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Wales

Wales Waste Information 2013

A summary of the types and quantities of waste handled by permitted waste management facilities in Wales in 2013.

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About the data

Permitted waste management facilities in Wales are required to make returns (which must be quarterly or annually) to us detailing the amounts and types of materials handled, treated or disposed of.

By collecting and summarising this information, we are able to provide data on the material which was deposited (or otherwise dealt with) at permitted waste management facilities.

This information will be useful for local authorities, regional planning bodies and businesses involved in planning for future waste facilities. These pages form one of a series of annual reports summarising our waste data.

Geographic assignment of tonnages to the “South East” and “North” regional waste plan areas within Wales may have been affected by inconsistencies for a small number of sites prior to 2013. Total figures for Wales are unaffected.

Numbers are based on all correct returns held by NRW at the time of report collation. They do not include waste returns that are outstanding or pending quality assurance action.

Key Facts

Waste Managed

During 2013, facilities in Wales managed a total of 7.9 million tonnes of waste (table 2).

Table 1: Number of active sites in Wales by year and site type. Multiple use sites have only been counted once and this may affect the final overall figure.

| Year | Landfill | Deposit for recovery | Metal Recycling | Incineration with energy recovery | Incineration without energy recovery | Transfer | Treatment | Use of waste | Total |
|----------------|----------|----------------------|-----------------|-----------------------------------|--------------------------------------|----------|-----------|--------------|-------|
| at end of 2010 | 33 | 0 | 145 | 3 | 1 | 217 | 73 | 0 | 472 |
| at end of 2011 | 30 | 2 | 95 | 3 | 1 | 212 | 81 | 6 | 430 |
| during 2012 | 25 | 7 | 90 | 3 | 1 | 222 | 102 | 10 | 460 |
| during 2013 | 25 | 6 | 98 | 3 | 1 | 218 | 109 | 7 | 467 |

Table 2: Kilotonnes of waste managed by permitted sites in Wales by year and site type. Note: Some of the increase in quantities of waste managed can be attributed to the inclusion within permitting of types of sites previously operating under exemptions before 2010/11. These sites were not required to provide tonnage returns whilst operating under exemptions.

| Year | Landfill | Deposit for recovery | Metal Recycling | Incineration with energy recovery | Incineration without energy recovery | Transfer | Treatment | Use of waste | Total |
|------|----------|----------------------|-----------------|-----------------------------------|--------------------------------------|----------|-----------|--------------|-------|
| 2010 | 2,303 | 0 | 551 | 23 | 5 | 1,813 | 1,580* | 0 | 6,275 |
| 2011 | 2,200 | 3 | 677 | 24 | 5 | 1,855 | 2,174* | 63 | 7,001 |
| 2012 | 2,163 | 92 | 814 | 55 | 5 | 2,025 | 2,582 | 214 | 7,949 |
| 2013 | 2,138 | 162 | 829 | 43 | 5 | 2,005 | 2,667 | 61 | 7,910 |

* This data has been changed from the original published data and now includes data from 1 facility that had been omitted in previous years' publications

