States of Guernsey
Trading Assets

2016 Waste Management Report

1. Executive Summary

- Waste landfilled at Mont Cuet was 28,389 tonnes, the lowest annual total on record.
- The domestic recycling rate for 2016 was 48.1%, compared to 47.8% in 2015.
- The commercial recycling rate for 2016 was 42.2%, up from 40.4% in 2015.

2. Waste Disposal - Mont Cuet Landfill Site (residual waste)

The net tonnage of waste entering Mont Cuet continues on a downward trend, due to reductions in a number of incoming waste streams. 28,389 tonnes of residual waste was deposited in 2016, which is the lowest annual total on record. It represents a reduction of just over 1,200 tonnes (4.1%) compared to 2015.

Net Mont Cuet input[1] (tonnes)	2012	2013[2]	2014[3]	2015	2016
Annual total	33,441	32,044	32,492	29,609	28,389
Monthly average	2,787	2,670	2,708	2,467	2,366

Table 1: Net waste Input for Mont Cuet

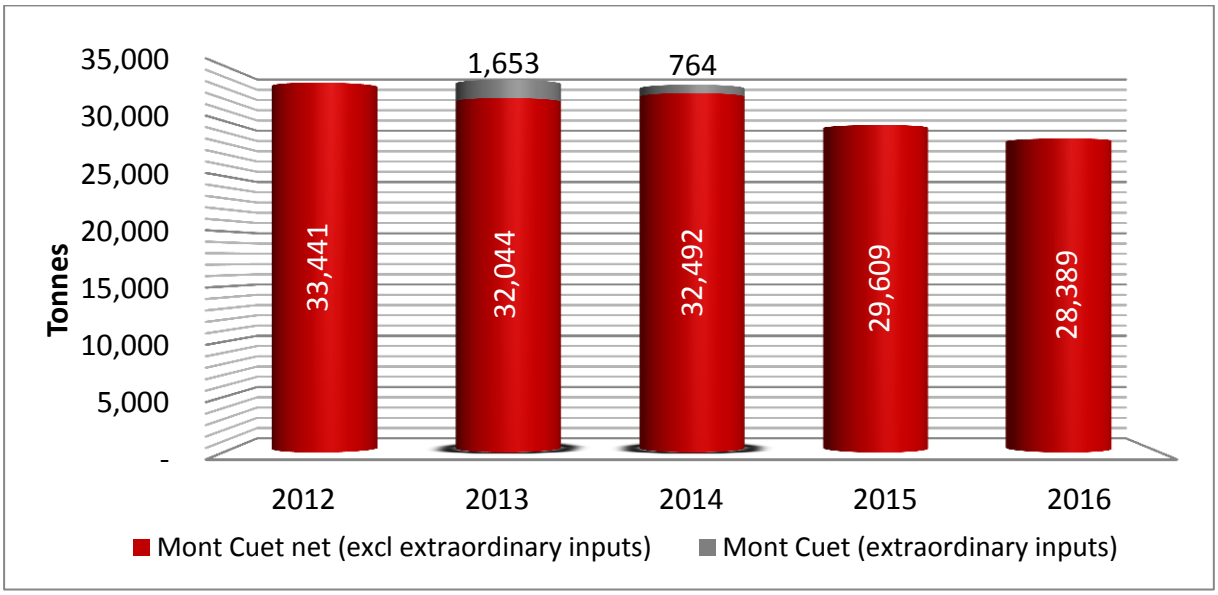

Figure 1 - Net inputs for Mont Cuet 2012 – 2016

[1] Net waste tonnage for Mont Cuet does not include material brought in for engineering purposes and to cover waste.
[2] Excludes exceptional inputs of 1,653 tonnes of Japanese Knotweed contaminated soil deposited in October 2013.
[3] Excludes exceptional inputs of 764 tonnes of Japanese Knotweed contaminated soil deposited in July 2014.

Parish 'black bag' waste was down by more than 200 tonnes compared with 2015, to 11,312 tonnes. This waste stream has now shown a downward trend for the past four years (the largest annual reduction was in 2014, when parish waste fell by nearly 900 tonnes following introduction of kerbside recycling).

The next big step to reducing black bag waste is expected to come in late 2018 when the new kerbside collection scheme is introduced. That will see the introduction of food waste and glass recycling collections and a 'pay as you throw' charging mechanism, all of which will provide further incentive and opportunities to reduce residual waste.

