



Northern Ireland Local Authority Collected Municipal Waste Management Statistics

Quarterly provisional estimates for October to December 2016



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Key Points for Northern Ireland

- Northern Ireland's councils collected 228,631 tonnes of LAC municipal waste between October and December 2016. This was a 0.6% decrease on the 230,089 tonnes collected during the same three months of 2015. Household waste accounts for 89.3% of total LAC municipal waste. Newry, Mourne & Down generated the smallest quantity of household waste per person at 97kg, whilst the largest quantity per person was recorded in Antrim & Newtownabbey at 129kg.
- The household waste preparing for reuse, dry recycling and composting rate was 42.1% between October and December 2016, an increase on the 40.1% recorded during the same three months of 2015. At council level, rates varied from 37.1% in Belfast to 49.9% in Mid Ulster.
- The LAC municipal waste energy recovery rate was 19.7%, similar to the 19.3% recorded in the same quarter last year. The highest rate was recorded in Newry, Mourne & Down at 52.9% and the lowest was 2.6% in Fermanagh & Omagh.
- The latest quarterly landfill rate for household waste was 38.3%, a further reduction on the 40.1% recorded during the same three months of 2015. There were 51,090 tonnes of BLACMW sent to landfill between October and December 2016. This was 7.2% lower than the 55,079 tonnes sent between the same three months of 2015. However, it did account for a similar proportion of the annual allowance, 19.4% between October and December 2016 compared to 19.9% in the equivalent quarter of 2015.

Reader Information

This document may be made available in alternative formats, please contact us to discuss your requirements.

Purpose

This is a quarterly publication which reports provisional figures on the key measurements of local authority collected municipal waste for councils and waste management groups in Northern Ireland.

Next Updates

- Provisional figures for January to March 2017 will be available on 27 July 2017.
- Finalised data for 2016/17 are scheduled to be published on 30 November 2017.
- The scheduled dates for all upcoming publications are available from the GOV.UK statistics release calendar: <https://www.gov.uk/government/statistics>

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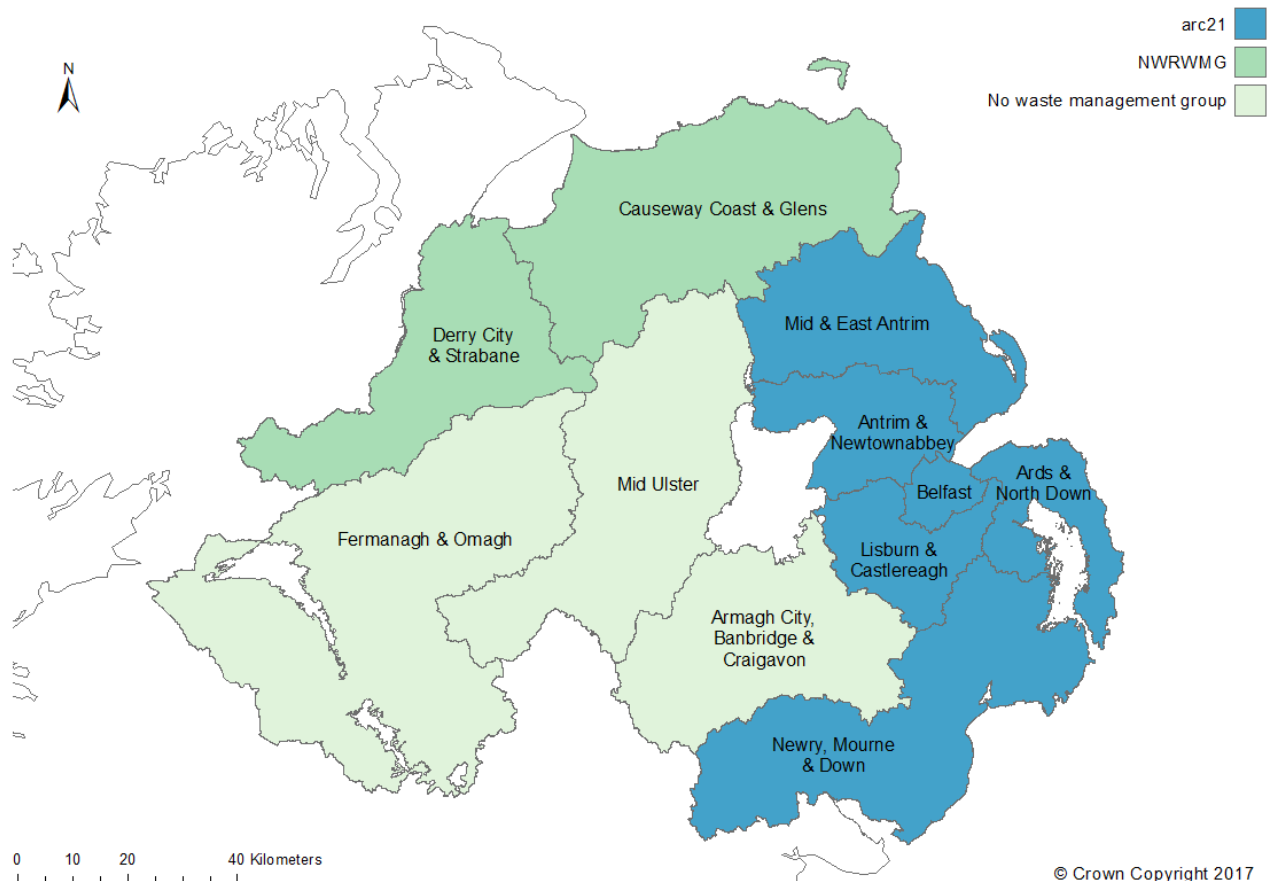
Introduction

This report presents information on the quantities of local authority collected municipal waste managed in Northern Ireland between October and December 2016. It provides information on the quantities and rates of local authority collected waste arisings, sent for preparing for reuse, for dry recycling, composting, energy recovery and sent to landfill. Some of these measurements are key performance indicators (KPIs). These are used to assess progress towards achieving waste strategy targets and where appropriate this is highlighted in the tables and charts.

The 26 councils covered by previous reports were reorganised into 11 new councils from 1 April 2015. This is the seventh release of waste data collected on an 11 council basis. During this period in Northern Ireland, 8 of the 11 councils were split into two Waste Management Groups (WMGs) with 3 councils unaffiliated to any group. WMGs produce, develop and implement Waste Management Plans for their areas of responsibility and are an important part of the data submission process. The group with the largest share of the population is arc21 with 59%. The North West Regional Waste Management Group (NWRWMG) has 16% of the population with the remaining 25% residing in councils belonging to no waste management group.

There were six councils in arc21: Antrim & Newtownabbey; Ards & North Down; Belfast; Lisburn & Castlereagh; Mid & East Antrim; and Newry, Mourne & Down. NWRWMG contained two councils: Causeway Coast & Glens; and Derry City & Strabane. The remaining three councils were not members of any WMG: Armagh City, Banbridge & Craigavon; Fermanagh & Omagh; and Mid Ulster.

Figure 1: Map of councils and waste management groups in Northern Ireland



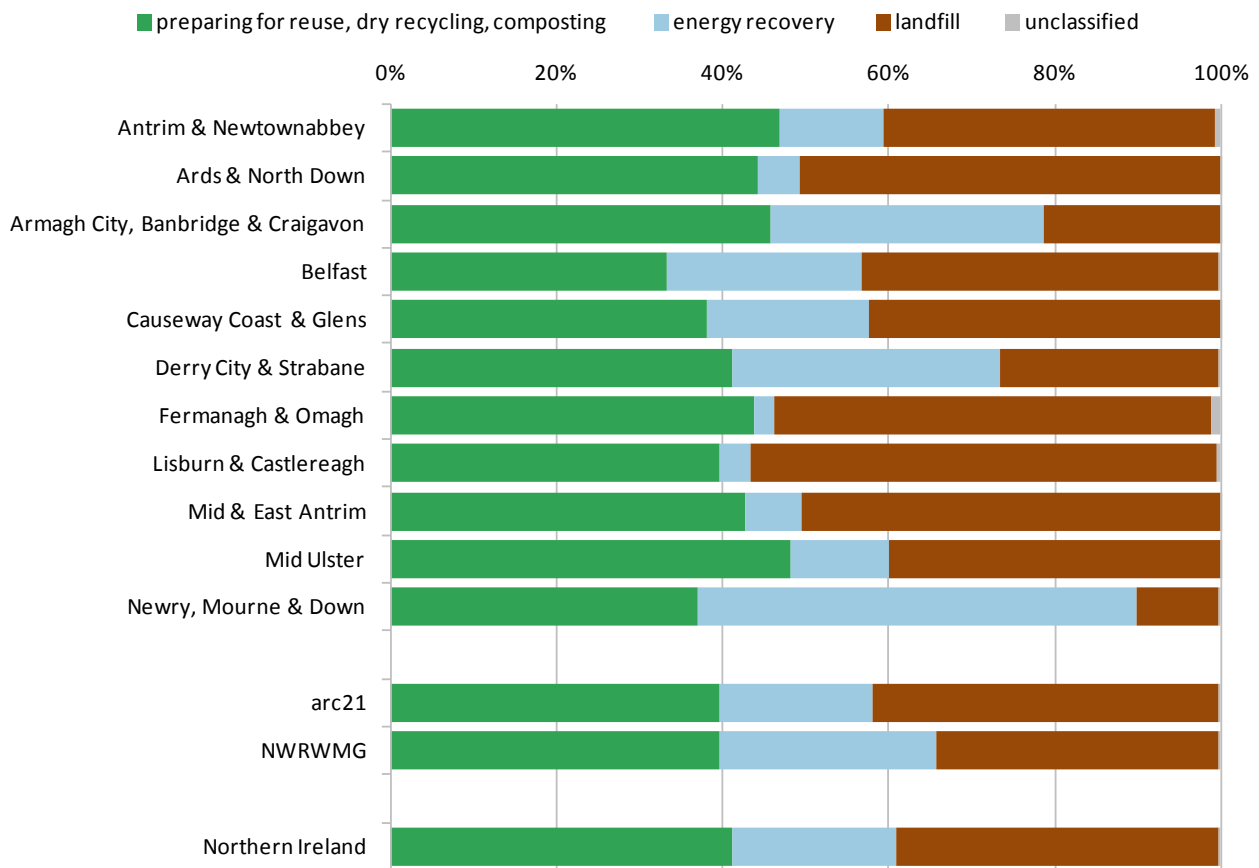
Overview

This report is split into five sections, each of which cover local authority collected (LAC) municipal and, where appropriate, household waste:

- waste arisings (pages 6-8),
- reuse, dry recycling and composting (pages 9-11),
- energy recovery (pages 12-14),
- landfill (pages 15-17), and,
- biodegradable landfill (pages 18-19).