Key Trends

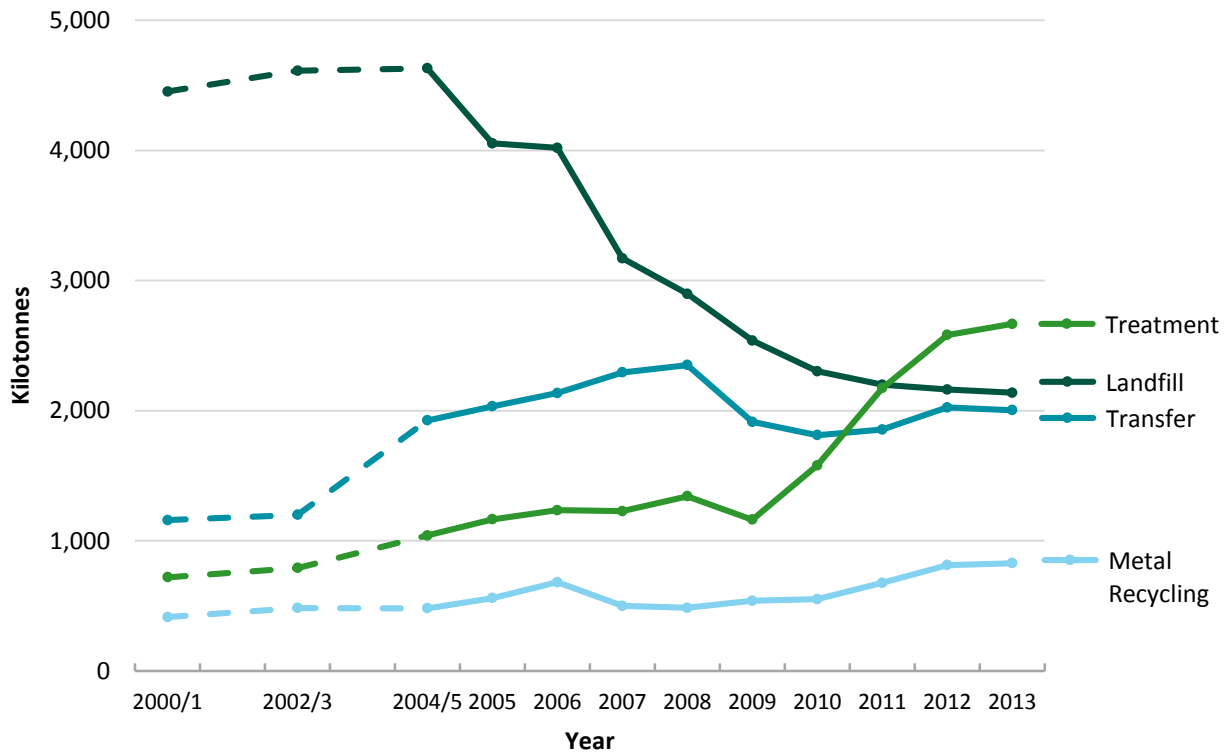


Figure 1: Waste management trends 2000/1 - 2013 Waste inputs shown in kilotonnes by site type

Waste sent to landfill in Wales continued to decrease. This has reduced by 1% (24,450 tonnes) between 2012 and 2013 and by 52% since 2001.

Inputs to permitted transfer facilities decreased by 1% between 2012 and 2013.

Inputs to permitted treatment facilities increased by 3% between 2012 and 2013.

Landfill

Landfill Capacity

Remaining capacity at landfill sites decreased by 4% during 2013 to 31.3 million cubic metres.

Regional Variation:

- North: 1% Decrease
- South East: 6% Decrease
- South West: 4% Decrease

At the end of 2013:

- 11% of capacity was at inert sites;
- 69% of capacity was at non-hazardous sites; and
- 20% of capacity was at restricted user sites (non hazardous and hazardous).
- approximately 10.7 years of landfill life was left at sites for non-hazardous wastes in Wales, at 2013 input rates (Figure 2).