Overall, when other sources of domestic waste are included, household waste sent to landfill was 13,021 tonnes. That is largely unchanged compared to 2015 (12,996 tonnes). The most significant change within this element was an increase in waste collected from island litter bins, which was up more than 120 tonnes (+30%) compared to 2015. This may be attributed, at least in part, to the method used to record litter, whereby tonnages from coastal bin collections are extrapolated for other public bins collections. Any incidents of coastal fly tipping are included in those litter collections, and therefore can artificially affect the total across the island.

The remainder of the waste entering Mont Cuet was from local commercial sources and Alderney. Commercial waste going to landfill did see a significant fall, down by more than 1,200 tonnes compared to 2015 – a fall of nearly 8%. This was due to reductions across a number of waste streams within the commercial category. (Further commentary on commercial waste is provided in section 5).

Rate of fill

Figure 2 represents the current level of landfilled waste, derived from regular surveys and the recorded mass of waste deposited. The last survey in January 2017 concluded the site was 87% full. As shown, recent years' inputs are significantly lower than in the first 8 years, but higher cover requirements since 2010 have resulted in more void space being consumed.

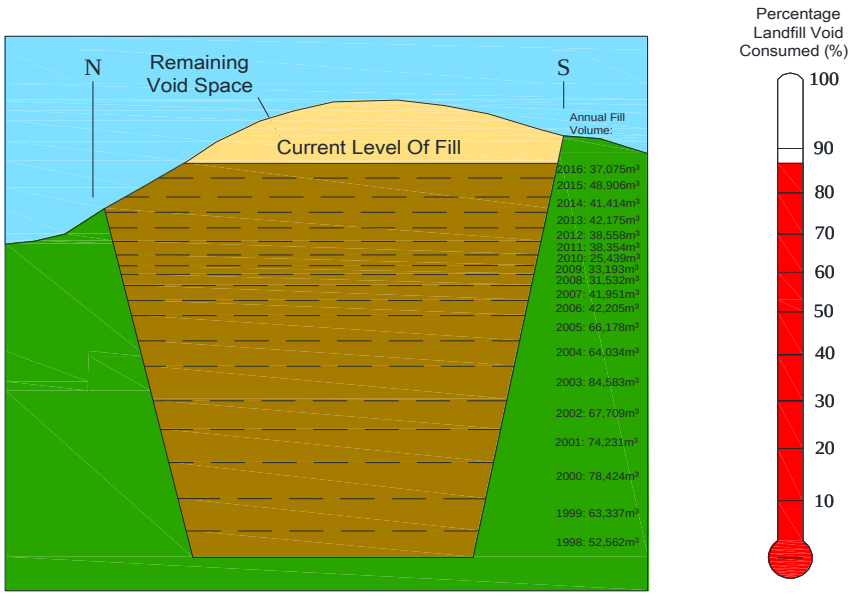

Figure 2 – Sc hematic of Mont Cuet landfill site, across a north-south cross-section, including volumes filled (Jan 2017)

Fill life calculations are based on the illustrated domed profile, to a height of 25 metres above Guernsey Datum. The site will actually be filled to a lower, flat profile, to allow green waste composting to continue at the site for the foreseeable future and retain an area to deposit hazardous waste[4], such as asbestos. The site is expected to reach that level by mid-2018, which will be managed to coincide with the commissioning of the new waste management facilities.

3. Waste disposal - Longue Hougue Land Reclamation site

The Longue Hougue Land Reclamation Site also has a finite life. The January 2017 survey estimated a remaining life of three years and three months, based on average fill rates 2011–2016. The land reclamation is therefore expected to be completed in April 2020.

Annual inputs vary in line with construction activity, and have therefore declined in recent years, mostly due to the downturn in that industry. However improved waste management in some major building projects, involving more recycling or reuse of construction and demolition waste within developments, are likely to have reduced some inputs. That trend should increase in future, with the requirement under the Island Development Plan for any building projects of a significant size to have a waste management plan.

