

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

## 2006/07 Annual Report

December 2007

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## Executive Summary

This report covers the second 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 2006/07 landfill allowance obligations by both diverting Biodegradable Municipal Waste (BMW) from landfill and, where necessary transferring allowances.

In 2006/07, the total amount of BMW which was permitted to be sent to landfill was 655,545 tonnes. The total amount reported to have been sent to landfill was 535,716 tonnes. In 2006/07, 18.3% of landfill allowances were not utilised, a positive increase from the 16.3% not utilised in 2005/06. Over the last 2 years Northern Ireland has reduced the amount of BMW sent to landfill by 22,294 tonnes.

The Southern Waste Management Group (SWaMP) sent 135,835 tonnes of BMW to landfill, 23.70% less than their allocated allowances.

The amount of BMW sent to landfill by the arc21 Waste Management Group (WMG) was 295,624 tonnes, 16.3 % less than their allocated amount.

In the North West Regional Waste Management Group (NWRWMG), two district councils were involved in the transfer of landfill allowances: Coleraine Borough Council had a deficit of 1,830 allowances. Therefore, Ballymoney Borough Council transferred 1,830 allowances to Coleraine Borough Council, which allowed them to meet their obligations under the Regulations. This continues to demonstrate the flexibility and the partnership working of the scheme.

The amount of BMW sent to landfill in the NWRWMG was 104,257 tonnes, 15.7% less than their allocated allowances.

After the final reconciliation, Banbridge District Council and Castlereagh Borough Council had a surplus of allowances exceeding 40% of their allocations. Antrim Borough Council, Armagh City & District Council, and Down District Council had a surplus of allowances exceeding 30% of their allocation. There were 5 district councils: Belfast City Council, Carrickfergus Borough Council, Fermanagh District Council, Newtownabbey Borough Council and Moyle District Council, who had less than 10% of their allocation as surplus at the end of the scheme year.

Over the next 13-14 years the allocations for each district council, and Northern Ireland as a whole, progressively reduce making it vital for more BMW to be diverted from landfill. In 2007/08, 641,235 tonnes of BMW can be sent to landfill in Northern Ireland, reducing to 626,925 tonnes in 2008/09. This amount further reduces to 470,000 tonnes in 2009/10, the first Landfill Directive target year.

Moreover, the three WMGs revised Waste Management Plans detail 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 and Northern Ireland Landfill Allowance Scheme (NILAS) targets.

There were eleven district councils with a surplus of more than 20% of landfill allowances from their 2006/07 scheme year allocation.

From a WMG regional perspective, SWaMP as a whole has the greatest headroom in relation to its landfill allowance utilisation. SWaMP district councils collectively utilised 76.3% (surplus of 24.7%) of their allocated

landfill allowances, with 5 out of the 8 district councils having a surplus of more than 20% of their allocation.

## List of Acronyms

<b>AA</b>	Allocating Authority
<b>BMW</b>	Biodegradable Municipal Waste
<b>CIWM</b>	The Chartered Institution of Wastes Management
<b>Defra</b>	Department of Environment, Food and Rural Affairs
<b>EHS</b>	Environment and Heritage Service
<b>EWC</b>	European Waste Catalogue
<b>MA</b>	Monitoring Authority
<b>NILAS</b>	Northern Ireland Landfill Allowance Scheme
<b>NWRWGM</b>	North West Regional Waste Management Group
<b>SWaMP</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
<b>P&amp;EPG</b>	Planning and Environmental Policy Group

## 1. Introduction

The NILAS Regulations came into operation in Northern Ireland on 1st April 2005 hence, 2006/07 is the second scheme year. The scheme is designed to ensure the amount of BMW sent to landfill is reduced through setting limits on the amount of BMW that can be sent to landfill on an annual basis by each district council.

Article 5(2) of the EU Landfill Directive (1999/31/EC) 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 NILAS Regulations, made under the WET Act 2003, 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 by allocating progressively challenging limits on the amount of BMW which can be landfilled by each district council.

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 of £150 per tonne of exceeded allowances (Landfill Allowances Scheme (Amendment) Regulations (Northern Ireland) SR 2005/588)

The scheme facilitates the transfer and borrowing (with restrictions e.g. Allowances cannot be borrowed in a target year or a year before 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.