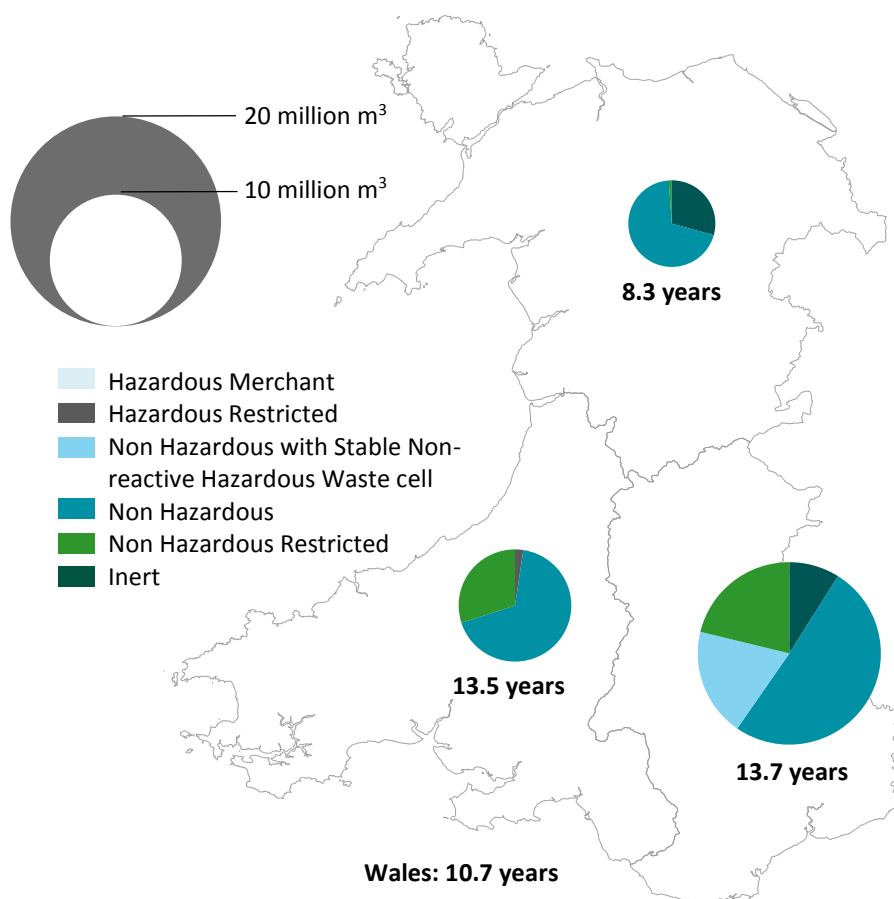


Figure 2: Remaining landfill capacity and landfill life expectancy in Wales Capacity shown at the end of 2013 in cubic metres by regional waste plan area and site type. Life expectancy estimate based on dividing remaining capacity by 2013 inputs for non-hazardous landfill sites, assuming a waste density of 1.2 tonnes per m³ and a 25% consumption of capacity for engineering and cover.

No additional landfill capacity was created this year, but more accurate surveying of sites by operators has indicated more space available at some sites.

Landfill Inputs

In Wales, 2.14 million tonnes of waste were landfilled in 2013 (Fig. 4). This is a 1% reduction compared to the 2.16 million tonnes of waste sent to landfill during 2012. The total tonnage of waste landfilled in Wales has fallen by 52% since 2001.