The purpose of this overview is to show at a glance the proportions of the total LAC municipal waste arisings sent for preparing for reuse, dry recycling, composting, energy recovery and landfill between October and December 2016.

Figure 2: LAC municipal waste preparing for reuse, dry recycling, composting, energy recovery and landfill rates by council and waste management group Northern Ireland, October to December 2016



At the Northern Ireland level, 41.2% of LAC municipal waste was sent for preparing for reuse, dry recycling and composting between October and December 2016. Energy recovery accounted for 19.7% and 38.8% was landfilled. This left 0.3% unaccounted for which was likely to involve moisture and/or gaseous losses. Unclassified waste is calculated as a residual amount of municipal waste after municipal waste sent for preparing for reuse, dry recycling, composting, energy recovery and landfill have been accounted for, instead of being extracted directly from the WasteDataFlow system. Each of the rates is discussed in detail in the appropriate section of the report.

These figures are an improvement on the same quarter last year when 39.4% of LAC municipal waste was sent for preparing for reuse, dry recycling and composting, 19.3% was sent for energy recovery and 40.8% was landfilled.

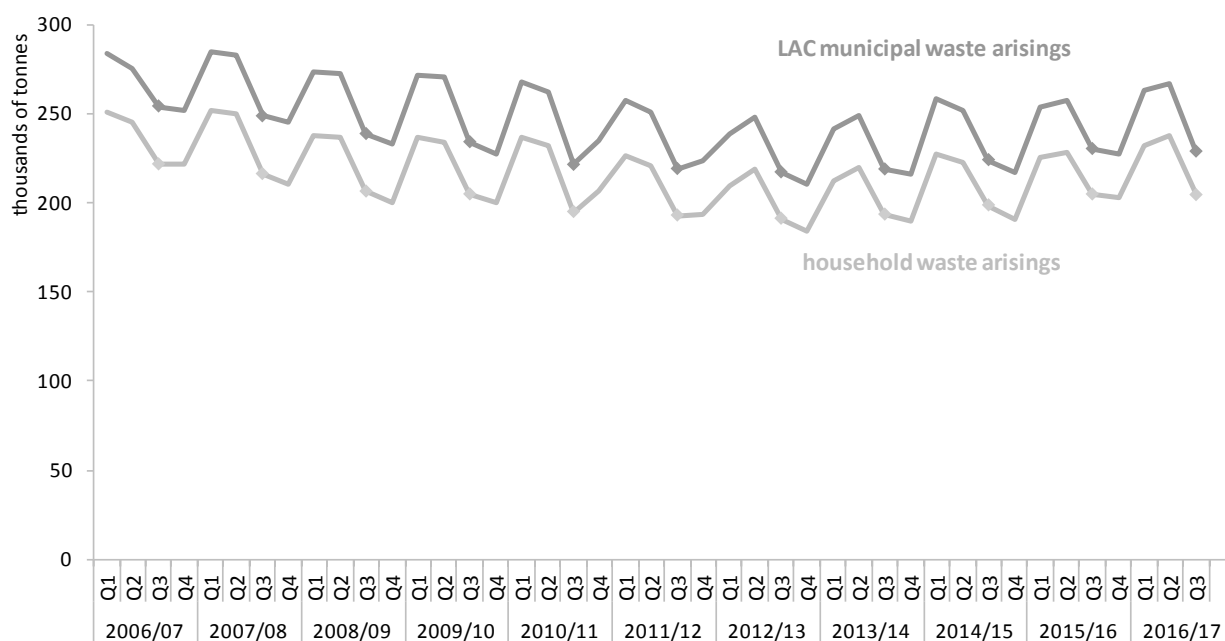
Waste arisings

The total quantity of local authority collected (LAC) municipal waste arisings is a key performance indicator, KPI (j). This indicator is also used to monitor performance under the Local Government (Performance Indicators and Standards) Order (Northern Ireland) 2015. Northern Ireland's councils collected 228,631 tonnes of LAC municipal waste between October and December 2016. This was a 0.6% decrease on the 230,089 tonnes collected during the same three months of 2015.

Since 2006/07 household waste has accounted for 86-90% of total LAC municipal waste each quarter. From October to December 2016, household waste accounted for 89.3%. Household waste includes materials collected directly from households via kerbside collections, material taken to bring sites and civic amenity sites as well as several other smaller sources. The remaining 10.7% was non household waste.

Figure 3: Waste arisings

Northern Ireland, quarterly from 2006/07 to 2016/17, KPI (j)

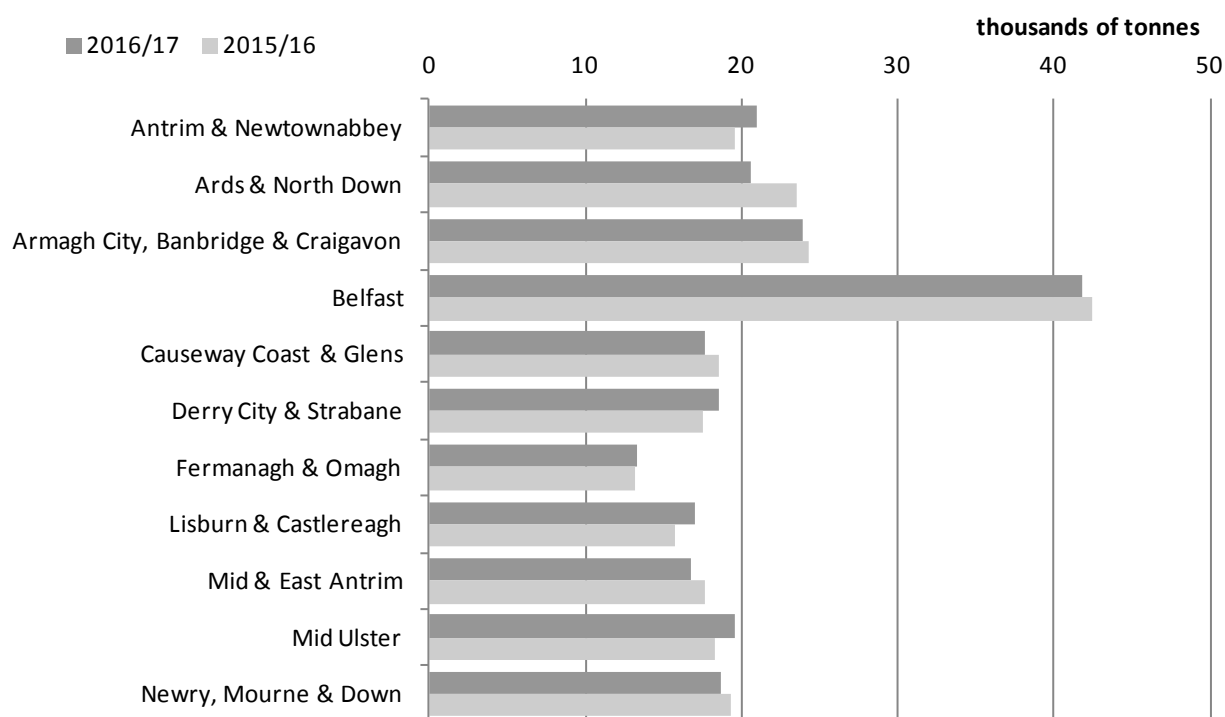


The longer term trend in October to December saw a gradual reduction in LAC municipal waste arisings of 14.6% across six years, from a high of 253,956 tonnes between October and December 2006 to a low of 216,987 tonnes between the same three months of 2012. In the four years since, arisings have increased by 5.4% to 228,631 tonnes in October to December 2016.

Factors affecting LAC municipal waste arisings, the majority of which is household waste, include individual household behaviours, the advice and collection services provided by councils and to some extent the state of the economy which continues to show signs of recovery.

Figure 4: LAC municipal waste arisings by council

Northern Ireland, October to December 2015 and October to December 2016, KPI (j)



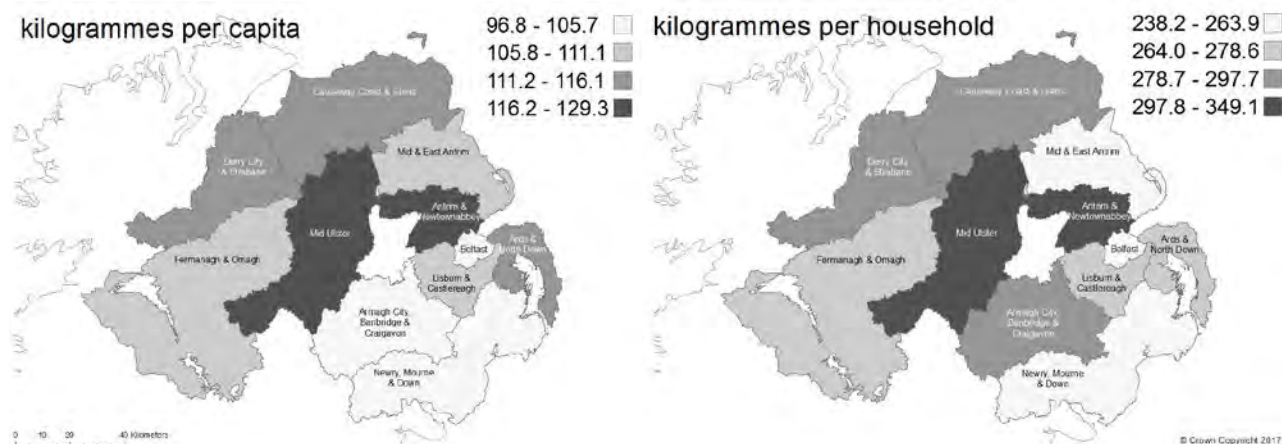
Note: The NI and waste management group figures are not shown on this chart as their larger waste arisings distort the scale and make it difficult to distinguish the differences between councils. All figures are available from the data tables appendix.

The proportion of Northern Ireland’s total LAC municipal waste by each council broadly reflects the population within the councils. Belfast City Council had the greatest LAC municipal waste arisings between October and December 2016 with 41,791 tonnes, a decrease of 1.6% compared with the same quarter last year. This was 18% of total NI LAC waste arisings, the same as its share of the total NI population.