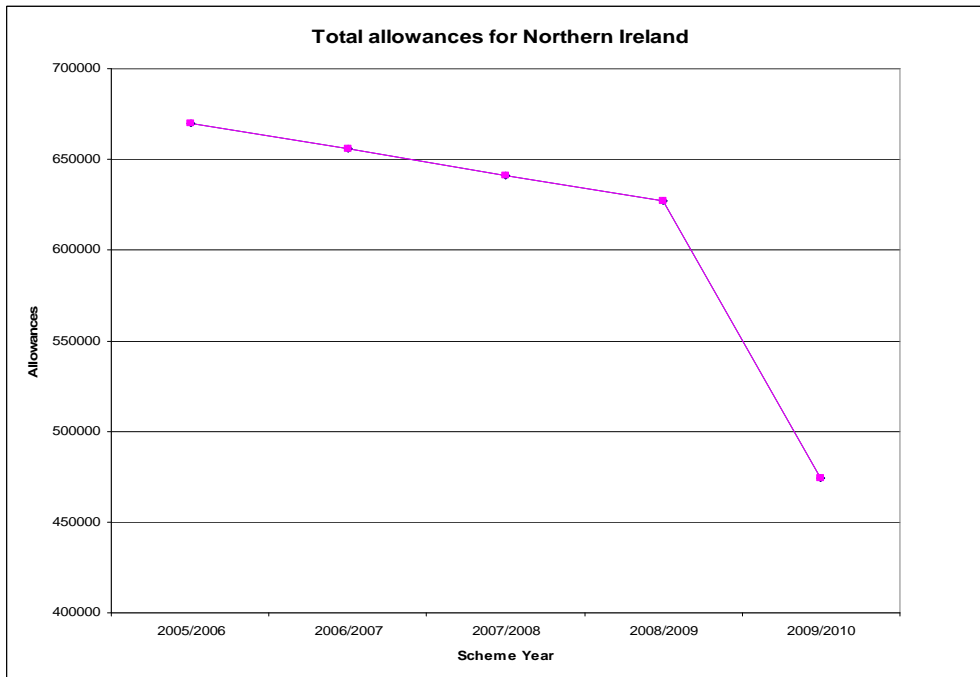
One allowance represents one tonne of BMW that can be sent to landfill.

The Planning & Environmental Policy Group (P&EPG) of the Department of Environment (DOE), as allocating authority have allocated allowances to each district council for every year of the scheme from 2005/06 until 2019/20.

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 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, 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'. Details of this methodology can be found at [www.doeni.gov.uk/foi\\_details.htm?docid=2409](http://www.doeni.gov.uk/foi_details.htm?docid=2409).

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 Waste Management Plans, have detailed a range of facilities that will need to be delivered to meet these targets.

Figure 1:



The allocating authority will be conducting an operational review of the scheme during 2007/08.

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

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

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

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

## 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. WDF is a web based system, initially developed by CIWM ([www.wastedataflow.org](http://www.wastedataflow.org)). WDF was launched in 2004.

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.

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, EHS and public access. After the final reconciliations have been issued by EHS the data for the scheme year is made available to the public on WDF. A member of the public must register with WDF and can then download the raw data in an excel spreadsheet format.

**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

During the scheme year 82% of district councils had submitted data on time (or within one day of the submission deadline) to EHS. However, over 86% of all district councils had submitted data to the WMG level before the submission deadline.

At times during the scheme year, there appeared to be confusion regarding the level within WDF at which district councils must have rolled their data up to in order for it to be regarded as submitted to EHS.

Data is deemed to have been submitted to EHS at level 35 on WDF.

The following tables illustrate when data was submitted to level 35 by EHS. For comparison, the date when the data was approved to WMG at level 30 is also provided. On numerous occasions, delays in submission of data to EHS could be attributed to the WMGs not being aware that data had been approved to their level or personnel not being available to approve data.

Subsequently, during the course of the 2007/08 scheme year an 'e-mail notification alert' has been 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. It is anticipated that this measure will improve the timeliness of data being submitted by the relevant deadline over the course of the third scheme year.