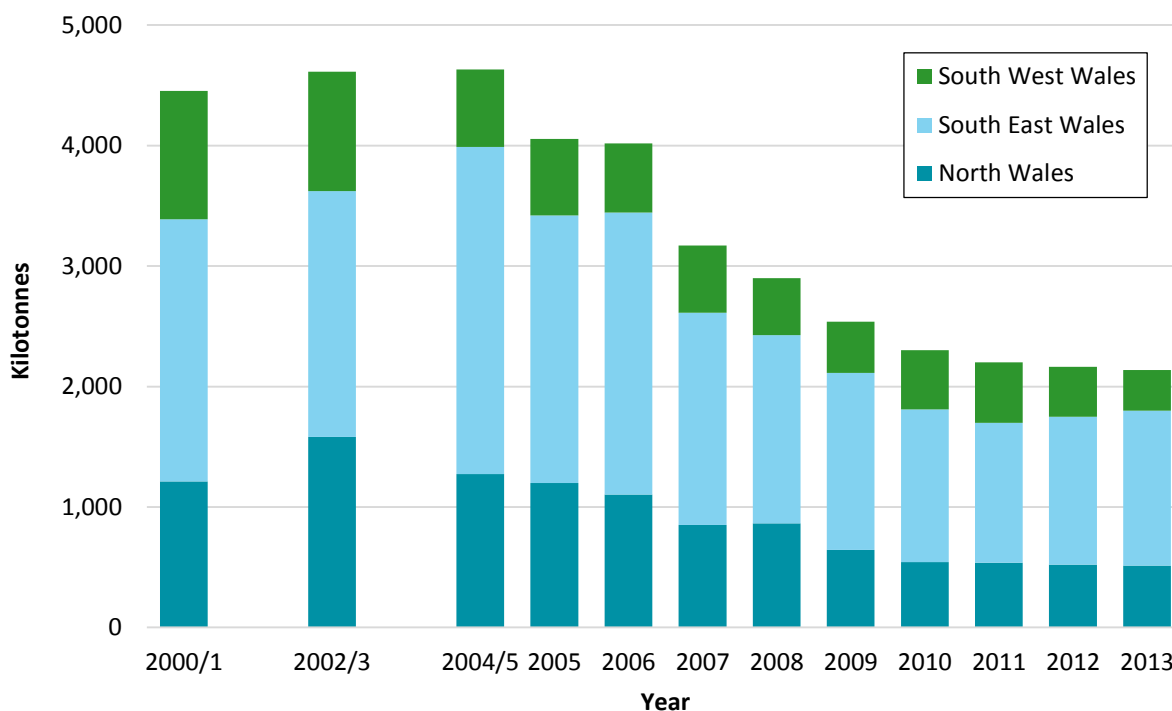


Figure 3: Waste deposited at permitted landfill facilities in Wales from 2001 – 2013 Waste inputs shown in kilotonnes by regional waste plan area. Data since 2005 has been reclassified into categories used under the PPC permitting of landfills and because of the ban on the co-disposal of waste in landfill in July 2004.

In 2013, 1.2 million tonnes of HIC (Household, Industrial & Commercial) waste was sent to landfill.

A further 933,875 tonnes of Inert/C&D (Construction & Demolition) waste was landfilled during 2013.

Approximately 64 tonnes of hazardous waste was landfilled during 2013 (consisting of mainly insulation material landfilled within factory curtilage) There has been a total reduction of 99% in the amount of Hazardous waste landfilled in Wales since 2001. Some sites are permitted for Solid Non Reactive Hazardous Waste (SNRHW) but are not actively accepting this type of waste currently.

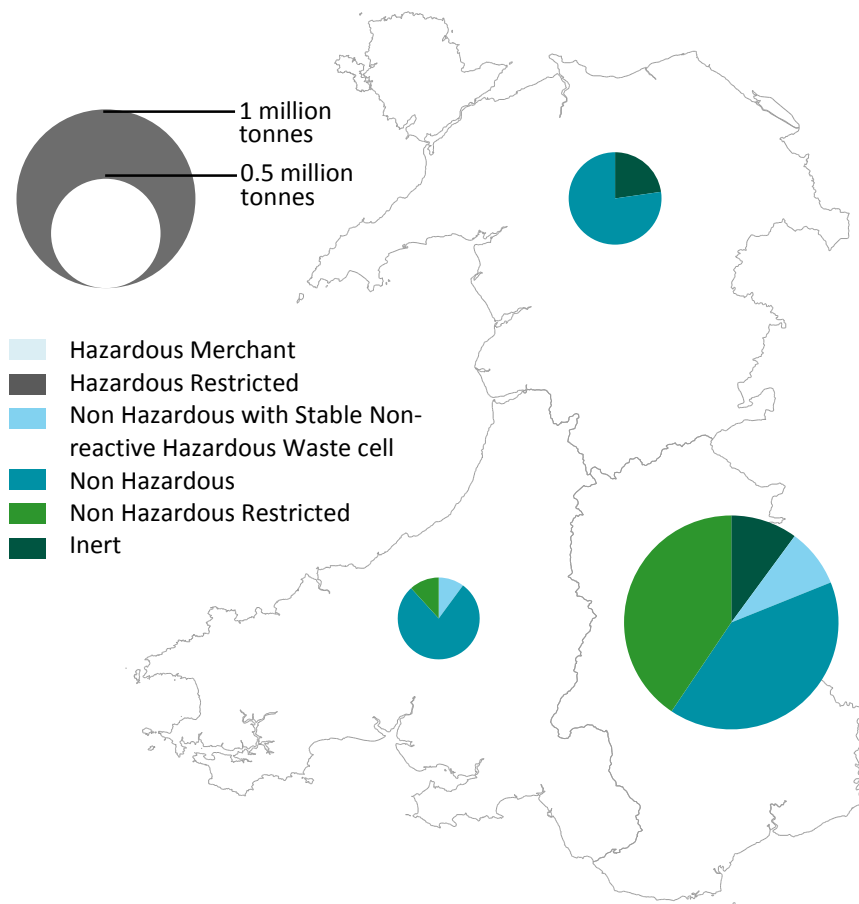


Figure 4: Waste inputs to permitted landfill sites in Wales in 2013 Waste inputs shown in tonnes by regional waste plan area and site type