Fermanagh & Omagh District Council had the lowest LAC municipal waste arisings between October and December 2016 with 13,286 tonnes collected. This represented 6% of total NI arisings during the period and again was the same as the share of the NI population living in this council area. Antrim & Newtownabbey, Derry City & Strabane, Fermanagh & Omagh, Lisburn & Castlereagh and Mid Ulster reported increases of between 0.9% and 8.4% on their arisings compared with the same quarter last year. All other councils recorded a decrease in waste arisings when compared to October to December 2015 with Ards & North Down reporting the largest decrease at 12.5%.

There are two key performance indicators which look at household waste arisings in more detail by considering household waste arisings per capita, KPI (p), and per household KPI (h). In Northern Ireland there were 110 kilogrammes (kg) of household waste collected per capita (per head of population) and 278 kg per household between October and December 2016. This compares with the 111 kg collected per person and 281 kg per household during the same three months of 2015.

Figure 5: Household waste arisings per capita and per household by council
Northern Ireland, October to December 2016, KPIs (p) and (h)



Newry, Mourne & Down generated the smallest quantity of household waste per person of the 11 councils at 97kg per person between October and December 2016. The largest quantity per person was recorded in Antrim & Newtownabbey (129kg per person). Comparing with October to December 2015, Newry, Mourne & Down again generated the smallest quantity of household waste per person then at 99kg whilst Ards & North Down generated the highest quantity at 129kg per person, closely followed by Antrim & Newtownabbey with 127kg per person. Ards & North Down however reduced this figure in October to December 2016 to 116kg of household waste per person.

The household waste arisings per household show a similar distribution across Northern Ireland to household waste arisings per capita with some small differences. Belfast City Council generated the smallest quantity at 238kg per household, 0.8% lower than the 240kg generated per household in October to December 2015. The largest quantity per household was recorded in Mid Ulster at 349kg per household (increased from 330kg in October to December 2015). This may be related to the fact that Mid Ulster has the largest average household size of the 11 councils.

The arisings figures can be found in Tables 1 and 2 of the data tables appendix. The per capita and per household figures can be found in Tables 12 and Table 13 respectively. All figures are also available from the time series dataset.

<https://www.daera-ni.gov.uk/publications/northern-ireland-local-authority-collected-municipal-waste-management-statistics-october-december-2016>

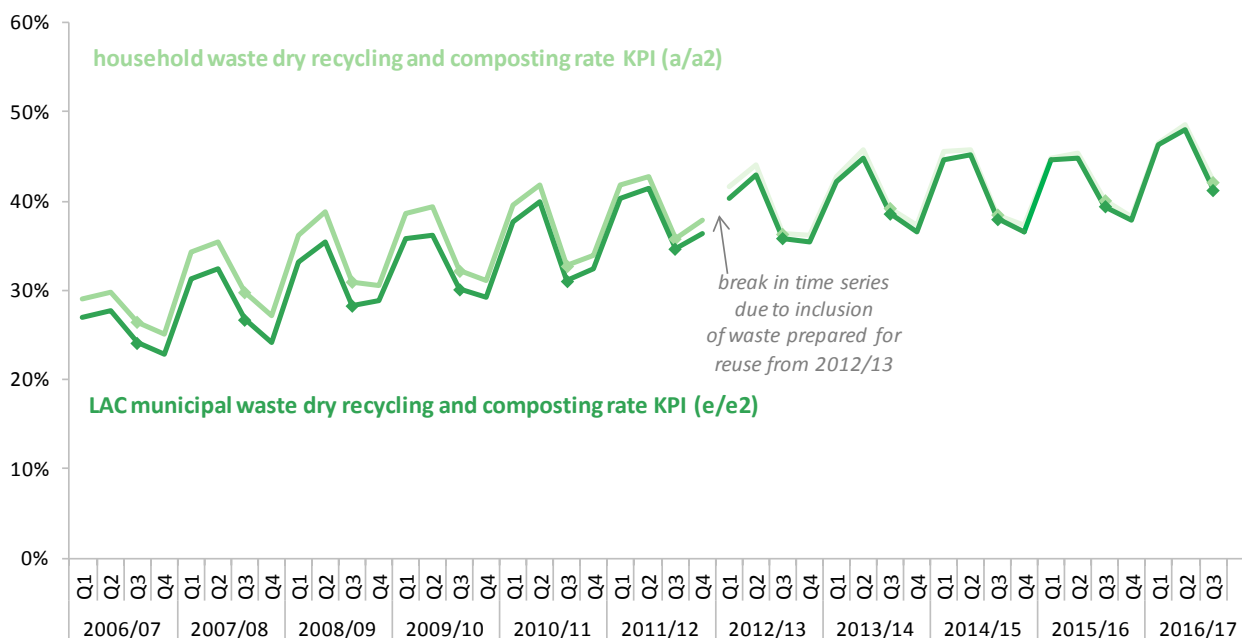
Recycling (preparing for reuse, dry recycling and composting)

This section of the report looks at local authority collected (LAC) municipal and household waste recycling rates. Both are key performance indicators and now include waste sent for preparing for reuse, dry recycling and composting. Previously used key performance indicators KPI (a) and (e) have been modified, in line with the rest of the UK, to include waste sent for preparing for reuse, and relabelled as KPI (a2) and (e2). The impacts were small, adding 0.1-0.2 percentage points to the rates, and resulted in the break in the time series visible in Figure 6. The KPI (a2) indicator is also used to monitor performance under the Local Government (Performance Indicators and Standards) Order (Northern Ireland) 2015.

There were 94,246 tonnes of LAC municipal waste sent for preparing for reuse, dry recycling and composting (referred to as 'recycling' for the rest of this section) between October and December 2016. The LAC municipal waste recycling rate was 41.2%. This was an increase on the 39.4% of LAC municipal waste sent for recycling between October and December 2015.

The household waste recycling rate was 42.1% between October and December 2016, higher than the 40.1% recorded during the same three months of 2015. The proportion of household waste sent for preparing for reuse was 0.2%, dry recycling made up 23.9% and composting was 18.1%. During October to December 2015, the equivalent rate for reuse was 0.1% whilst the dry recycling and composting rates were 23.1% and 16.9% respectively.

Figure 6: Waste sent for preparing for reuse, dry recycling and composting
Northern Ireland, quarterly from 2006/07 to 2016/17, KPIs (a), (a2), (e) and (e2)

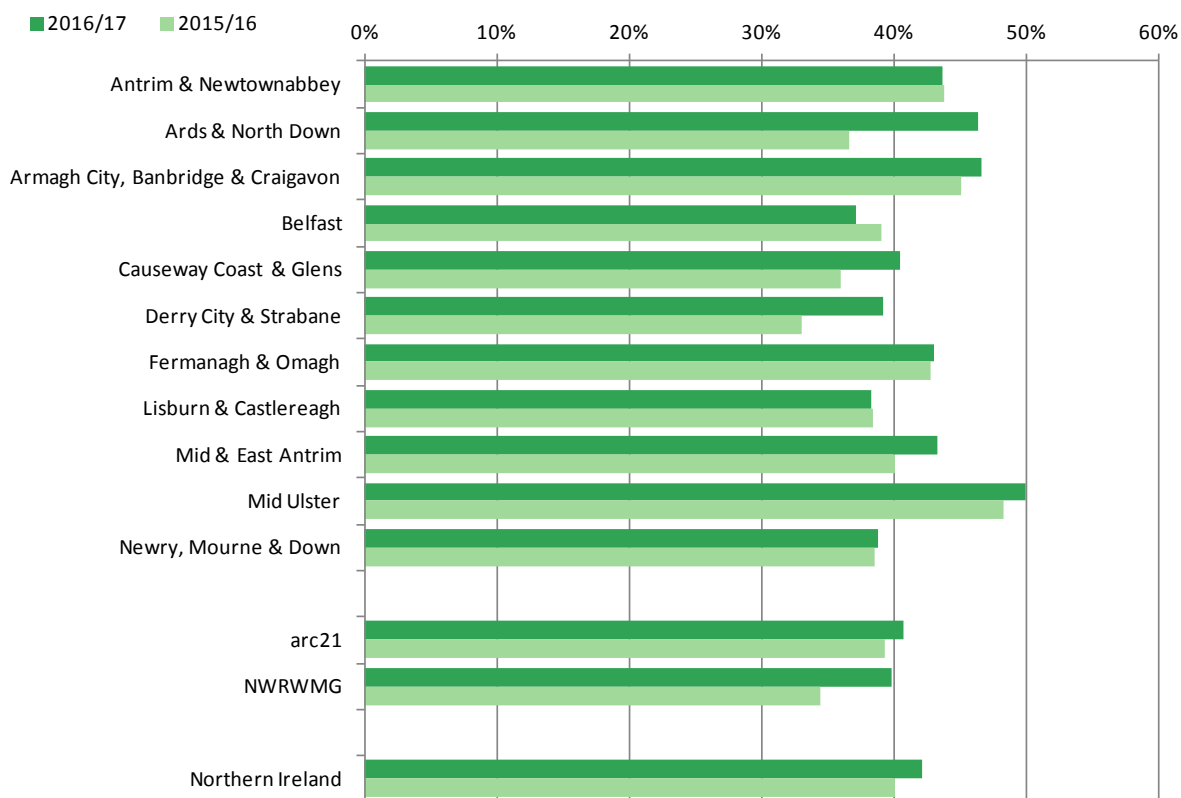


These figures show seasonal variation which is driven by the quantities of garden waste sent for composting. Greater quantities of garden waste are collected and sent for composting during the spring and summer quarters, April to June and July to September. The longer term trend in October to December of each year has been a steady increase in the household waste recycling and composting rate from 26.5% in October to December 2006 to a peak of 41.9% in October to December 2016. Waste sent for preparing for

reuse (331 tonnes this quarter) has been included from 2012/13 and adds 0.2 percentage points to the rate.

Figure 7: Household waste preparing for reuse, dry recycling and composting rate by council and waste management group

Northern Ireland, October to December 2015 and October to December 2016, KPI (a2)



The lowest recycling rate recorded was in Belfast at 37.1%, a fall of 2.0 percentage points on the 39.0% recycled in the same quarter last year. Most of this is attributable to a decrease in the dry recycling rate from 26.7% to 24.7%. The composting rate has remained similar at around 12%, whilst the reuse rate for Belfast has increased to 0.6% this quarter, higher than any other council.

The highest household waste recycling rate was recorded in Mid Ulster at 49.9%, an improvement of 1.7 percentage points on the 48.2% recorded in the same quarter last year. This change can be mostly attributed to an increase in composting which added 1.5 percentage points to the total (increasing to 27.3% in October to December 2016).