Longue Hougue input (tonnes)	2012	2013	2014	2015	2016
Annual total	174,584	136,612	126,456	105,442	81,311
Monthly average	14,549	11,384	10,538	8,785	6,776

Table 2 - Inputs for Longue Hougue Land Reclamation site 2012 – 2016

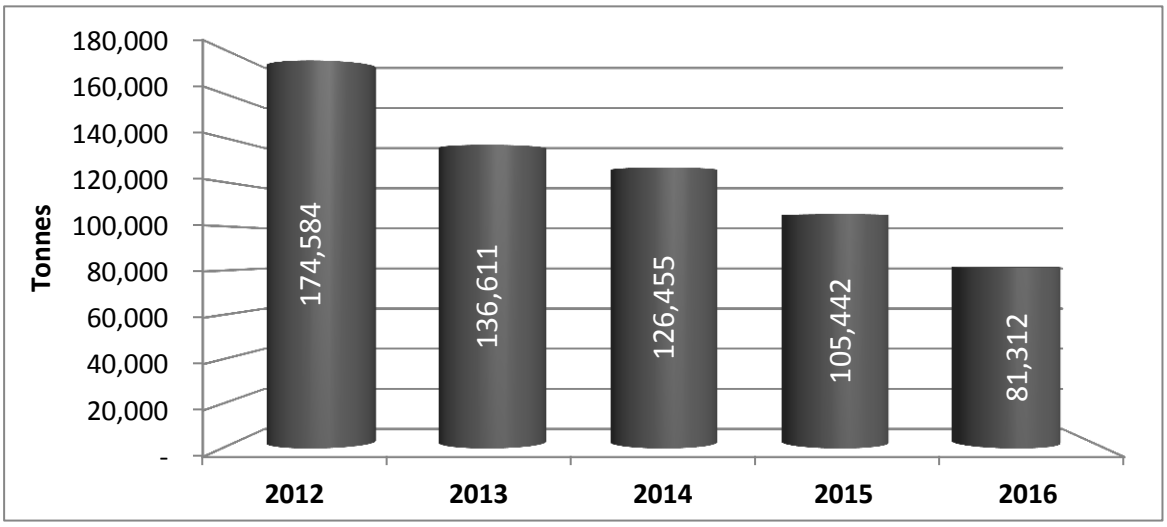

Figure 3 - Inputs for Longue Hougue Land Reclamation site 2012 – 2016

[4] This type of waste will not be able to be processed at the new waste management facilities at Longue Hougue.

The ability to dispose of inert waste is vital to the local construction industry. It is therefore important a suitable solution is identified for when Longue Hougue is full, and a review of options and a high level Environmental Impact Assessment are currently being carried out.

4. Household recycling

In total, 8,188 tonnes of 'dry' recycling was achieved through kerbside collections, bring banks, the Longue Hougue Recycling Facility and the Mont Cuet Civic Amenity site.

Material (tonnes)[5]	2012	2013	2014	2015	2016
Kerbside – Clear Bag	*Launched Mar 2014*		1,598	1,808	1,688
Paper (Bring banks)	2,305	2,235	1,167	853	804
Cardboard (Bring banks)	1,294	1,355	1,014	958	933
Kerbside – Blue Bag	*Launched Mar 2014*		499	592	593
Tins and cans (Bring banks)	198	208	120	75	70
Plastic packaging (Bring banks)	307	323	167	123	120
Beverage Cartons (Bring banks)	143	121	65	35	33
Bottle Glass (Bring banks)	1,778	1,734	1,779	1,763	1,791
Kerbside – Glass	*Trial began Nov '14*		6	20	-
Textiles & books (Bring banks)[6]	803	731	762	705	731
Metal from MC CA Site & LHRF[7]	1,165	655	462	457	544
Cooling equipment (fridges etc.)	-	81	83	90	108
Display equipment (TVs, screens etc.)	-	66	75	90	70
Other WEEE	-	245	348	371	382
Lead Acid Batteries	-	19	16	29	26
Rigid plastic	49	83	27	98	96
Other Material from LHRF[8]	7	27	37	15	33
Reuse at LHRF	-	81	36	30	24
Bulk Refuse	63	55	62	72	82
Polystyrene	11	8	14	11	13
Household batteries	-	10	11	8	7
On-the-Go recycling	-	4	2	5	5
Fluorescent Tubes	-	1	2	4	3
Mattresses	*Launched Q4 2013*		10	5	8
Domestic Green Waste	4,095	4,081	4,334	3,638	3,862
Total household waste recycled	**12,180**	**12,125**	**12,698**	**11,877**	**12,050**

Table 3 - Recycling tonnages for household waste

[5] Data for household recycling schemes supported by the States, and excludes commercial recycling at Fontaine Vinery.
[6] Material sent to a processing facility in the UK, collected from charity bring banks and charity shops.
[7] From 2013, the general 'metal' category has been split, and changes also made to acknowledge 'raw' scrap contains non-metallic elements that will not be recycled. Tonnages are therefore not directly comparable with prior data.
[8] Includes oils (cooking and mineral), polythene, printer cartridges etc.