Hazardous Waste

We are required to monitor all registered hazardous waste movements. The data published here is a summary of these movements. The same waste may be moved between multiple facilities and each separate movement is recorded. This double counting should be taken into account when using this data.

In 2013, 310,407 tonnes of hazardous waste was deposited at facilities in Wales (Table 3). This is a decrease of 4% since 2012. Of this waste, 196,929 tonnes arose from outside of Wales and were imported from England, Scotland & Northern Ireland.

Table 3: Tonnes of hazardous waste deposited in Wales by fate and year.

| Year | Incineration with energy recovery | Incineration without energy recovery | Landfill | Long term storage | Recovery | Transfer (Short term) | Treatment | Other | Total |
|------|-----------------------------------|--------------------------------------|----------|-------------------|----------|-----------------------|-----------|-------|---------|
| 2010 | 7,237 | 8,939 | 453 | - | 164,428 | 83,767 | 53,878 | 0 | 318,702 |
| 2011 | 872 | 7,906 | 17 | - | 159,048 | 94,722 | 61,874 | 114 | 324,554 |
| 2012 | 8,995 | 7,454 | 66 | - | 137,270 | 123,353 | 47,437 | 2 | 324,578 |
| 2013 | 3,897 | 4,203 | 64 | - | 167,420 | 80,323 | 54,500 | - | 310,407 |

From 2012 to 2013:

- Treatment of hazardous waste in Wales increased by 15% (7063 tonnes).
- Recovery of hazardous waste in Wales increased by 22% (30,149 tonnes).
- Energy recovery of hazardous waste in Wales decreased by 57% (5,098 tonnes).