Ards & North Down, Derry City & Strabane and Causeway Coast & Glens reported the largest increases on their recycling rates compared to last year. Ards & North Down increased their rate by 9.7 percentage points to 46.3%. The composting rate increased by 9.5 percentage points to 26.9%, accounting for most of this improved recycling rate. Derry City & Strabane recorded a 6.1 percentage point increase to report a 39.1% recycling rate this quarter, dry recycling accounted for most of this with a 5.3 percentage point increase, taking the rate to 31.2% in October to December 2016. Causeway Coast & Glens increased their recycling rate compared to last year by 4.5 percentage points to 40.5%. Whilst their composting rate was similar, their dry recycling rate improved by 4.7 percentage points to 27.3%.

Four councils had similar recycling rates this quarter compared to October to December 2015 – Antrim & Newtownabbey, Fermanagh & Omagh, Lisburn & Castlereagh and Newry, Mourne & Down. All other councils have recorded smaller increases in their recycling rates with the exception of the aforementioned Belfast.

Overall, there was considerable variation between dry recycling and composting rates. Derry City & Strabane recorded the highest dry recycling rate at 31.2% whilst Lisburn & Castlereagh recorded the lowest rate at 16.5%. The highest composting rate was in Mid Ulster at 27.3% with Derry City & Strabane having the lowest rate at 7.7%.

Differences in recycling will have been affected by the timing of the roll-out of specific types of collection services between councils. The composting rate can also be affected by differences in the urban-rural characteristics across the council areas. For example, the improvement in the composting element of the recycling rate for Ards & North Down can be explained by the implementation of a programme which bans food waste from being placed in black bins alongside the extension of the Council's organics collection to all households in the area.

The recycling rates for the Waste Management Groups were 40.7% for arc21 and 39.8% for NWRWVG. Both were lower than the NI level of 42.1%.

An additional recycling rate, called the waste from households recycling rate, is now also calculated. It is not a key performance indicator and is not discussed in this report but can be found in the data tables appendix. It can be used to make comparable calculations between each of the four UK countries. For more information see *Waste from Households Recycling Rate* under *Data Developments* in the User Guidance.

These figures can be found in Tables 3 and 4 (for LAC municipal waste) and Tables 10 and 11 (for household waste) of the data tables appendix and also in the time series dataset. The waste from households figures are available in Table 16 and in the time series dataset.

<https://www.daera-ni.gov.uk/publications/northern-ireland-local-authority-collected-municipal-waste-management-statistics-october-december-2016>

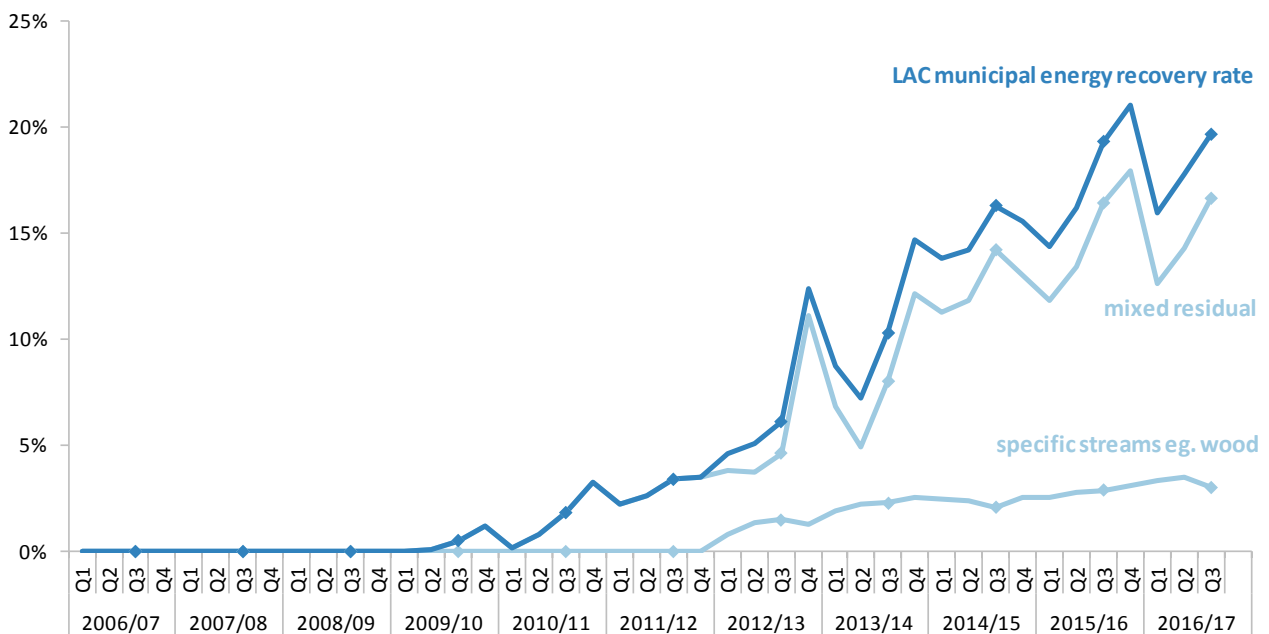
Energy recovery

This quarterly report includes figures on energy recovery, which is the term used when value is gained from waste products by converting them into energy. The major method used is incineration with energy recovery, although other technologies exist.

Between October and December 2016, 44,999 tonnes of LAC municipal waste arisings was sent for energy recovery. This gave a LAC municipal waste energy recovery rate of 19.7%, similar to the 19.3% sent during the same three months of 2015. In each year, the majority was mixed residual LAC municipal waste with a smaller proportion from specific streams, e.g. wood.

Figure 8: LAC municipal waste sent for energy recovery

Northern Ireland, quarterly from 2006/07 to 2016/17

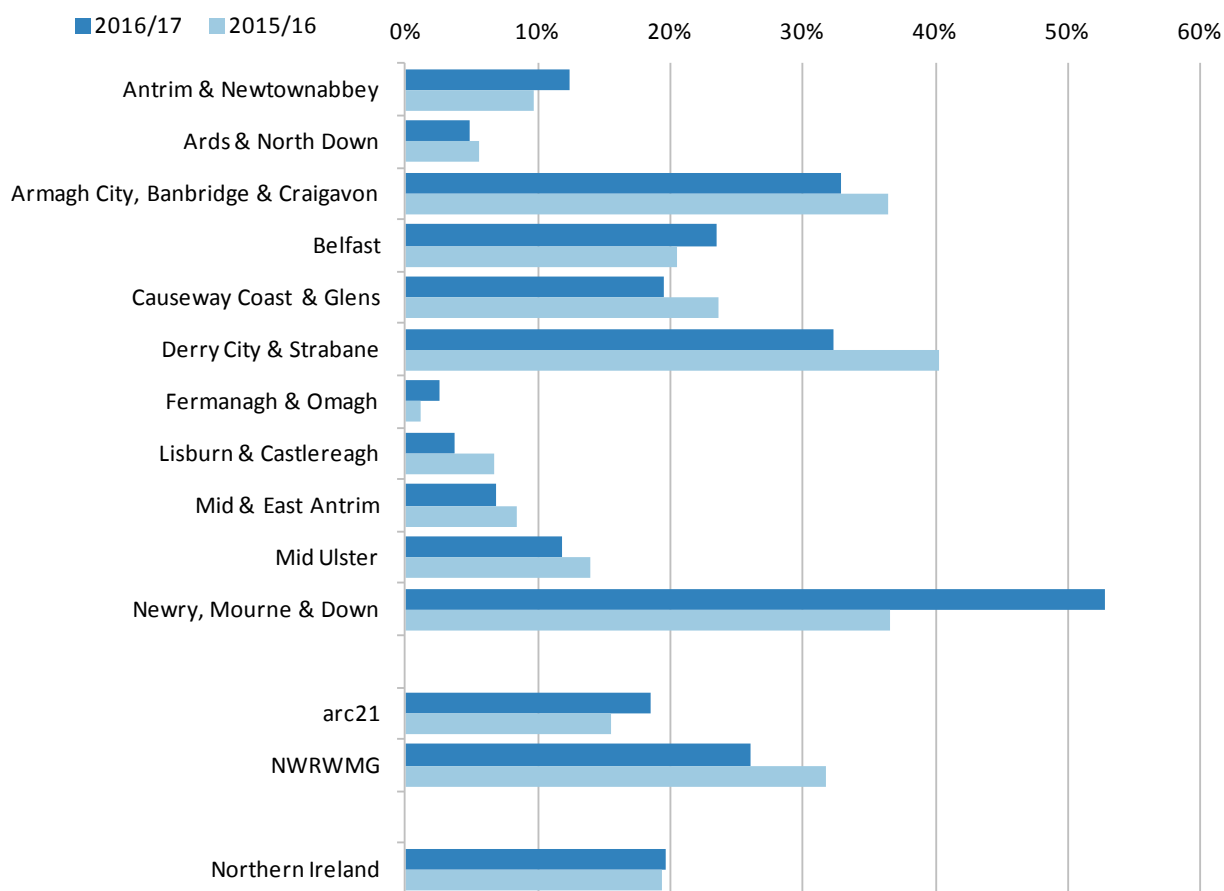


There was zero, or very small quantities, of LAC municipal waste sent for energy recovery before 2009/10. Strong growth followed from 2010/11 to 2016/17 with the energy recovery rate increasing from 0.5% between October and December 2009 to 19.7% for the same three months of 2016. Most of the growth has been driven by mixed residual LAC municipal waste sent for energy recovery (from 0.5% in October to December 2009 to 16.7% in October to December 2016), with the specific streams proportion reaching 2-3% in 2013/14 and remaining around that level since, sitting at 3.0% in October to December 2016.

Mixed residual LAC municipal waste sent for energy recovery is combustible residual waste collected from the kerbside and from civic amenity sites and processed into refuse derived fuel at material recovery facilities. The specific streams element of energy recovery is mostly wood but also includes furniture, carpets and mattresses, mostly collected from civic amenity sites.

Figure 9: LAC municipal waste energy recovery rate by council and waste management group

Northern Ireland, October to December 2015 and October to December 2016



The highest LAC municipal waste energy recovery rate was recorded in Newry, Mourne & Down at 52.9%, 16.2 percentage points higher than the rate reported in the same quarter last year (36.6%).

The lowest rate recorded was 2.6% in Fermanagh & Omagh, an increase of 1.4 percentage points on the 1.2% sent for energy recovery between October and December 2015.