**Table 2a: Date when data was submitted to WMG (level 30), and EHS (level 35)**

District Council	Q1		Q2		Q3		Q4	
	Level 30	Level 35	Level 30	Level 35	Level 30	Level 35	Level 30	Level 35
Antrim BC	31/08/06	31/08/06	30/11/06	01/12/06	28/02/07	01/03/07	01/06/07	01/06/07
Ards BC	14/08/06	31/08/06	15/11/06	01/12/06	21/02/07	01/03/07	18/05/07	25/05/07
Armagh C&DC	08/08/06	24/08/06	06/11/06	08/11/06	20/02/07	09/03/07	18/05/07	30/05/07
Ballymena BC	31/08/06	31/08/06	20/11/06	01/12/06	28/02/07	01/03/07	04/05/07	25/05/07
Ballymoney BC	29/08/06	01/09/06	28/11/06	30/11/06	23/02/07	09/03/07	25/05/07	30/05/07
Banbridge DC	18/08/06	24/08/06	16/11/06	30/11/06	20/02/07	09/03/07	30/05/07	30/05/07
Belfast CC	31/08/06	04/09/06	30/11/06	01/12/06	27/02/07	01/03/07	29/05/07	30/05/07
Carrickfergus BC	23/08/06	31/08/06	30/11/06	01/12/06	05/03/07	08/03/07	30/05/07	01/06/07
Castlereagh BC	15/08/06	31/08/06	17/11/06	01/12/06	23/02/07	01/03/07	25/05/07	25/05/07
Coleraine BC	18/08/06	24/08/06	29/11/06	30/11/06	26/02/07	08/03/07	24/05/07	30/05/07
Cookstown DC	29/08/06	01/09/06	30/11/06	01/12/06	27/02/07	08/03/07	30/05/07	31/05/07
Craigavon BC	04/09/06	05/09/06	30/11/06	01/12/06	13/03/07	13/03/07	07/06/07	07/06/07
Derry CC	31/08/06	01/09/06	29/11/06	30/11/06	23/02/07	09/03/07	15/05/07	30/05/07
Down DC	16/09/06	-	29/11/06	01/12/06	01/06/07	01/06/07	01/06/07	01/06/07
Dungannon & South Tyrone BC	15/08/06	24/08/06	23/11/06	30/11/06	23/02/07	09/03/07	01/06/07	01/06/07
Fermanagh DC	01/09/06	01/09/06	15/12/06	15/12/06	01/03/07	08/03/07	01/06/07	01/06/07
Larne BC	31/08/06	31/08/06	30/11/06	01/12/06	26/02/07	01/03/07	31/05/07	01/06/07
Limavady BC	25/08/06	01/09/06	28/11/06	30/11/06	20/02/07	09/03/07	22/05/07	30/05/07
Lisburn CC	25/08/06	31/08/06	27/11/06	01/12/06	26/02/07	01/03/07	29/05/07	30/05/07
Magherafelt DC	30/08/06	01/09/06	30/11/06	01/12/06	28/02/07	08/03/07	30/05/07	31/05/07
Moyle DC	29/08/06	01/09/06	30/11/06	01/12/06	27/02/07	08/03/07	31/05/07	01/06/07
Newry & Mourne DC	31/08/06	01/09/06	10/11/06	10/11/06	27/02/07	08/03/07	30/05/07	30/05/07
Newtownabbey BC	30/08/06	31/08/06	24/11/06	01/12/06	26/02/07	01/03/07	30/05/07	01/06/07
North Down BC	25/08/06	31/08/06	29/11/06	01/12/06	28/02/07	01/03/07	31/05/07	01/06/07
Omagh DC	31/08/06	01/09/06	28/11/06	30/11/06	20/02/07	09/03/07	29/05/07	30/05/07
Strabane DC	31/08/06	01/09/06	28/11/06	30/11/06	21/02/07	09/03/07	25/05/07	30/05/07

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

**Table 2b: Date by which all returns submitted to level 35:**

	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
<b>NWRWVG</b>	01/09/06	01/12/06	09/03/07	31/05/07
<b>SWaMP</b>	05/09/06	15/12/06	09/03/07	01/06/07
<b>Arc21</b>	04/09/06	01/12/06	01/06/07	01/06/07
% received at level 35 (EHS) by deadline or within one day of the deadline:	92.3%	96.2%	38.5%	100 %
% received at level 30 (WVG) by deadline:	92.3%	96.2%	88.4%	100 %

### **2.1.1 Validation Process**

On receipt of data the Monitoring Authority conducts a qualitative assessment of the municipal waste arisings data in WDF. The validation process involves cross checking figures between questions and previously submitted quarterly returns. Any anomalies or discrepancies are queried with the relevant district council. Queried data for the relevant quarter is rejected back to the WVG who then reject data to the relevant district council to facilitate the amendment, where applicable, of queried data. The data can normally only be entered and amended at district council level.

To assist district councils with self validation a material summary sheet 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.

Additionally, a spreadsheet detailing an indicative mass balance calculation has been developed to enable local authorities to easily review the calculated amount of BMW sent to landfill, in any particular quarter, and hence monitor their progress in towards meeting their obligations under NILAS.

The Monitoring Authority aims to complete the validation of all returns within one month of the relevant deadline. EHS requests that a response is made to all validation queries within 5 working days to ensure this deadline is met, and to enable the production of accurate municipal waste statistics for district councils, WMGs and Northern Ireland.

As the year progressed the number and size of queries regarding most district council returns reduced, as officers became more familiar and confident with the operation of the WDF system. However, not all district councils appeared to be familiar with the 'material summary spreadsheets' which enables users to perform a degree of self validation of data prior to submission to EHS. However, through the newly formed WasteDataFlow User Group a forum for sharing information and ensuring district councils are made fully aware of new developments, aimed to assist them as system users, has been created.

### **2.1.2 WasteDataFlow Northern Ireland User Group**

On 10<sup>th</sup> July 2007 EHS hosted the inaugural Northern Ireland WasteDataFlow User Group with the 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 will be to provide a reliable database of waste management information, with reporting functions available at a district council, regional WMG and Northern Ireland level.

The Group will 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 enables EHS to provide an element of training to district council users involve in the entry of data through demonstrations of the reporting functionality etc. It also provides a forum for dialogue between the Monitoring Authority, District Councils and the Regional WMGs.

### **2.1.3 WasteDataFlow Training**

EHS 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 scheme year.

