ireland</b>	<b>* 348,674</b>	<b>320,000</b>	<b>-28,674</b>	<b>-8.96%</b>

\* These totals are calculated on exact values for each District Council from WasteDataFlow which are subsequently rounded rather than the already rounded values that appear in the table above.

Figure 4: Comparison of forecast / estimate of BMW landfilled (64%) to 2012/13 NILAS allowances on a static basis.

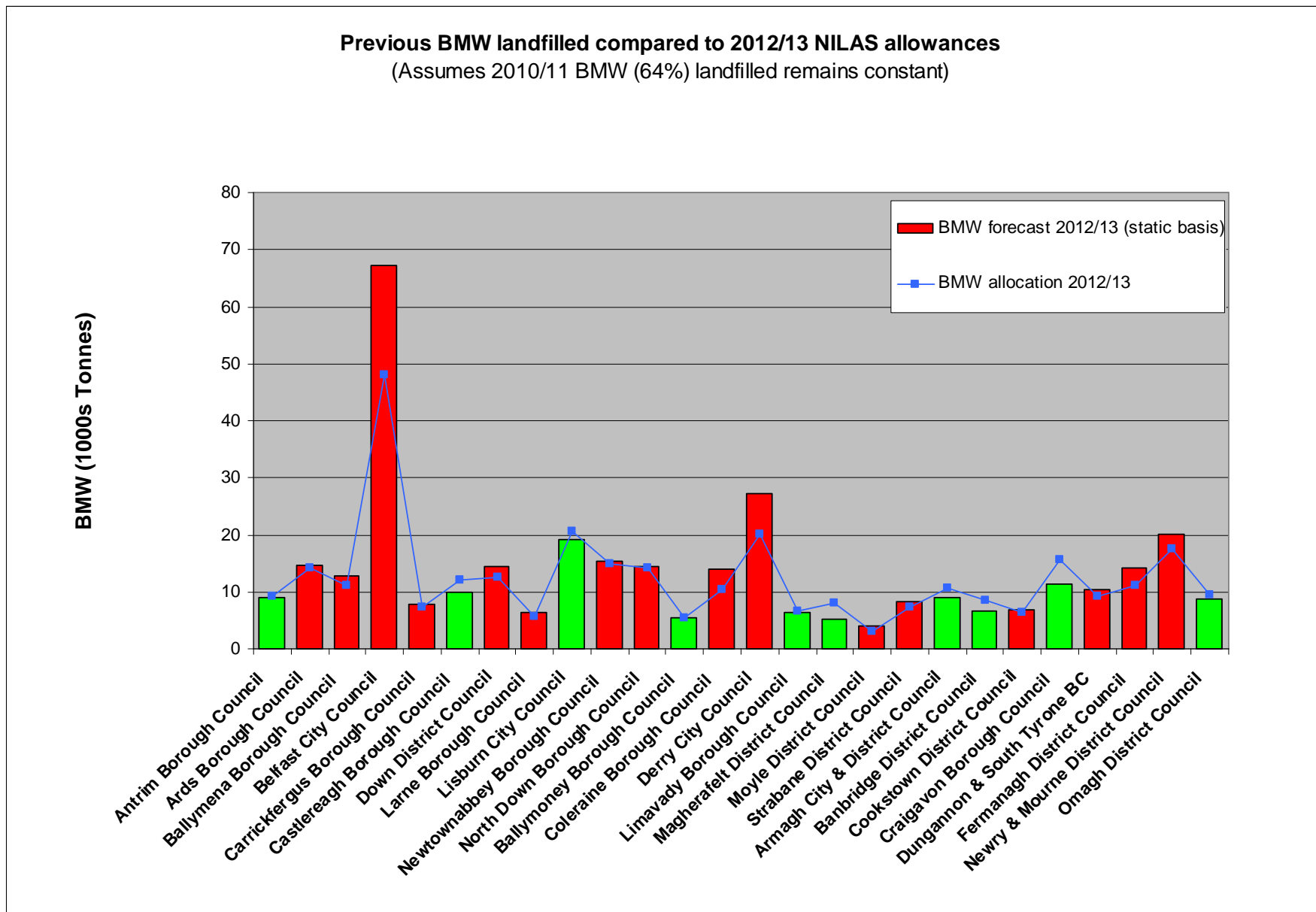
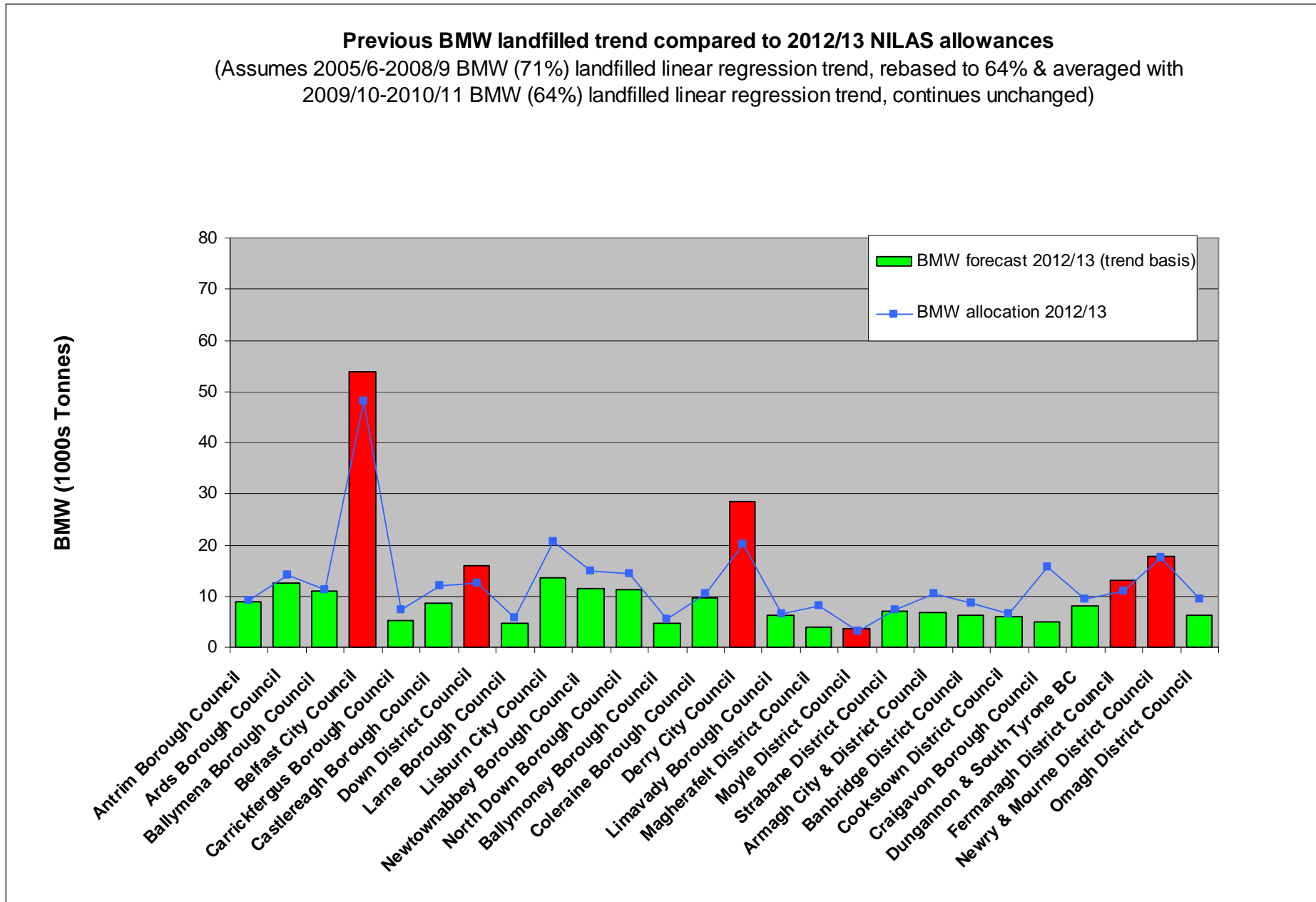


Table 9: Landfill Allowance Utilisation for 2012/13 (using 64% biodegradability) assuming amount of BMW landfilled follows existing average trends (composite linear regression over first five scheme years).