Kerbside

- **Participation:** A survey of households in collection rounds in Castel and St Peter Port was carried out in July 2015 and repeated in September 2016. This observed participation in kerbside recycling over a four week period.

  In 2015, 76% of households in the sample areas were using kerbside. The figure was higher in Castel (78%) than in St Peter Port (72%). In 2016, the participation observed was lower, at 71% overall and 73% and 68% respectively in the two parishes.

  One of the issues during the interim scheme has been restocking with bags, for which it is acknowledged the process has been more cumbersome than desirable. That has been due to the requirement for stock control given a finite supply of bags, but may have impacted on participation.

  An island-wide mail drop of recycling bag vouchers was carried out in October, enabling all islanders to restock easily. There is evidence that participation increased again after that. Blue bag tonnages during the final quarter of 2016 were up on 2015, having shown a slight decline in all previous quarters of the year. That growth trend continued in the early months of 2017, which supports this observation.

  It is anticipated that further improvements to the kerbside scheme and the planned changes to charging arrangements will bring about further increases in participation.

- **Blue bags:** The initial uplift seen in 2014 in blue bag materials collected has been maintained, with an overall increase of one tonne compared with 2015.

- **Clear bags:** The amount of paper and cardboard collected from kerbside fell by 6.6% compared with 2015. This is in line with a long term trend in recent years, which corresponds with a general reduction in paper consumption which has been observed in the UK also. Demand for newsprint has reduced by nearly 40% since 2000[9], as readers' shift towards online reading. For this reason, two national newspapers ceased their print editions in 2016. This more widespread decrease in paper consumption has had a clear impact on paper recycling tonnages in Guernsey in recent years.

Bring banks

- Of the materials that are collected through the kerbside recycling scheme, cardboard contributes the highest tonnages deposited at bring bank sites. This is largely due to the bulky nature of some packaging which means it does not easily fit in kerbside bags. It is also suspected that bring banks are providing a 'free' means for some businesses to dispose of cardboard. It is impossible to quantify the impact of this accurately.

  Given the popularity of the kerbside recycling scheme, a number of smaller, less used sites have been removed. Further rationalisation of these sites is also expected in the future, particularly as glass collections are introduced into the kerbside collections and the new Household Waste Recycling Centre is developed which will provide islanders with a 'one-stop shop'.

[9] Source: Confederation of Paper Industries - www.recyclingwasteworld.co.uk/in-depth-article/2016-a-year-of-relative-stability/149318/