Seven of the eleven council areas recorded lower rates of energy recovery when compared with the same quarter last year. The largest decrease was in Derry City & Strabane, falling 8.0 percentage points to 32.3%.

For most councils energy recovery for mixed residual waste accounted for a greater proportion of total energy recovery than specific streams such as wood. Three councils, Ards & North Down, Fermanagh & Omagh and Lisburn & Castlereagh had larger proportions of energy recovery for specific streams such as wood than for mixed residual waste. Antrim and Newtownabbey had the highest energy recovery rates for specific streams, at 6.1%, similar to the 6.3% mixed residual waste sent for energy recovery for this council.

Generating energy from waste by incineration is preferable to landfill, although preparing for reuse, dry recycling and composting are preferable to both.

These figures can be found in Tables 3 and 4 of the data tables appendix and in the time series dataset.

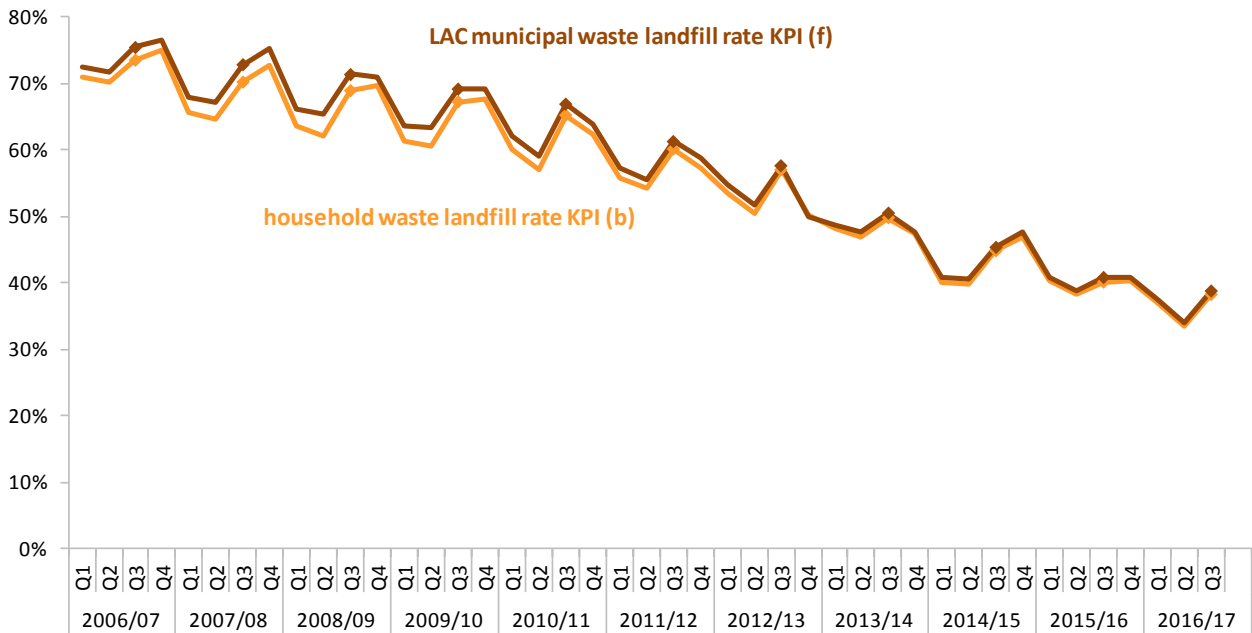
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Landfill

The quantity of LAC municipal waste sent to landfill decreased by 5.6% from 93,923 tonnes during October to December 2015 to 88,690 tonnes between October and December 2016. This gave a quarterly landfill rate of 38.8% for the most recent quarter which was lower than the 40.8% recorded during the same quarter of 2015. The latest quarterly landfill rate for household waste only was 38.3%, a further reduction on the 40.1% recorded during the same three months of 2015.

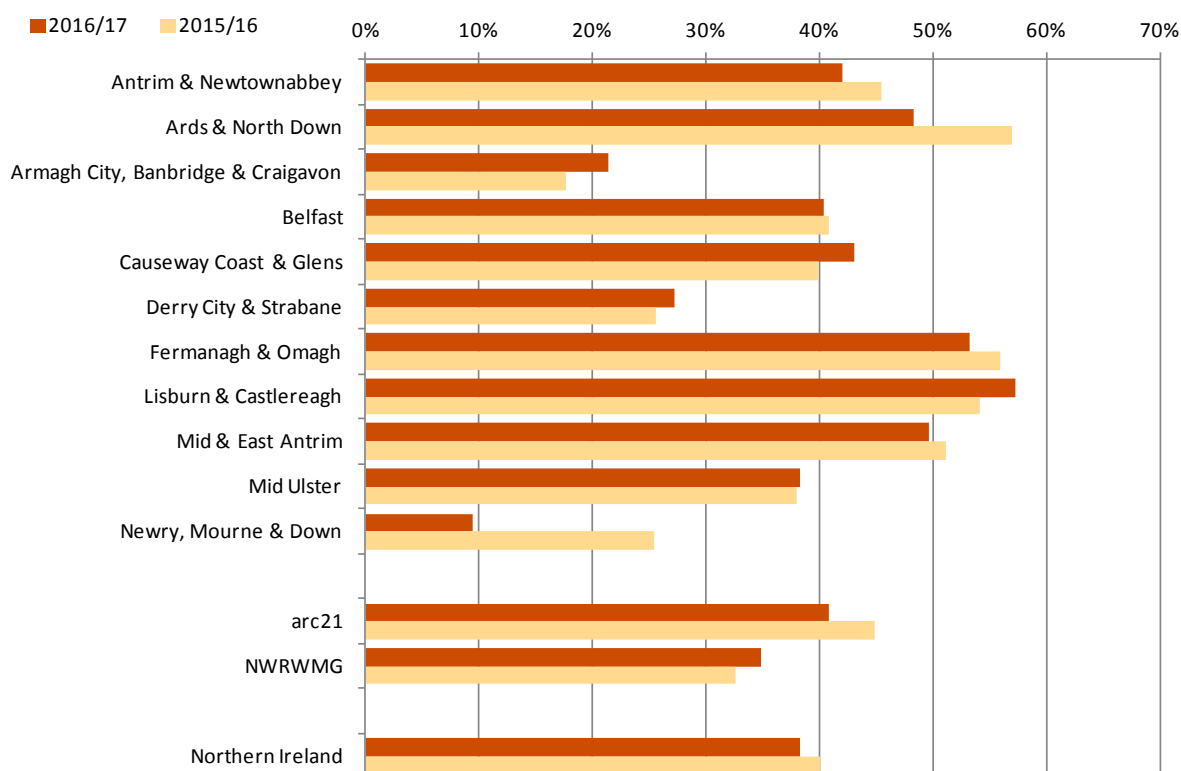
Figure 10: Waste sent to landfill

Northern Ireland, quarterly from 2006/07 to 2016/17, KPIs (b) and (f)



The landfill rate has now reached its lowest ever level for October to December. The long term trend has seen the October to December household waste landfill rate fall consistently from 73.5% in October to December 2006 to the 38.3% recorded for this quarter. Note that the landfill rate exhibits seasonality and the April to June and July to September quarters tend to have lower rates than October to December and January to March. The seasonality stems from the higher proportion of compostable garden waste arising during spring and summer.

Figure 11: Household waste landfilled by council and waste management group
Northern Ireland, October to December 2015 and October to December 2016, KPI (b)



Newry, Mourne & Down recorded the lowest landfill rate at 9.5%, less than one quarter of the Northern Ireland rate of 38.3% and an improvement of 16.0 percentage points on the October to December 2015 rate for the council of 25.4%. This council also reported a large increase (of 16.2 percentage points) in material sent for energy recovery that would contribute towards this drop.

Ards & North Down also reported a large decrease in its landfill rate by 8.8 percentage points, to report a rate of 48.2% in October to December 2016. The large increase in the recycling rate, particularly the composting element, for this council would contribute towards the drop in its landfill rate.

The highest household landfill rate was recorded in Lisburn & Castlereagh at 57.2%, an increase of 3.1 percentage points on the October to December 2015 rate of 54.1%. Three other councils (Armagh City, Banbridge & Craigavon, Causeway Coast & Glens and Derry City & Strabane) recorded increases in their landfill rate compared to October to December 2015. Belfast and Mid Ulster reported similar household landfill rates this quarter when compared with the same quarter last year.

Material, mainly from residual waste treatment, can also be sent for energy recovery in the form of refuse derived fuel (RDF) which also diverts it from landfill. In addition, the ongoing Rethink Waste campaign is encouraging the NI population to Reduce, Reuse and Recycle their waste. Landfill Tax for household waste continues to be the main driver for local authorities to reduce landfill. Other considerations include a limit on the amount of biodegradable LAC municipal waste as measured by KPI (g). Generating energy from waste by incineration is preferable to landfill, although recycling and reuse are preferable to both.

This data and more information including collection method can be found in the data tables appendix. Tables 3 and 4 cover LAC municipal waste and Tables 10 and 11 cover household waste. The data are also available from the time series dataset.

<https://www.daera-ni.gov.uk/publications/northern-ireland-local-authority-collected-municipal-waste-management-statistics-october-december-2016>

Biodegradable local authority collected municipal waste to landfill

Article 5(2) of the EC Landfill Directive (1999/31/EC) requires member states to reduce the amount of biodegradable municipal waste sent to landfill, setting challenging targets. The Landfill Allowance Scheme (NI) Regulations 2004 (as amended) place a statutory responsibility on councils, in each scheme year, to landfill no more than the quantity of biodegradable LAC municipal waste (BLACMW) for which they have allowances. In order to ensure compliance with these targets, the amount of biodegradable LAC municipal waste sent to landfill, KPI (g), is monitored. This indicator is also used to monitor performance under the Local Government (Performance Indicators and Standards) Order (Northern Ireland) 2015.