Training on WasteDataFlow reporting functionality was provided to senior council officers in each of the three waste management groups during November 2006.

## **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 2006/07, 18 landfills in Northern Ireland reported accepting municipal waste. Municipal waste data from landfill operators is required within 2 months of the quarter end.

Landfill operator returns are submitted electronically to the monitoring authority using the 'Landfill Operator – Municipal Waste Data Return Form (NILAS 001)' ([http://www.ehsni.gov.uk/nilas\\_landfilloperatorreturnssheet.xls](http://www.ehsni.gov.uk/nilas_landfilloperatorreturnssheet.xls)).

The return includes the following information:

- Weight of each load (to the nearest tonne);
- EWC code;

- District council area where the waste originates.

### 2.2.1 Validation Process

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

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 sets of returns to determine the reason for the differences, and to enable rectification of one or both sets of data, if required.

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 take municipal waste to landfill in the same collection vehicle as non-municipal waste and therefore an estimated apportionment is used;
- EHS 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 off by district councils and landfill operators.

## 2.2.2 Landfill Operator Data Audit

During the second scheme year 3 landfill sites accepting municipal waste were audited. The following landfill sites were audited:

<b>Landfill Operator:</b>	<b>Date of Audit:</b>
Green Road (Biffa Waste Management Ltd)	05/03/07
Lisbane Landfill Site (Sean Quinn Group)	08/05/07
Ballymacombs Landfill Site (Magherafelt District Council)	24/07/07

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 per month, within the relevant quarter was audited. Any discrepancies found were discussed and resolved with the operator prior to the close of the audit.

The three landfills audited presented satisfactory records. Waste Transfer Notes, invoices and weighbridge printouts were generally ordered and readily available. In general, the documentation matched or agreed closely with landfill return figures sent to EHS. There were, on occasion, some missing waste transfer notes, although this would not be unexpected due to the large volumes of traffic through a landfill. Where 'missing' dockets were discovered it was possible to track the tonnages using the weighbridge printouts.

### 3. District Council Data Audits

Between April 2006 and August 2007, the Monitoring Authority carried out 12 audits of district council's municipal waste data submitted via WasteDataFlow during the scheme year. The audits were conducted under Regulation 10 (6)(a) of the NILAS Regulations. District councils were selected from each WMG. The district councils selected were contacted by telephone, letter and e-mail informing them of EHS' intention to audit. The table below lists the councils selected and the dates of the audits.

<b>District Council:</b>	<b>Date of Audit:</b>
Newtownabbey Borough Council	19/04/07
Antrim Borough Council	09/05/07
Belfast City Council	23/05/07
Craigavon Borough Council	30/05/07
Armagh City & District Council	31/05/07
Banbridge District Council	01/06/07
Ballymoney Borough Council	19/07/07
Magherafelt District Council	24/07/07
Moyle District Council	16/08/07
Fermanagh District Council	21/08/07
Carrickfergus Borough Council	22/08/07
Lisburn City Council	29/08/07

The audit involved checking and confirming relevant data which was submitted as a NILAS return to the Monitoring Authority via WDF.

One quarter of each District Council's municipal waste returns was randomly selected; the areas being 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 WasteDataFlow, and in 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 how the various components of the residual waste stream were comprised, and the methodology utilised for the determination of the origin of the respective tonnages.

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 accordingly.

The majority of the audits were completed within one working day. In one case additional time was required to complete the audit.

The systems used by district councils for the collection and storage of data were 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 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.

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 council's 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 difficult to access.

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

The Monitoring Authority has a duty under the NILAS Regulation 13 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. The mass balance is calculated via a mass balance approach (see Annex C or link below)

<http://www.wastedataflow.org/documents/NIDCWasteDataFlowMassBalanceCalculation.pdf>).

EHS delivered a draft reconciliation to each district council in arc21 and NWRWMG on the 10<sup>th</sup> August 2007. The draft reconciliation to councils in SWaMP was delayed to 20<sup>th</sup> August 2007 with the exceptions of Craigavon Borough Council and Newry & Mourne District Council, which were issued on 28<sup>th</sup> August. The final reconciliation was sent to each district council and WMGs on the 18<sup>th</sup> October 2007 with the exception of Newry and Mourne District Council and Omagh District Council which were issued on 31<sup>st</sup> October and 22<sup>nd</sup> November, respectively.

There were no queries following the issuing of the final reconciliation.

## 5. District Council Performance

The scheme year 2006/07 was the second year of the scheme. In 2006/07 the total number of landfill allowances allocated was 655,545.. Each allowance permits the landfilling of one tonne of BMW.

The total amount reported to have been sent to landfill was 535,716 tonnes. In 2006/07, 18.3% of landfill allowances were not utilised, a positive increase from the 16.3% not utilised in 2005/06. Over the last 2 years Northern Ireland has reduced the amount of BMW sent to landfill by 22,294 tonnes.