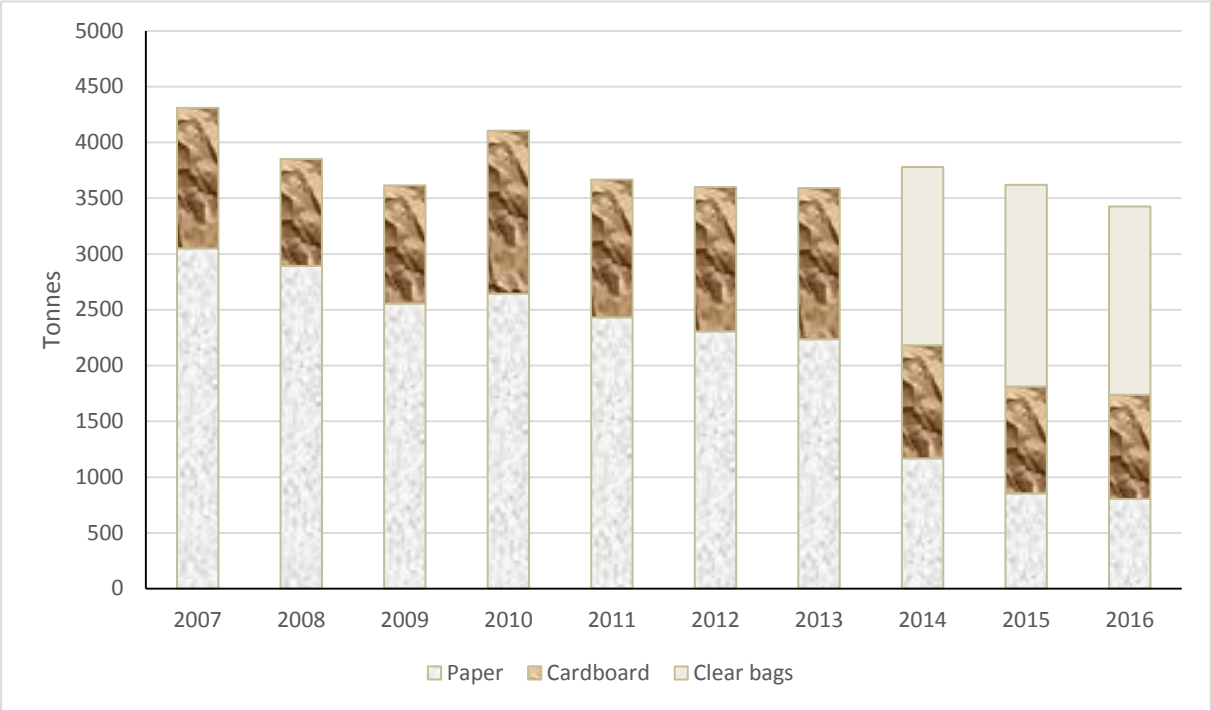

Figure 4 - Clear bag materials collected at bring banks and in kerbside bags

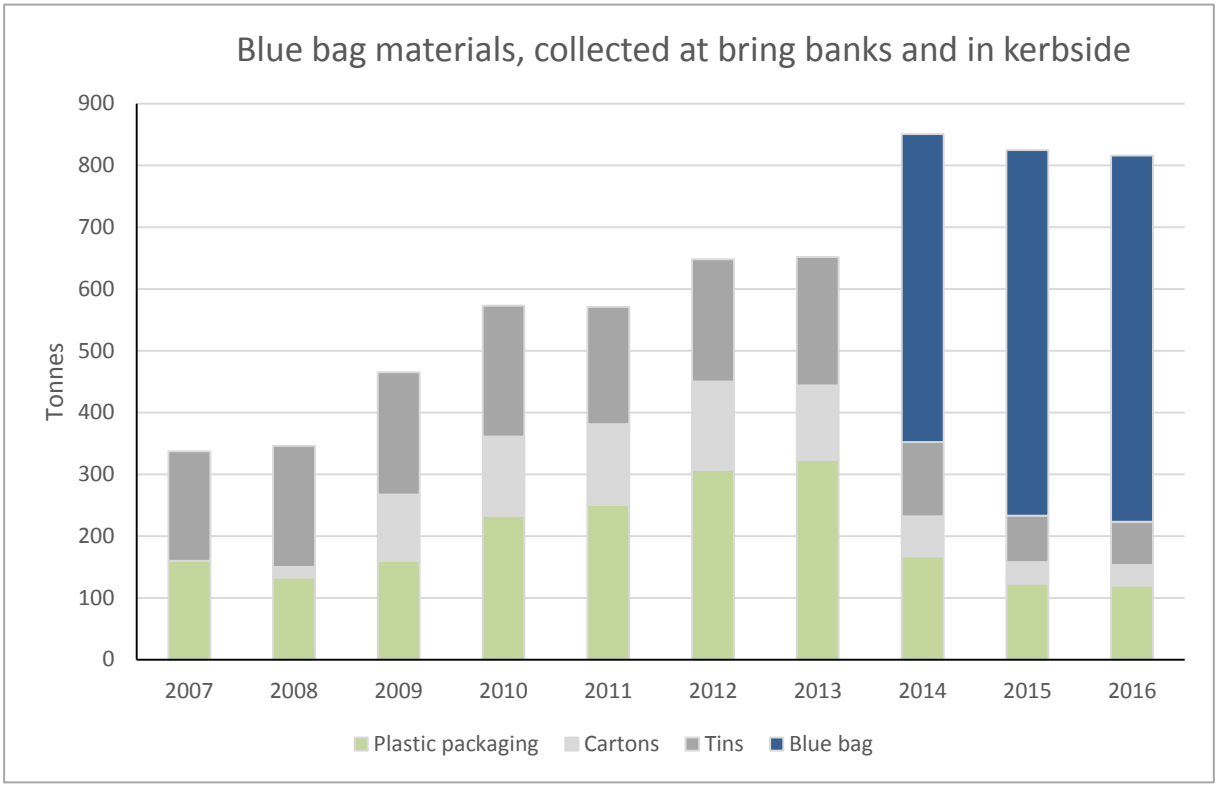

Figure 5 - Blue bag materials collected at bring banks and in kerbside bags

Glass

Against a declining trend in recent years, with changes in packaging materials and 'light-weighting', glass tonnages recycled in Guernsey went up by 0.5% when compared with 2015 (and were 2.5% higher than before kerbside began). Glass is not included in the current kerbside scheme, but is often cited[10] as a disadvantage of the scheme. Following a 9-month trial in St Peter Port in 2014/15, it is proposed to include glass when the new kerbside collection scheme is introduced.

Although most glass is currently recycled, a waste composition analysis in 2015 found it makes up more than 4% of black bag waste - equivalent to around 500 tonnes a year[11].

Civic amenity sites

Also in the dry recycling total, over 1,300 tonnes of materials were recycled through the Longue Hougue Recycling Facility and Mont Cuet Civic Amenity Site, an increase of over 100 tonnes against the 2015 total.

Green Waste

2016 saw just over 200 tonnes of additional household green waste collected compared to 2015. This was still lower than in 2010-2014 due to factors relating to climate and seasonal variations; this has impacted the overall recycling rate for 2016.

Reuse

Reuse lies higher up the waste hierarchy than recycling and, as such, work continues to support efforts at this level. Approximately 24 tonnes of material was taken away for reuse by members of the public from the Longue Hougue Recycling Facility in 2016. This figure is calculated from disclaimers completed for items removed from the site, but monitoring disclaimer completion has been challenging.