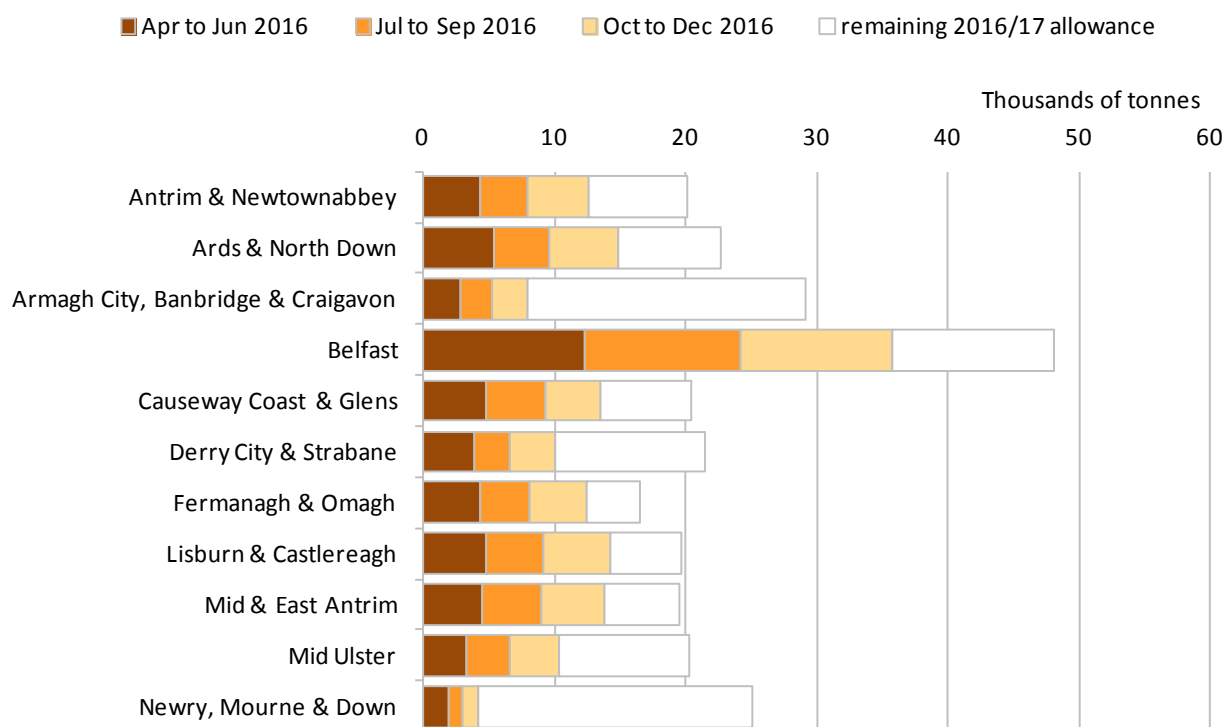
Under the Northern Ireland Landfill Allowance Scheme (NILAS) regulations councils have been allocated a number of allowances (each allowance represents 1 tonne of BLACMW) for each year until 2019/20. However in any scheme year a council may transfer allowances to other councils in order to ensure that each council does not exceed the amount it is permitted to send to landfill. Transfers of allowances are not included in the provisional quarterly figures but are included in the finalised annual figures. The finalised 2016/17 figures are scheduled to be released on 30 November 2017. More information on the NILAS regulations can be found on the DAERA website:

- <https://www.daera-ni.gov.uk/articles/northern-ireland-landfill-allowance-scheme-nilas>

There were 51,090 tonnes of BLACMW sent to landfill between October and December 2016. This was 7.2% lower than the 55,079 tonnes sent between the same three months of 2015. However, it did account for a similar proportion of the annual allowance, 19.4% between October and December 2016 compared to 19.9% in the equivalent quarter of 2015. The 2016/17 NILAS allowance (262,856 tonnes) was 5.2% lower than the 2015/16 NILAS allowance (277,142 tonnes). If comparing the extent to which allowances have been used against last year, it is important to note that there has been a reduction in the allocations.

At the waste management group level, the councils in the arc21 group used 21.0% of their 2016/17 allowance and councils in the NWRWGM used 18.4% of their 2016/17 allocation between October and December 2016.

Figure 12: Biodegradable LAC municipal waste allowance sent to landfill by council
Northern Ireland, October to December 2016, KPI (g)



Note: The NI and waste management group figures are not shown on this chart as their figures distort the scale and make it difficult to distinguish differences between councils. The figures are available from the data tables appendix.

There is considerable variation between councils in the proportion of the 2016/17 allocation used between October and December 2016. Newry, Mourne & Down have used the lowest share of its annual allocation at 4.6% during the quarter and 16.5% for the year-to-date. This is lower than the 12.0% and 46.2% they had used at the same point last year. Fermanagh & Omagh used the highest share this quarter at 26.5%, 1.1 percentage points more than their usage for the same quarter last year (25.3%). To date, Fermanagh & Omagh have used 75.2% of their allowance, more than the 73.0% used at this point last year. Belfast (74.2%) and Lisburn & Castlereagh (72.2%) have used 8.6 and 10.9 points more of their allocation respectively compared to this point last year.

This data can be found in Table 14 of the data tables appendix and in the time series dataset.

<https://www.daera-ni.gov.uk/publications/northern-ireland-local-authority-collected-municipal-waste-management-statistics-october-december-2016>

Overview of Key Performance Indicators

Key Performance Indicators (KPIs) are a set of measures used to gauge performance in terms of meeting waste strategy targets. They were originally defined in the Environment and Heritage Service (now the Northern Ireland Environment Agency) municipal waste data monitoring and reporting: interim guidelines, published in March 2003.

The annual reports provide final validated information on KPIs used to assess progress towards achieving local authority collected municipal waste targets. As targets are set for an annual period, care should be taken when comparing quarterly figures against such targets.

The reference table below has been included to help users quickly find a specific KPI in the report and/or appendix.

Indicator	Definition	Location
KPI (a)	Percentage of household waste arisings sent for recycling and composting	Report pages 9-11
KPI (a2)	Percentage of household waste arisings sent for preparing for reuse and recycling (including composting)	Report pages 9-11 Appendix table 11
KPI (b)	Percentage of household waste arisings landfilled	Report pages 15-17 Appendix table 11
KPI (e)	Percentage of local authority collected municipal waste arisings sent for recycling and composting	Report pages 9-11
KPI (e2)	Percentage of local authority collected municipal waste arisings sent for preparing for reuse and recycling (including composting)	Report pages 9-11 Appendix table 4
KPI (f)	Percentage of local authority collected municipal waste arisings landfilled	Report pages 15-17 Appendix table 4
KPI (g)	Biodegradable local authority collected municipal waste landfilled	Report pages 18-19 Appendix table 14
KPI (h)	Total household waste collected per household	Report page 8 Appendix table 13
KPI (j)	Total local authority collected municipal waste arisings	Report pages 6-7 Appendix tables 1-2
KPI (m)	Percentage capture rate for collected household kerbside primary waste categories	Appendix tables 15i and 15ii
KPI (p)	Total household waste collected per capita	Report page 8 Appendix table 12

Note: In this table 'appendix' refers to the data table appendix available with the report. <https://www.daera-ni.gov.uk/publications/northern-ireland-local-authority-collected-municipal-waste-management-statistics-october-december-2016>

Appendix 1: User Guidance

This statistics release is part of a regular quarterly data series presenting provisional information on local authority collected municipal waste managed in Northern Ireland.

Description of data

Local authority collected municipal waste (LACMW) data in Northern Ireland. This is municipal waste which is collected under arrangements made by a district council.

Main Uses of Data

Data contained in this release are published primarily to provide an indication of the progress towards achieving waste strategy targets. They allow for the assessment of the performance of the councils and waste management groups in Northern Ireland in managing waste arisings, recycling, composting and landfill. Targets are set for an annual period and care should be taken when comparing quarterly figures against such targets.

The revised NI Waste Management Strategy sets out targets for the management of local authority collected municipal waste.

- To achieve a recycling rate of 45% (including preparing for re-use) of household waste by 2015.
- To achieve a recycling rate of 50% (including preparing for re-use) of household waste by 2020.
- Proposals to achieve a recycling rate of 60% (including preparing for re-use) of LACMW by 2020.

<https://www.daera-ni.gov.uk/articles/waste-management-strategy>

The draft Programme for Government Framework 2016-2021 contains 'percentage of household waste that is recycled or composted' as a measure for indicator 36: increase household waste recycling. The second consultation on this framework opened on 28 October 2016 and closed on 23 December 2016.

The Local Government (Performance Indicators and Standards) Order (Northern Ireland) 2015 came into operation on 28 September 2015. It contains three waste management indicators which correspond to KPIs (a2), (g) and (j) in this publication.

The EU Waste Framework Directive statutory target requires member states to recycle 50% of waste from households by 2020.

The data are also used to assess performance against the Landfill Directive targets.

<http://www.ciwm.co.uk/ciwm/knowledge/landfill-directive.aspx>

The annual report provides final validated information on several key performance indicators (KPIs) used to assess progress towards achieving local authority collected municipal waste targets.

These data also provide policy makers with the necessary information to formulate and evaluate waste services and are helpful in assessing the effectiveness of resource allocation in providing services that are fully responsive to public need.

Councils and waste management groups use these statistics to inform corporate analysis and reports. Indeed both councils and waste management groups are integral parts of the data provision and submission processes.

The waste data may help to inform particular lifestyle choices of the public, specifically decisions about how to treat their waste. Waste statistics are used in the 'Rethink Waste' campaign which influences choices that ultimately impact upon the quantity and type of waste that is generated, reused and recycled. The Department of Agriculture, Environment and Rural Affairs (DAERA) Northern Ireland delivers the Northern Ireland Waste Management Strategy through the Rethink Waste Programme.

<http://rethinkwasteni.org/about-waste/facts-and-figures/>

Waste data feed into Northern Ireland specific and UK wide research projects carried out by Waste and Resource Action Programme (WRAP).

<http://www.wrap.org.uk/>

<http://laportal.wrap.org.uk/>

These projects are funded by each of the governments within the UK and the EU. The results of research by WRAP assist governments to devise strategies to deal with issues such as using resources sustainably, helping people to recycle more and to waste less both at home and at work, which offers economic as well as environmental benefits.

Additionally, waste management information is used to inform the media, special interest groups such as the Chartered Institute of Waste Management (CIWM) which is the professional body representing waste and resource professionals, academics, for example those who would have an interest and/or involvement in the WRAP research mentioned above, and by DAERA to respond to parliamentary / assembly questions and ad hoc queries from the public.

The Northern Ireland Neighbourhood Information Service (NINIS) provides access to waste information with the aim of making it available to as wide an audience as possible by providing interactive charts and mapping facilities that enable the statistics to be interpreted in a spatial context.

<http://www.ninis2.nisra.gov.uk/InteractiveMaps/Agriculture%20and%20Environment/Environment/Local%20Authority%20Collected%20Municipal%20Waste%20Recycling/atlas.html>

Local Government Reorganisation

The 26 councils covered by previous reports were reorganised into 11 new councils from 1 April 2015.