Waste Management Group	District Council	BMW estimate sent to landfill in 20012/13 (T)	Allocation 2012/13 (T)	Balance (T)	surplus / deficit (%)
arc21	Antrim BC	8,781	9,261	480	5.19%
	Ards BC	12,483	14,230	1,747	12.28%
	Ballymena BC	11,102	11,156	54	0.48%
	Belfast CC	53,733	48,123	-5,610	-11.66%
	Carrickfergus BC	5,145	7,328	2,183	29.79%
	Castlereagh BC	8,619	12,079	3,460	28.65%
	*Down DC	15,954	12,645	-3,309	-26.17%
	Larne BC	4,746	5,710	964	16.88%
	Lisburn BC	13,568	20,551	6,983	33.98%
	Newtownabbey BC	11,472	14,934	3,462	23.18%
	North Down BC	11,170	14,259	3,089	21.66%
	<b>arc21</b>	<b>155,5883</b>	<b>170,277</b>	<b>14,689</b>	<b>7.93%</b>
NWRWMG	Ballymoney BC	4,824	5,525	701	12.68%
	Coleraine BC	9,646	10,426	780	7.48%
	*Derry CC	28,491	20,192	-8,299	-41.10%
	Limavady BC	6,266	6,582	316	4.80%
	Magherafelt BC	3,942	7,983	4,041	50.62%
	Moyle DC	3,631	3,134	-497	-15.86%
	Strabane DC	7,070	7,330	260	3.55%
	<b>NWRWMG</b>	<b>63,763</b>	<b>61,172</b>	<b>-2,591</b>	<b>-4.41%</b>
SWaMP2008	Armagh C&DC	6,844	10,546	3,702	35.10%
	Banbridge DC	6,335	8,573	2,238	26.11%
	Cookstown DC	5,904	6,440	536	8.32%
	Craigavon BC	4,874	15,708	10,834	68.97%
	Dungannon & South Tyrone BC	7,988	9,320	1,332	14.29%
	Fermanagh DC	12,999	11,101	-1,898	-17.10%
	Newry & Mourne	17,832	17,422	-410	-2.36%
	Omagh DC	6,163	9,442	3,279	34.73%
	<b>SWaMP2008</b>	<b>68,938</b>	<b>88,552</b>	<b>19,614</b>	<b>22.15%</b>
	<b>Northern Ireland:</b>	<b>288,393</b>	<b>320,000</b>	<b>31,607</b>	<b>9.51%</b>

\* denotes that when taken over all scheme years, as above, these district councils' BMW landfilled linear regression trend is increasing. If only the more recent years were included these same trends would be decreasing. However, as the amount of historical data is limited and to keep the dataset consistent, all available data has been used for each district council.

Figure 5: Comparison of forecast / estimate of BMW landfilled (64%) to 2012/13 NILAS allowances on a trend basis.



Annex A: NILAS progress – 6<sup>th</sup> Scheme Year (2010/11) Regulation 14 Final Reconciliation