Recycling totals

		Annual tonnage/percentage rate				
		2012	**2013**	**2014**	**2015**	**2016**
Household waste landfilled	Tonnes	13,911	13,728	13,171	12,996	13,021
Household waste recycled [12]	Tonnes	*8,123*	*8,044*	*8,363*	*8,239*	*8,188*
	Percent	31.1%	31.1%	32.3%	33.1%	32.7%
Household waste composted	Tonnes	*4,095*	*4,081*	*4,334*	*3,638*	*3,862*
	Percent	15.7%	15.8%	16.8%	14.6%	15.4%
Household waste recycling rate [13]		**46.8%**	**46.9%**	**49.1%**	**47.8%**	**48.1%**

Table 4 - Household Waste Recycling Rate (calculated on a rolling annual rate)

[10] Island Analysis survey (sample 500) in October 2014, over 40% highlighted non-collection of glass as an issue.
[11] Waste Composition Analysis for Guernsey (August 2015), by Integrated Skills
[12] This is the dry recycling element of the overall recycling rate. All three elements above (waste landfilled, recycled and composted) figure in the overall calculation, thus green waste has an influence on the overall recycling rate.
[13] Does not necessarily equal the sum of the above components due to rounding.

As a result of the factors outlined in this report, the recycling rate for 2016 is 48.1%. This is 0.3% higher than 2015 and, excluding 2014 when kerbside was introduced, it is the highest annual recycling rate on record.

England has changed its methodology for calculating its reported household (now termed 'waste from households') recycling rate, to exclude material types not considered to have come directly from households, such as litter bins. Litter is currently included in local calculations. Whilst Guernsey's current methodology has been retained in this report to maintain full compatibility and consistency with earlier data, the methodology will be re-examined against England's.