Prior to this, we consulted with users of the report, the proposed changes and summary of responses are available on the Statistics and Analytical Services Branch (SASB) website

<https://www.daera-ni.gov.uk/publications/changes-quarterly-ni-local-authority-collected-municipal-waste-management-statistics>

At that stage the opportunity was also taken to update the report using feedback from NISRA's peer review group.

Data Developments

Key Performance Indicators (a) and (e)

Prior to 2015/16, NI recycling KPIs did not include waste sent for preparing for reuse, unlike the other UK devolved administrations. Waste sent for preparing for reuse has been added to the calculations of these KPIs and they have been renamed KPI (a2) and KPI (e2). This change has been backdated to include data from 2012/13 onwards and allows comparisons across time to be made for these KPIs.

The difference this makes to the quantity of waste recycled is small. Across the four quarters of 2015/16 this change added on average 170 tonnes of waste sent for preparing for reuse to the recycling total per quarter. This added 0.1 percentage points to the KPI (a) and KPI (e) rates each quarter.

These measures are now more consistent with the rest of the UK and more consistent with the definition of the targets in the Waste Management Strategy 2020 and the Local Government (Performance Indicators and Standards) Order (NI) 2015, which include waste sent for preparing for reuse.

Waste from households recycling rate

In Northern Ireland, the household recycling rate is based on 'household waste' as defined in the Waste and Contaminated Land (NI) Order 1997 (the

1997 Order) and Schedule to the Controlled Waste and Duty of Care Regulations (NI) 2013. The new 'waste from households' recycling rate has been introduced for statistical purposes to provide a harmonised UK indicator with a comparable calculation in each of the four UK countries.

This new 'waste from households' measure has been added to the data tables appendix; see Table 16. However the focus of this report is still the previous 'household waste' definition because it is the measure most directly related to current NI policy targets. There are targets in the revised Waste Management Strategy, the 2015-16 Programme for Government and the Local Government (Performance Indicators and Standards) Order (NI) 2015 that reference the prior 'household waste' definition. The 'waste from households' measure may feature in the body of this report in future if it becomes more prominent in recycling targets.

There is a difference between 'household waste' and 'waste from households'. The latter has a generally narrower definition than the former. There are a number of sources of waste that were considered under 'household waste' that are not considered by 'waste from households', for example waste from street recycling bins and street cleaning. More information is available from the 'waste from households' calculation guidance on the WDF website. http://www.wastedataflow.org/documents/guidancenotes/NorthernIreland/OtherGuidanceNotes/WfHrecyclingguidanceNI_v2.pdf

Analysis using 2015/16 data has shown that the 'waste from households' rate is, on average, 0.4 percentage points lower than the 'household waste' recycling rate at the Northern Ireland level. However, the difference between these rates varies across councils and quarters. The range of this difference goes from the 'waste from households' rate being 2.1 percentage points higher than the 'household waste'

rate to being 3.6 percentage points lower. The time series file allows the difference in these rates to be compared over quarters and across councils.

Data Sources

Waste Management Data

The information presented in this report is taken from WasteDataFlow (WDF), a web based system for local authority collected municipal waste reporting by UK local authorities to central government. The data are based on returns made to WDF (relating to approximately 40 questions on local authority collected municipal waste management) by councils, within two months of the end of each quarter.

It is increasingly rare that residual waste may still be disposed of directly to landfill. Waste is collected by the councils directly from the kerbside and some civic amenity sites; third parties under contract to the council also collect from the remaining civic amenity sites and almost all of the bring banks. Some larger councils use intermediate bulking up stations where the waste is weighed both coming into and leaving the transfer station. In all cases the waste is weighed on arrival at treatment sites for recovery e.g. Material Recovery Facilities (MRFs) and/or disposal e.g. landfill sites.

MRFs, which sort the co-mingled waste into different resource streams, almost always have more than one input source and so the weighed tonnages of each stream coming out of the plant are assigned pro-rata to each source i.e. based on their input tonnages as a percentage of all input tonnages for that period. Weighbridge dockets are generated which form the basis for statutory Waste Transfer Notes (WTNs) as the waste moves further down the treatment chain/onto reprocessors. These WTNs and/or internal reports (which also form the basis for invoices) are then sent to the council on a monthly basis. These are summarised on a quarterly basis and organised into the relevant WDF

questions/categories and finally input by hand into the WDF web portal.

Data providers (councils in Northern Ireland) are supplied with technical guidance documents outlining the methodologies that should be used in the collection, reporting and validation of the data returns. These documents can be accessed on the WDF website.

www.wastedataflow.org/htm/datasets.aspx#NorthernIrelandGuidance

Population Data

Population data used to calculate KPI (p), household waste arisings per capita, are taken from the 2015 mid-year estimates, produced by NISRA, and were the most up to date available at the time of publication.

Household Data

Household data used to calculate KPI (h), household waste arisings per household, are based on the Land and Property Services (LPS) housing stock for Quarter 4 and annual reports. For quarters 1-3 reports, housing stock plus the number of quarterly new dwelling completions up to and including the quarter to which that report relates. Note these household figures do not include caravans. An adjustment is made to account for the estimated number of vacant properties. A council-specific occupancy rate was calculated from 2011 Census data and is applied to the LPS data. The datasets can be accessed from the LPS website.

<https://www.finance-ni.gov.uk/topics/statistics-and-research/housing-stock-statistics>

<https://www.finance-ni.gov.uk/topics/statistics-and-research/new-dwelling-statistics>

Data Quality

The data are provisional and may change when all returns have undergone validation at the end of the year. The data were downloaded from WDF on 30 March 2017. At that time, all the councils had

made a return, giving a 100% response rate.

Information contained in this report has been sourced from WasteDataFlow (WDF) which is the web based system for local authority collected municipal waste data reporting by UK local authorities to central government. The data in this report are based on returns made to WDF by councils in Northern Ireland at the end of the quarter. Although these quarterly data have been validated by the Department prior to release, the data should be treated as provisional since they will undergo further validation.

The fully validated figures that are published in the *annual* report have undergone audit by Northern Ireland Environment Agency (NIEA) and further validation by Statistics and Analytical Services Branch (SASB). The annual validation acts as a check that all issues raised at the quarterly validation stage have been addressed. Additional validation checks incorporated later in the working year are then also applied backwards to all quarters in the reporting year via the annual validation.

The fully validated figures for 2016/17 are scheduled to be published on 30 November 2017.

Strengths of Data

Data are derived from WDF with full coverage for all councils to support statutory NILAS diversion targets. As the data are derived from an administrative system, they provide a complete picture of council controlled waste activity in NI.

Validation and audits

Various validation checks are carried out by both NIEA and SASB. Validations are conducted for each individual question, with additional global validations carried out to ensure that total tonnage of waste types is equal to the sum of the component parts. Any discrepancies are queried with the data provider. Variance

checks are employed as an integral part of the production process.

In addition, NIEA carry out a year round programme of audits of WDF returns by individual councils. These audits are conducted under Regulation 10 (6)(a) of the NILAS Regulations. Councils are selected from each waste management group and contacted by telephone, letter and e-mail informing them of NIEA's intention to audit. The audit involves checking and confirming relevant data submitted as a NILAS return to the Monitoring Authority via WDF. One quarter of each council's municipal waste returns are selected, generally being the most recent submission. The areas being inspected relate to:

- i. landfilling of municipal waste,
- ii. collection, recycling, reuse and recovery of municipal waste,
- iii. the standard of reporting/evidence for end destinations of recycled materials.

Councils are asked to provide original documentation to support reported figures in the WDF system for the quarter in question. Any anomalies or discrepancies are subsequently queried with the relevant council. As WDF data can usually only be amended at council level, it is then necessary to 'reject' or release the data back to the waste management group and subsequently back to the council so that it might be corrected as appropriate.

Limitations of Data

Waste Management Data

Despite the intensive validation carried out on the data prior to publication, any administrative system involving manual data compilation will always be open to a degree of clerical error.

Provisional Status

In addition, data are not finalised until the production of the annual report. For these reasons, very small increases or decreases in figures (<0.5% or <0.5 percentage points) are not highlighted in the commentary and should be interpreted

with care. Due to the significant impact of in-year revisions at low geographical levels, the provisional Council level figures should only be viewed as indicative and any comparisons made with care and with due regard to seasonal factors.

Departmental policy is to publish revised figures with subsequent statistical releases unless it is decided that the magnitude of the change merits earlier notification. Provisional results for each quarter are published within four months of the end of that quarter. Each quarter will not be revised in subsequent quarterly publications to minimise revisions and confusion for the user. Instead, a final set of results will be published in the annual dataset in December and this will include revised quarterly figures.

Unclassified waste

Unclassified waste is calculated as a residual amount of municipal waste after municipal waste sent to landfill, sent for recycling (including composting), sent for energy recovery and preparing for reuse have been accounted for, instead of being extracted directly from the WasteDataFlow system. The majority of the total unclassified tonnage can be attributed to moisture and/or gaseous losses. Small negative tonnages can arise in the unclassified column if more waste is sent for treatment in the quarter than was actually collected as is more likely at councils operating transfer stations. Transfer stations move waste quickly but if a particular transfer occurs the day after arriving, which also happens to be the start of the next quarter, then a small inconsistency can arise.

Types of waste

There are many different forms of waste, including municipal solid waste, commercial and industrial waste, construction, demolition and excavation waste, hazardous waste, agricultural waste, and waste water and sludges.

The latest report on construction, demolition and excavation waste arisings is for 2009/10:

<https://www.daera-ni.gov.uk/publications/construction-demolition-and-excavation-waste-arisings-use-and-disposal-northern-ireland>

Following on from the UK's agreement to revise its interpretation of 'municipal waste' to include much more commercial and industrial waste than previously; it should be noted that this report, as with all previous ones, reflects local authority collected municipal waste only.

Material Recovery Facilities

MRFs usually have more than one input source and the pro-rata assignment to each source based on their input tonnages can lead to a small over or under estimation of the actual tonnage being recovered from each individual source.

Capture Rates

Capture rates are no longer included in the body of the report but are still available in the data tables appendix. The calculations for capture rates are based on a Compositional Study undertaken in 2007-08 and may not accurately reflect the current situation. However, it is the best available estimation of the proportions of the primary waste categories contained within kerbside residual waste. Levels of uncertainty around the results of the Compositional Study are discussed in the full report.