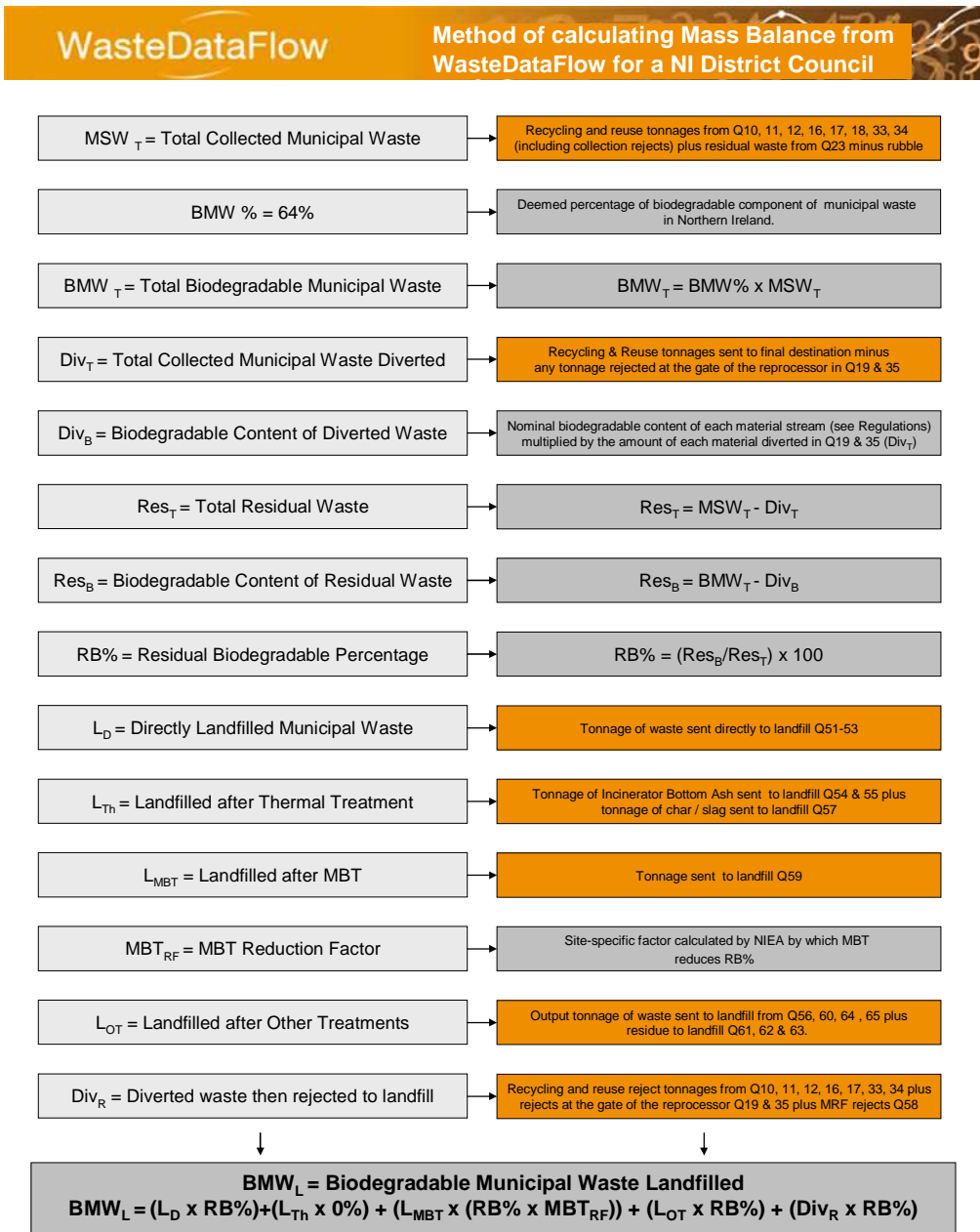
Waste Management Group	District Council	2010/11 Allocation	BMW sent to landfill 2010/11 (T)	BMW sent to landfill 2010/11 (% of allocation)
<b>arc21</b>	Antrim Borough Council	13,607	8,989	66.06%
	Ards Borough Council	20,828	14,743	70.79%
	Ballymena Borough Council	16,380	12,793	78.10%
	Belfast City Council	71,692	67,148	93.66%
	Carrickfergus Borough Council	10,724	7,746	72.23%
	Castlereagh Borough Council	17,907	10,047	56.11%
	Down District Council	18,432	14,449	78.39%
	Larne Borough Council	8,426	6,389	75.83%
	Lisburn City Council	30,215	19,101	63.22%
	Newtownabbey Borough Council	22,014	15,327	69.62%
	North Down Borough Council	21,030	14,376	68.36%
	<b>arc21 total</b>	<b>251,256</b>	<b>* 191,110</b>	<b>76.06%</b>
<b>NWRWVG</b>	Ballymoney Borough Council	8,010	5,505	68.72%
	Coleraine Borough Council	15,367	13,874	90.29%
	Derry City Council	29,596	27,117	91.62%
	Limavady Borough Council	9,568	6,347	66.33%
	Magherafelt District Council	11,603	5,213	44.93%
	Moyle District Council	4,580	3,976	86.81%
	Strabane District Council	10,736	8,251	76.85%
	<b>NWRWVG total</b>	<b>89,460</b>	<b>* 70,282</b>	<b>67.55%</b>
<b>SWaMP2008</b>	Armagh City & District Council	15,441	8,996	58.26%
	Banbridge District Council	12,412	6,734	54.25%
	Cookstown District Council	9,387	6,778	72.20%
	Craigavon Borough Council	22,972	11,64	49.03%
	Dungannon & South Tyrone BC	13,614	10,461	76.84%
	Fermanagh District Council	16,249	14,269	87.81%
	Newry & Mourne District Council	25,353	20,131	79.40%
	Omagh District Council	13,793	8,649	62.71%
	<b>SWaMP2008 total</b>	<b>129,221</b>	<b>* 87,282</b>	<b>67.55%</b>
	<b>Northern Ireland total</b>	<b>469,937</b>	<b>* 348,674</b>	<b>74.20%</b>