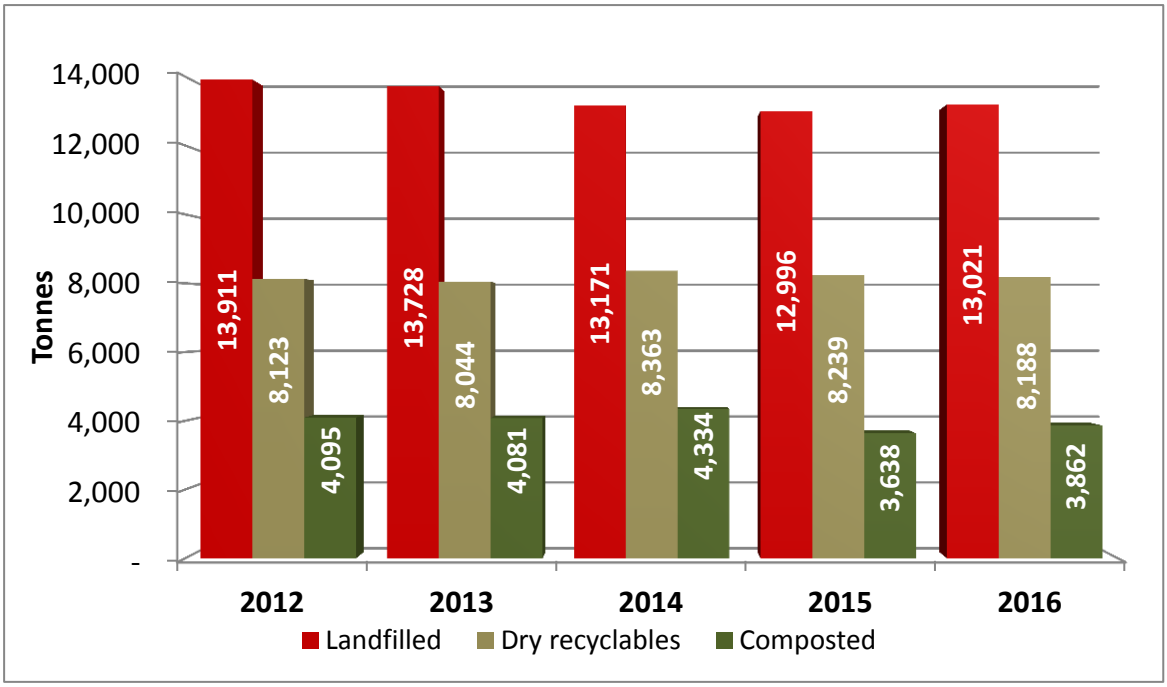

Figure 6 - Total Household Waste (tonnes) - annual rolling total

5. Commercial recycling

Data to calculate the commercial recycling rate is obtained through direct approach to operators known to be active in commercial recycling, but operators are under no obligation to provide information and it is provided on a goodwill basis.

The methodology employed is consistent with that used in earlier years, with reasoned estimates being employed in respect of waste that will have been generated, but not reached formal disposal routes (this is particularly the case with wood).

It should be noted that the completeness of the commercial information obtained cannot be guaranteed, nor can the accuracy of the figures provided by the commercial operators.

	2016 Commercial data				
	2012	**2013**	**2014**	**2015**	**2016**
Recycled	20,724[14]	18,304	19,948	17,940	18,599
Not recycled [15]	27,538	26,176	27,768	26,478	25,452
of which landfilled	*17,979*	*16,849*	*18,029*	*15,298*	*14,090*
of which diverted from landfill	9,559	9,327	9,938	11,180	11,362
Total	**48,262**	**44,480**	**47,715**	**44,418**	**44,051**
Recycling rate	**42.9%**	**41.2%**	**41.8%**	**40.4%**	**42.2%**

Table 5 - Commercial recycling tonnages and percentages

Recycling tonnages for 2016 increased by 3.7% when compared with the 2015 tonnages, and waste not recycled fell by 3.9%. Of the waste not recycled, the amount landfilled at Mont Cuet continues on a downward trend, with inputs for 2016 the lowest yet. Tonnages being diverted away from landfill (for example, by export or land reclamation) continue on a general upward trend, with an increase of over 180 tonnes compared with 2015.

For advice on Waste Disposal and Recycling:

- Visit the website: www.gov.gg/recycling;
- Contact the Recycling Team on 01481 231234 or via recyle@gov.gg
- Like us on Facebook (www.facebook.com/RecycleforGsy) and follow us on Twitter @recycleforgsy

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[14] Includes a small allowance (estimate based on data from previous years) for figures that could not be obtained for 2012.
[15] I.e. disposed of in landfill, or otherwise diverted from landfill. Diversion includes, for example, incineration of healthcare and abattoir waste, and export for disposal (hazardous waste). An amount is also figured in for wood that is estimated to have been generated but which, following the ending of established commercial burning operations, has not re-entered the landfill waste stream.