The accuracy of these estimates is expected to decrease over time as household recycling habits continue to change.

Waste Crime

Waste crime is the unauthorised management of waste, including illegal dumping. It can be difficult to quantify the impact of such activity upon these official figures as it is not always possible to determine the source, date and tonnage of illegally deposited waste. Where possible

the extent and any implications of such activity will be communicated to users.

Rounding and Summing

It should be noted that in some instances totals may not add up due to rounding. If tonnages work out to be less than 0.5 tonnes, they will be rounded to zero.

On occasion percentages work out to be less than 0.1% or more than 99.9%. Users should be aware that in such cases, the percentage is rounded to zero or 100% respectively.

Whilst tonnages may be summed over councils and/or Waste Management Groups to give totals for higher level geographies, such totals may suffer from rounding errors when compared with any given totals.

However where fractions or proportions, such as recycling rates, waste arisings per capita etc are stated for councils or waste management groups, these indicators cannot be simply added or averaged to produce a rate for a higher level geography. Such information is often available in the data tables appendix, or otherwise may be available upon request.

Notation and Terminology

Please see the glossary (appendix 2) for clarification of key terms.

Guidance on using data

The data contained in the publication are presented on a quarterly basis. Many of the figures show seasonal variation, particularly composting, to a lesser extent recycling, and consequently overall waste arisings. It is therefore advisable that data for the current quarter be compared with both the previous quarter (to gauge the most recent direction of activity) and, more importantly, the same quarter in the previous year (to consider seasonal impact).

Care needs to be taken in interpreting the long-term trends of an annual dataset with

that of a quarterly release of provisional data. The revisions that can happen to quarterly data and the balancing of tonnages across quarters could mean that different trends are observed in the provisional year to date and the finalised annual figures. The provisional quarterly figures are the best available at the time of publication, however they are subject to change following further validation activities such as audits.

If finalised figures are required by the user then the latest annual local authority collected municipal waste management report should be used, bearing in mind these figures may not necessarily reflect the situation this year. The latest annual report (2015/16) is available via the DAERA website:

<https://www.daera-ni.gov.uk/publications/northern-ireland-local-authority-collected-municipal-waste-management-statistics-2015>

Waste Management information elsewhere in the United Kingdom and Europe

While it is our intention to direct users to waste management information elsewhere in the UK and Europe, users should be aware that local authority collected municipal waste statistics in other administrations are not always measured in a comparable manner to those in Northern Ireland. Details of waste management data published elsewhere in the UK and Europe can be found at the following links.

England

<https://www.gov.uk/government/collections/waste-and-recycling-statistics>

Scotland

<http://www.sepa.org.uk/environment/waste/waste-data/waste-data-reporting/>

Wales

<http://gov.wales/statistics-and-research/local-authority-municipal-waste-management/?lang=en>

Ireland

<http://www.epa.ie/waste/municipal/>

European Union Member States

http://ec.europa.eu/eurostat/statistics-explained/index.php/Municipal_waste_statistics

The basis of the data collection across the UK using WDF is broadly consistent, however there are some minor definitional differences such as NI recycling KPIs do include material used as 'backfill' (using suitable waste material to refill an excavation instead of non-waste material) which is not directly comparable with the revised Waste Framework Directive recycling measurements.

The meetings of the WasteDataFlow Operational Group ensure a conscious effort to share waste management developments on a UK-wide basis with Northern Ireland representation on this group.

<https://www.daera-ni.gov.uk/publications/waste-data-flow-northern-ireland-user-group-meeting-2012>

A National Statistics Publication

National Statistics are produced to a high professional standard. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

The UK Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods; and

- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

The Department demonstrates its commitment to the Code of Practice by publishing a series of supporting statements related to its use of administrative data, publication strategy, confidentiality arrangements, revisions policy, customer service and complaints procedure. For details see the statistics charter on the DAERA statistics website <https://www.daera-ni.gov.uk/publications/daeras-statistics-charter>

For further information

For more information relating to this publication, including additional analysis, breakdowns of the data or alternative formats please contact Statistics and Analytical Services Branch.

As we want to engage with users of our statistics, we invite you to feedback your comments on this publication at any time of the year. Contact details are available on the front cover of this report and in the data tables appendix.

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Appendix 2: Glossary

Term	Explanation
Biodegradable waste	Any waste that is capable of undergoing anaerobic decomposition, such as food and garden waste, and paper and paperboard.
Bring site	An unmanned site with a container or a collection of containers for depositing recyclable waste.
Capture rate for household kerbside collected waste	The amount of 'available' material that is actually being collected for recycling through household kerbside collection schemes.
Civic amenity site	A manned site for depositing waste.
Composting	An aerobic, biological process in which organic wastes, such as garden and kitchen waste, are converted into a stable granular material which can be applied to land to improve soil structure and enrich the nutrient content of the soil.
Composting rate	The percentage of waste sent for composting. It excludes waste collected for composting that was rejected at collection or at the gate of the reprocessor.
Dry recycling	The recycling of dry materials such as paper, card, cans, plastic bottles, mixed plastic, glass.
Dry recycling rate	The percentage of waste sent for recycling. It excludes waste collected for recycling that was rejected at collection, during sorting or at the gate of the recycling reprocessor. It includes residual waste which was diverted for recycling but excludes waste sent for preparation for reuse.
Energy recovery rate	The percentage of waste sent for energy recovery. It includes mixed residual and specific sources components.
Household waste	Includes materials (except soil, rubble and plasterboard) collected directly from households (e.g. kerbside collections) or indirectly (e.g. bring sites, civic amenity sites, collected by private and voluntary organisations not included elsewhere or street sweepings).
Kerbside	A regular collection of waste from premises.
Key Performance Indicators (KPIs)	A set of measures used to gauge performance in terms of meeting waste strategy targets.
LAC	Local Authority Collected, as in LAC municipal waste.
Landfill sites	Any areas of land in which waste is deposited. Landfill sites are often located in disused mines or quarries. In areas where they are limited or no ready-made voids exist, the practice of landraising is sometimes carried out, where waste is deposited above ground and the landscape is contoured.
Local authority collected municipal waste	Waste which is collected under arrangements made by a district council.
Mixed dry recyclables	Waste streams intended for recycling found together with each other but separately from other waste.

Term	Explanation
Mixed residual waste sent for energy recovery	Combustible residual waste collected from the kerbside and civic amenity sites and processed into refuse derived fuel at material recovery facilities.
NILAS	Northern Ireland Landfill Allowance Scheme
Non household waste	Asbestos, beach cleansing, civic amenity sites waste, fly-tipped materials, gully emptyings, commercial and industrial, construction and demolition, grounds waste, highways waste, other collected waste and other.
Other household waste	Healthcare waste, bulky waste, street cleaning and other household.
Recycling	Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It does not include energy recovery and the reprocessing into materials that are used as fuels.
Refuse Derived Fuel (RDF)	Consists largely of organic components of municipal waste (such as plastics and biodegradable waste). This can then be used in a variety of ways to generate electricity, most commonly as an additional fuel used with coal in power stations or in cement kilns.
Regular residual household waste	Household regular kerbside collection.
Residual waste	Waste that is not sent for preparing for reuse, sent for recycling or composting.
Specific streams e.g. wood	Used in the context of LAC municipal waste sent for energy recovery. It is mostly wood but also contains furniture, carpets and mattresses, mostly collected from civic amenity sites.
Waste arisings	The amount of waste collected in a given locality over a period of time.
Waste collected for disposal to landfill	Collected for disposal is residual waste that has not been sorted to separate out recyclable material from other waste before being presented to the Council for collection at various locations.
Waste from households	Not the same as 'household waste'. This is a narrower definition and includes material (except soil, rubble and plasterboard) collected only from households (e.g. kerbside collection, bring sites, civic amenity sites or community skips managed by councils).
Waste sent to landfill	The amount of waste sent to landfill. Excludes residual waste which was diverted for energy recovery, recycling or composting. Includes household waste collected for energy recovery, recycling or composting which was diverted to landfill.

Term	Explanation
Waste Transfer Note (WTN)	A note which must be created for any transfer of controlled waste. The exception to this is householders, who are not required to produce transfer notes.
WasteDataFlow	The web based system for local authority collected municipal waste data reporting by UK local authorities to government (www.wastedataflow.org).
Recycled material types	
Compostable (excluding wood)	Green waste only, green garden waste only, mixed garden and food waste, waste food only, other compostable waste (excluding wood).
Construction, Demolition and Excavation	Plasterboard, rubble and soil.
Electrical Goods	Large and small domestic appliances, TVs and monitors, fluorescent tubes and other light bulbs, fridges and freezers, auto batteries and post consumer batteries.
Glass	Brown, clear, green and mixed glass.
Metal	Aluminium, mixed and steel cans, aluminium foil, bicycles, aerosols, gas bottles, fire extinguishers and other scrap metal.
Paper and Card	Books, card, mixed paper and card, paper, yellow pages and cardboard beverage packaging.
Plastics	PET(1), HDPE(2), PVC(3), LDPE(4), PP(5), PS(6), other plastics(7), mixed plastic bottles, and plastics.
Textiles	Textiles and footwear, footwear only, textiles only and carpets.
Unclassified	Derived category including all other recycled material collected not included in the main categories.
WEEE (Waste Electrical and Electronic Equipment)	As electrical goods above but excluding auto batteries and post consumer batteries.
Wood	Wood, chipboard and MDF, composite wood materials and wood for composting.

Appendix 3: List of Acronyms

This is a list of commonly used acronyms in this report.

arc21	Regional waste management group in Northern Ireland
BLACMW	Biodegradable Local Authority Collected Municipal Waste
CIWM	Chartered Institution of Wastes Management
DAERA	Department of Agriculture, Environment and Rural Affairs
EC	European Commission
EU	European Union
KPI	Key Performance Indicator
LAC	Local Authority Collected
LACMW	Local Authority Collected Municipal Waste
LPS	Land and Property Services
MDR	Mixed Dry Recyclables
MRF	Materials Recovery Facility
NI	Northern Ireland
NIEA	Northern Ireland Environment Agency
NILAS	Northern Ireland Landfill Allowance Scheme
NISRA	Northern Ireland Statistics and Research Agency
NWRWVG	North West Regional Waste Management Group
RDF	Refuse Derived Fuel
SASB	Statistics and Analytical Services Branch, DAERA
UK	United Kingdom
WDF	WasteDataFlow
WEEE	Waste Electrical and Electronic Equipment
WRAP	Waste and Resource Action Programme