\* These totals are calculated on exact values for each District Council from WasteDataFlow which are subsequently rounded rather than the already rounded values that appear in the table above.

## ANNEX B: Northern Ireland Landfill Allowance Scheme Allocations

Northern Ireland Landfill Allowances Scheme: Landfill Allowance Allocation (tonnes)															
DC Allowances	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Antrim BC	17,288	18,936	18,535	18,138	13,605	13,607	13,490	9,261	8,846	8,430	8,014	7,596	7,184	6,771	6,358
Ards BC	31,842	28,862	28,280	27,695	20,798	20,828	20,686	14,230	13,617	13,002	12,382	11,758	11,119	10,480	9,841
Ballymena BC	21,453	22,835	22,344	21,849	16,384	16,380	16,242	11,156	10,656	10,156	9,657	9,158	8,660	8,162	7,665
Belfast CC	116,877	102,992	99,985	97,033	72,218	71,692	70,573	48,123	45,652	43,218	40,817	38,445	36,355	34,266	32,177
Carrickfergus BC	17,114	14,843	14,549	14,252	10,705	10,724	10,652	7,328	7,011	6,691	6,371	6,049	5,720	5,392	5,063
Castlereagh BC	23,103	25,385	24,745	24,097	17,987	17,907	17,673	12,079	11,488	10,900	10,317	9,740	9,211	8,682	8,152
Down DC	25,736	25,344	24,878	24,410	18,368	18,432	18,345	12,645	12,127	11,604	11,078	10,548	9,974	9,401	8,828
Larne BC	13,526	11,862	11,575	11,289	8,446	8,426	8,336	5,710	5,441	5,173	4,908	4,645	4,392	4,140	3,888
Lisburn CC	48,719	42,207	41,275	40,345	30,233	30,215	29,943	20,551	19,621	18,693	17,767	16,841	15,926	15,011	14,096
Newtownabbey BC	31,180	30,901	30,184	29,467	22,057	22,014	21,787	14,934	14,240	13,544	12,852	12,161	11,500	10,839	10,178
North Down BC	33,588	29,606	28,894	28,186	21,081	21,030	20,807	14,259	13,593	12,930	12,271	11,613	10,982	10,350	9,719
<b>arc21 total</b>	<b>380,427</b>	<b>353,773</b>	<b>345,244</b>	<b>336,762</b>	<b>251,880</b>	<b>251,256</b>	<b>248,533</b>	<b>170,277</b>	<b>162,291</b>	<b>154,344</b>	<b>146,435</b>	<b>138,554</b>	<b>131,024</b>	<b>123,493</b>	<b>115,964</b>
Armagh C&DC	17,790	21,394	20,964	20,531	15,420	15,441	15,334	10,546	10,089	9,632	9,172	8,710	8,236	7,763	7,290
Banbridge DC	12,896	16,824	16,577	16,325	12,324	12,412	12,395	8,573	8,247	7,915	7,577	7,235	6,842	6,449	6,055
Cookstown DC	11,681	12,920	12,678	12,435	9,356	9,387	9,344	6,440	6,175	5,908	5,638	5,367	5,075	4,784	4,492
Craigavon BC	30,961	31,763	31,141	30,516	22,928	22,972	22,825	15,708	15,037	14,365	13,689	13,011	12,304	11,597	10,890