The Southern Waste Management Group (SWaMP) sent 135,835 tonnes to landfill, 23.70% less than their allocated allowances. All district councils in SWaMP reduced the amount of BMW sent to landfill compared with 2005/06. Omagh District Council showed the largest percentage decrease in BMW landfilled. However, some of this apparent reduction has been attributed to an error in reported data in 2005/06.

The amount of BMW sent to landfill by the arc21 Waste Management Group (WMG) was 295,624 tonnes, 16.3 % less than their allocated amount. All but 2 district councils decreased the amount of BMW sent to landfill in 2006/07 compared with 2005/06.

In the North West Regional Waste Management Group (NWRWMG), two district councils were involved in the transfer of landfill allowances: Coleraine Borough Council had a deficit of 1,830 allowances. Therefore, Ballymoney Borough Council transferred 1,830 allowances to Coleraine Borough Council, which enabled them to meet their obligations under the Regulations.

The NWRWMG was the only WMG to show an increase in the amount of BMW sent to landfill. The amount of BMW sent to landfill increased from 95,481 tonnes in 2005/06 to 104,258 tonnes in 2006/07. All but one district council in the NWRWMG increased the amount of BMW sent to landfill in 2006/07 compared with 2005/06.

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.

Over the next 13-14 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.

**Table 3: Landfill Allowance Utilisation for 2006/07**

<b>District Council</b>	<b>BMW allowance 2006/07</b>	<b>BMW landfilled 2006/07</b>	<b>Surplus allowances in 2006/07</b>
Banbridge District Council	16,824	9,110	45.85%
Castlereagh Borough Council	25,385	14,450	43.08%
Armagh City & District Council	21,394	13,715	35.89%
Antrim Borough Council	18,936	12,402	34.51%
Down District Council	25,344	17,382	31.42%
Magherafelt District Council	15,863	10,977	30.80%
Limavady Borough Council	13,074	9,200	29.63%
Omagh District Council	19,047	13,894	27.05%
Craigavon Borough Council	31,763	24,191	23.84%
Newry & Mourne District Council	34,731	27,608	21.51%
Cookstown District Council	12,920	9,997	22.78%
Ballymena Borough Council	22,835	18,439	19.25%
Lisburn City Council	42,207	34,186	19.00%
Derry City Council	41,103	33,509	18.48%
Strabane District Council	14,896	12,697	14.76%
North Down Borough Council	29,606	25,257	14.69%
Dungannon & South Tyrone Borough Council	18,793	16,223	13.68%
Larne Borough Council	11,862	10,259	13.51%
Ards Borough Council	28,862	25,046	13.22%
Moyle District Council	6,334	5,739	9.39%
Newtownabbey Borough Council	30,091	28,024	9.31%
Belfast City Council	102,992	96,063	6.73%
Fermanagh District Council	22,557	21,117	6.38%
Carrickfergus Borough Council	14,843	14,116	4.90%
Ballymoney Borough Council	9,059 <sup>1</sup>	8,724	3.70%
Coleraine Borough Council	23,417 <sup>2</sup>	23,411	0.03%

<sup>1</sup> Includes 1,830 allowances transferred to Coleraine Borough Council

<sup>2</sup> Includes 1,830 allowances transferred from Ballymoney Borough Council

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

Table 4 illustrates the differences between the amount of BMW landfilled by each district council in the first and second scheme years.

Figure 2:

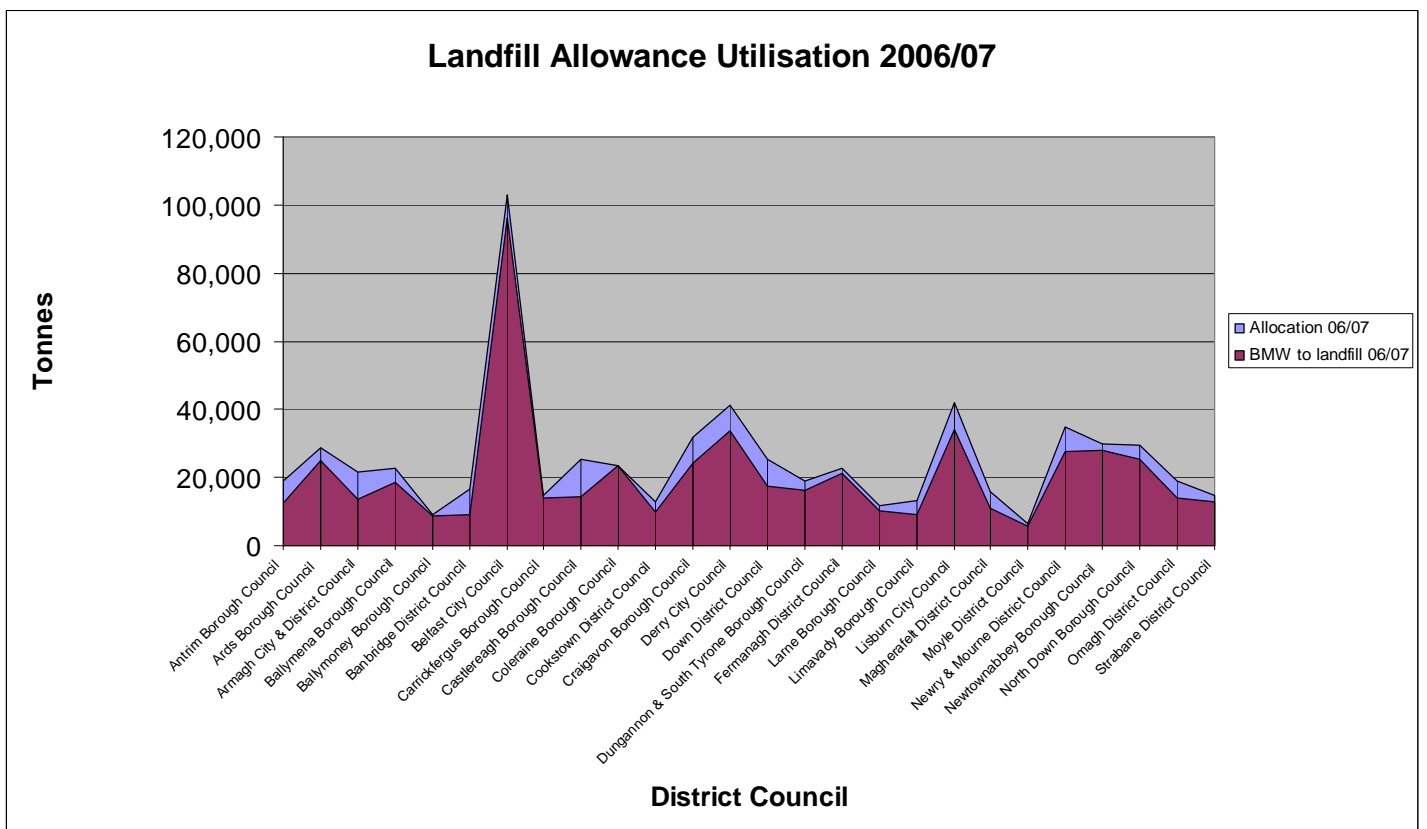


Table 4: Difference between 1<sup>st</sup> and second scheme years in BMW landfilled.

Waste Management Group:	District Council:	BMW sent to landfill for scheme year 2005/06 (As reported)	BMW sent to landfill for scheme year 2006/07 (As reported)	% Difference between 06/07 and 05/06 scheme years
ARC21	Antrim Borough Council	12,635	12,402	-1.84%
	Ards Borough Council	25,851	25,046	-3.11%
	Ballymena Borough Council	19,355	18,439	-4.73%
	Belfast City Council	106,509	96,063	-9.81%
	Carrickfergus Borough Council	14,935	14,116	-5.48%
	Castlereagh Borough Council	15,496	14,450	-6.75%
	Down District Council	17,262	17,382	0.70%
	Larne Borough Council	11,345	10,259	-9.57%
	Lisburn City Council	37,242	34,186	-8.21%
	Newtownabbey Borough Council	27,599	28,024	1.54%
	North Down Borough Council	28,503	25,257	-11.39%
	<b>Arc21 – Total:</b>	<b>316,732</b>	<b>295,622</b>	<b>-6.66%</b>
NWRWMG	Ballymoney Borough Council	8,119	8,724 <sup>1</sup>	7.45%
	Coleraine Borough Council	22,604	23,411 <sup>2</sup>	3.57%
	Derry City Council	27,909	33,509	20.07%
	Limavady Borough Council	8,016	9,200	14.77%
	Magherafelt District Council	10,445	10,977	5.09%
	Moyle District Council	6,043	5,739	-5.03%
	Strabane District Council	12,345	12,697	2.85%
	<b>NWRWMG – Total:</b>	<b>95,481</b>	<b>104,258</b>	<b>9.19%</b>
SWaMP	Armagh City & District Council	14,296	13,715	-4.06%
	Banbridge District Council	10,213	9,110	-10.80%
	Cookstown District Council	10,402	9,977	-4.09%
	Craigavon Borough Council	27,624	24,191	-12.43%
	Dungannon & South Tyrone Borough Council	16,694	16,223	-2.82%
	Fermanagh District Council	21,740	21,117	-2.87%
	Newry & Mourne District Council	28,105	27,608	-1.77%
	Omagh District Council	16,722	13,894	-16.91%
	<b>SWaMP – Total:</b>	<b>145,796</b>	<b>135,835</b>	<b>-6.83%</b>
	<b>Northern Ireland – Total:</b>	<b>558,009</b>	<b>535,715</b>	<b>-4.00%</b>

## 5.1 Looking Forward to the first Landfill Directive Target Year 09/10

If we assume the total BMW landfilled remains constant then Northern Ireland as a whole in 2009/10 would have a deficit of allowances of 66,064 tonnes, see table 5 and figure 3. The WMGs would have the following deficits:

- arc21 43,744 tonnes
- SWaMP 7,346 tonnes
- NWRWMG 14,974 tonnes

However, the reduction in BMW sent to landfill should continue to decrease as the WMGs continue to implement their Waste Management Plans.