Dungannon & South Tyrone BC	18,375	18,793	18,431	18,066	13,580	13,614	13,534	9,320	8,928	8,536	8,140	7,742	7,321	6,901	6,480
Fermanagh BC	21,041	22,557	22,088	21,619	16,229	16,249	16,138	11,101	10,623	10,144	9,663	9,183	8,684	8,185	7,686
Newry & Mourne DC	28,720	34,731	34,127	33,518	25,240	25,353	25,251	17,422	16,721	16,012	15,297	14,576	13,784	12,992	12,200
Omagh BC	19,155	19,047	18,678	18,305	13,760	13,793	13,711	9,442	9,043	8,642	8,241	7,837	7,411	6,985	6,559
<b>SWaMP2008 total</b>	<b>160,619</b>	<b>178,028</b>	<b>174,684</b>	<b>171,316</b>	<b>128,837</b>	<b>129,221</b>	<b>128,531</b>	<b>88,551</b>	<b>84,864</b>	<b>81,153</b>	<b>77,417</b>	<b>73,661</b>	<b>69,658</b>	<b>65,654</b>	<b>61,651</b>
Ballymoney BC	12,968	10,889	10,721	10,550	7,960	8,010	7,992	5,525	5,311	5,094	4,874	4,652	4,399	4,146	3,894
Coleraine BC	28,812	21,586	21,077	20,569	15,395	15,367	15,209	10,426	9,941	9,458	8,975	8,496	8,034	7,572	7,111
Derry CC	36,273	41,103	40,253	39,397	29,568	29,596	29,375	20,192	19,309	18,423	17,535	16,646	15,742	14,837	13,932
Limavady BC	12,255	13,074	12,860	12,637	9,521	9,568	9,536	6,582	6,317	6,050	5,777	5,503	5,204	4,905	4,606
Magherafelt BC	14,230	15,863	15,597	15,326	11,545	11,603	11,563	7,983	7,668	7,347	7,023	6,694	6,331	5,967	5,603
Moyle DC	6,889	6,334	6,207	6,081	4,569	4,580	4,552	3,134	3,001	2,866	2,733	2,598	2,457	2,316	2,174
Strabane DC	17,412	14,896	14,591	14,287	10,725	10,736	10,659	7,330	7,012	6,692	6,372	6,052	5,723	5,394	5,065
<b>NWRWMG total</b>	<b>128,839</b>	<b>123,745</b>	<b>121,307</b>	<b>118,847</b>	<b>89,283</b>	<b>89,460</b>	<b>88,886</b>	<b>61,172</b>	<b>58,559</b>	<b>55,931</b>	<b>53,290</b>	<b>50,641</b>	<b>47,889</b>	<b>45,136</b>	<b>42,384</b>
<b>Northern Ireland total</b>	<b>669,885</b>	<b>655,545</b>	<b>641,235</b>	<b>626,925</b>	<b>470,000</b>	<b>469,937</b>	<b>465,950</b>	<b>320,000</b>	<b>305,714</b>	<b>291,428</b>	<b>277,142</b>	<b>262,856</b>	<b>248,570</b>	<b>234,284</b>	<b>220,000</b>

## ANNEX C: Mass balance calculation



Excerpt from

[http://www.wastedataflow.org/documents/guidancenotes/NorthernIreland/LandfillAllowanceScheme/DC\\_Mass\\_Balance\\_Schematic\\_241109.pdf](http://www.wastedataflow.org/documents/guidancenotes/NorthernIreland/LandfillAllowanceScheme/DC_Mass_Balance_Schematic_241109.pdf)

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