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.

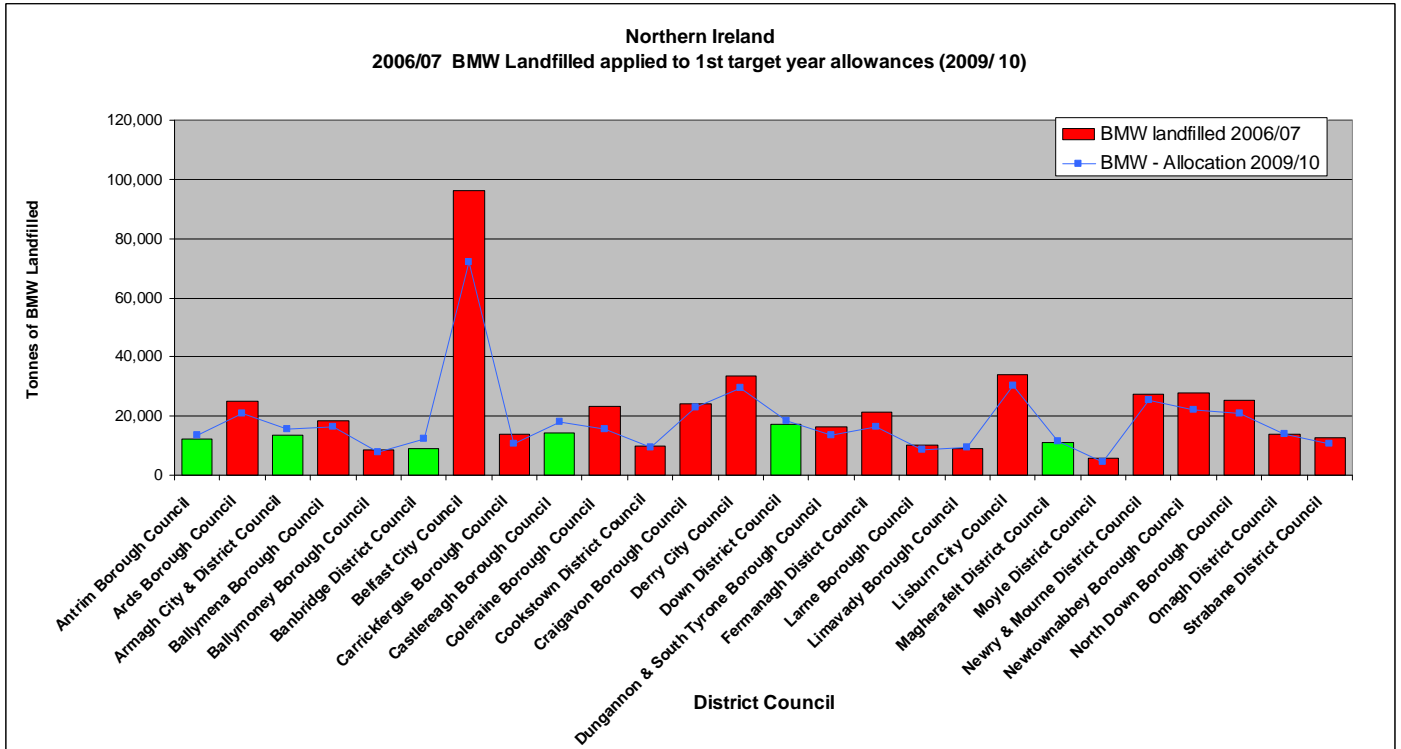
The municipal waste arisings increased by 0.05% between 2005/06 and 2006/07. The municipal waste recycling rate increased from 23.02% to 25.54% in the same period. This equates to an additional amount of almost 27,000 tonnes of waste sent for recycling. However, this also includes non-biodegradable fractions.

**Table 5: Landfill Allowance Utilisation (assuming amount of BMW landfilled remains constant)**

Waste Management Group	District Council	BMW landfilled in 2006/07 (tonnes)	2009/2010 allocation	Balance (tonnes)	% surplus / deficit
<b>ARC21</b>	Antrim BC	12,402	13,605	1,203	8.84%
	Ards BC	25,046	20,798	-4,248	-20.43%
	Ballymena BC	18,439	16,384	-2,055	-12.54%
	Belfast CC	96,063	72,218	-23,845	-33.02%
	Carrickfergus BC	14,116	10,705	-3,411	-31.86%
	Castlereagh BC	14,450	17,987	3,537	19.66%
	Down DC	17,382	18,368	986	5.37%
	Larne BC	10,259	8,446	-1,813	-21.47%
	Lisburn BC	34,186	30,233	-3,953	-13.08%
	Newtownabbey BC	28,024	22,057	-5,967	-27.05%
	North Down BC	25,257	21,081	-4,176	-19.81%
	<b>Arc21</b>	<b>295,622</b>	<b>251,880</b>	<b>-43,744</b>	<b>-17.37%</b>
<b>NWRWVG</b>	Ballymoney BC	8,724	7,960	-764	-9.60%
	Coleraine BC	23,411	15,395	-8,016	-52.07%
	Derry CC	33,509	29,568	-3,941	-13.33%
	Limavady BC	9,200	9,521	321	3.37%
	Magherafelt BC	10,977	11,545	568	4.92%
	Moyle DC	5,739	4,569	-1,170	-25.61%
	Strabane DC	12,697	10,725	-1,972	-18.39%
	<b>NWRWVG</b>	<b>104,258</b>	<b>89,283</b>	<b>-14,974</b>	<b>-16.77%</b>
<b>SWaMP</b>	Armagh C&DC	13,715	15,420	1,705	11.06%
	Banbridge DC	9,110	12,324	3,214	26.08%
	Cookstown DC	9,977	9,356	-621	-6.63%
	Craigavon BC	24,191	22,928	-1,263	-5.51%
	Dungannon & South Tyrone BC	16,223	13,580	-2,643	-19.46%
	Fermanagh DC	21,117	16,229	-4,888	-30.12%
	Newry & Mourne	27,608	25,240	-2,368	-9.38%
	Omagh DC	13,894	13,760	-134	-0.98%
	<b>SWaMP</b>	<b>135,835</b>	<b>128,837</b>	<b>-7,346</b>	<b>-5.70%</b>
	<b>Northern Ireland:</b>	<b>535,715</b>	<b>470,000</b>	<b>-66,064</b>	<b>-14.06%</b>

Figure 3 shows a comparison between BMW landfilled and progress towards 2009/ 10 targets.

Figure 3



**Annex A: Table: Northern Ireland - NILAS progress - 2<sup>nd</sup> Scheme Year (06/07) Regulation 14 Final Reconciliation**

Waste Management Group:	District Council:	2006/07 Allocation	BMW sent to landfill for scheme year 2006/07 (As reported)	BMW sent to landfill as % of 2006/07 allocation
<b>ARC21</b>	Antrim Borough Council	18,936	12,402	65.49%
	Ards Borough Council	28,862	25,046	86.78%
	Ballymena Borough Council	22,835	18,439	80.75%
	Belfast City Council	102,992	96,063	93.27%
	Carrickfergus Borough Council	14,843	14,116	95.10%
	Castlereagh Borough Council	25,385	14,450	56.92%
	Down District Council	25,344	17,382	68.58%
	Larne Borough Council	11,862	10,259	86.49%
	Lisburn City Council	42,207	34,186	81.00%
	Newtownabbey Borough Council	30,901	28,024	90.69%
	North Down Borough Council	29,606	25,257	85.31%
<b>ARC21 – Total:</b>		<b>353,773</b>	<b>295,622</b>	<b>83.56%</b>
<b>NWRWMG</b>	Ballymoney Borough Council	9,059 <sup>1</sup>	8,724	96.30%
	Coleraine Borough Council	23,416 <sup>2</sup>	23,411	99.98%
	Derry City Council	41,103	33,509	81.52%
	Limavady Borough Council	13,074	9,200	70.37%
	Magherafelt District Council	15,863	10,977	69.2%
	Moyle District Council	6,334	5,739	90.61%
	Strabane District Council	14,896	12,697	85.24%
<b>NWRWMG – Total:</b>		<b>123,745</b>	<b>104,258</b>	<b>84.25%</b>
<b>SWaMP</b>	Armagh City & District Council	21,394	13,715	64.11%
	Banbridge District Council	16,824	9,110	54.15%
	Cookstown District Council	12,920	9,997	77.22%
	Craigavon Borough Council	31,763	24,191	76.16%
	Dungannon & South Tyrone Borough Council	18,793	16,223	86.33%
	Fermanagh District Council	22,557	21,117	93.62%
	Newry & Mourne District Council	34,731	27,608	79.49%
	Omagh District Council	19,047	13,894	72.94%
<b>SWaMP – Total:</b>		<b>178,029</b>	<b>135,835</b>	<b>76.30%</b>
<b>Northern Ireland – Total:</b>		<b>655,545</b>	<b>535,715</b>	<b>81.72%</b>

<sup>1</sup>Includes 1,830 allowances transferred to Coleraine Borough Council

<sup>2</sup>Includes 1,830 allowances transferred from Ballymoney Borough Council

## 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	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	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	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	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	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	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	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	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	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	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	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</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	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	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	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	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	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	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	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	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>SWaMP</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	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	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	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	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	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	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	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>NWRWVG</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>Total Northern Ireland</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:

# WasteDataFlow

## Method of calculating Mass Balance from WasteDataFlow for a NI District Council