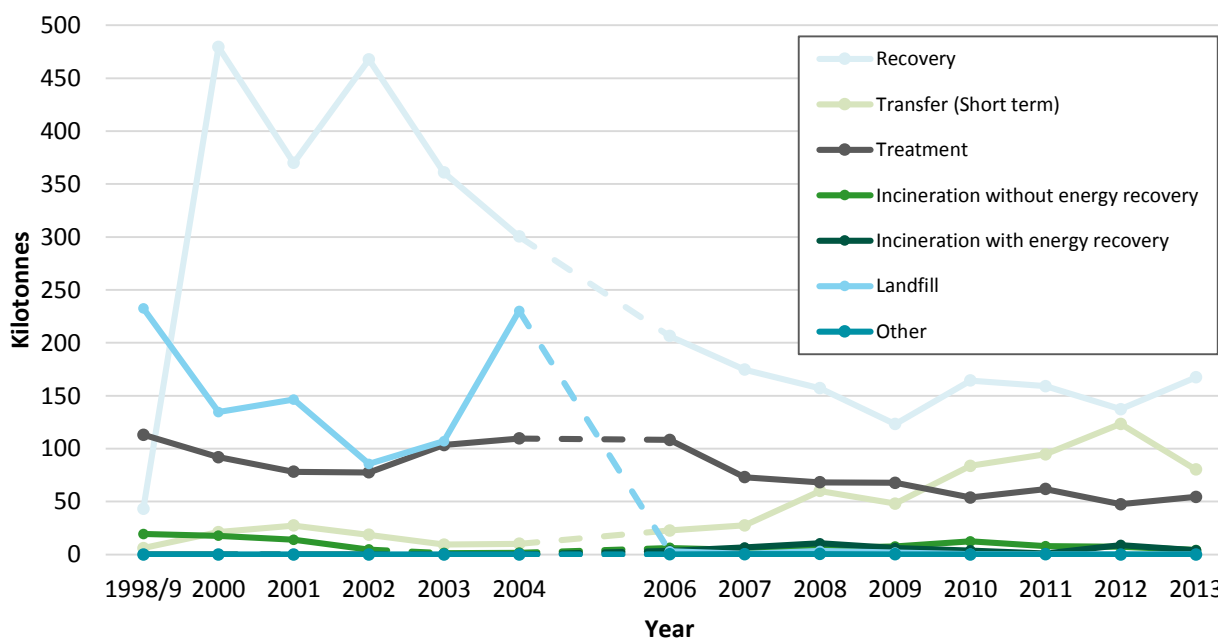


Figure 5: Wales hazardous waste management 1998/9 – 2013. Waste deposited in Wales by waste fate and year.

In 2013, 263,415 tonnes of hazardous waste was produced in Wales - a 4% (11,222 tonnes) increase from the 2012 level (Figure 6).

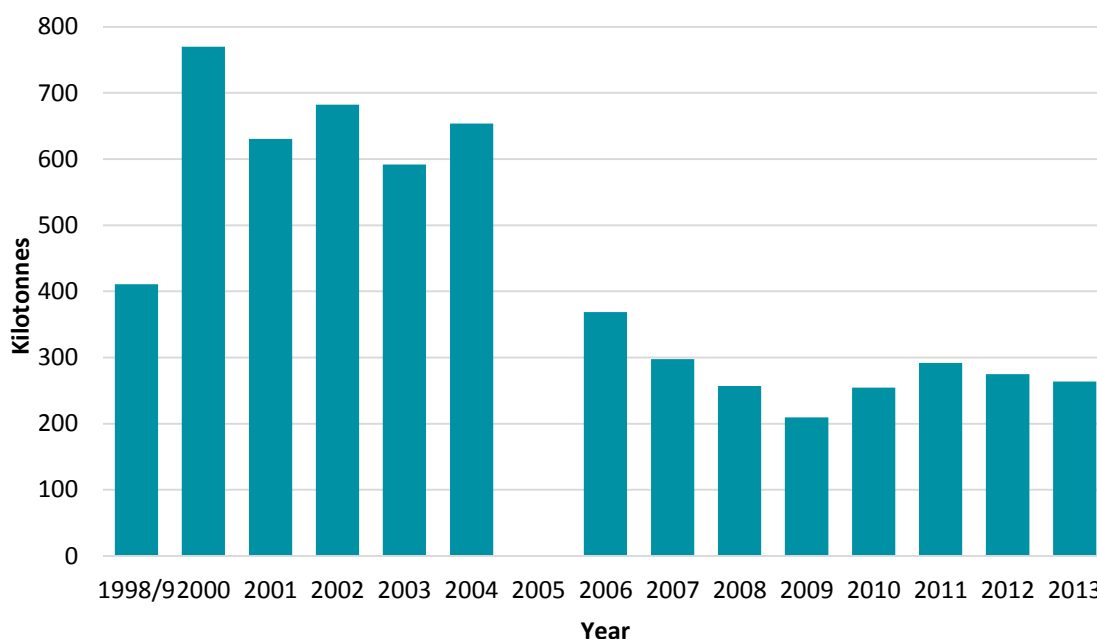


Figure 6: Wales hazardous waste production 1998/9 – 2013. Waste arisings in kilotonnes by year.

From 2012 to 2013, for hazardous waste produced in Wales and deposited in England and Wales: landfill decreased by 30% (8,693 tonnes), treatment increased by 3% (1,381 Tonnes), recovery of hazardous waste decreased by 6% (7,395 tonnes) and energy recovery increased by 121% (526 tonnes) (Table 4). Some of the major hazardous waste types produced in Wales are, thermal process waste (inorganic), oil and oil/water mixtures, petrol, gas and coal refining/treatment as well as construction and demolition waste and asbestos.

Table 4: Tonnes of hazardous waste produced in Wales and deposited within England and Wales by fate and year.

| Waste fate | 2010 | 2011 | 2012 | 2013 |
|--------------------------------------|----------------|----------------|----------------|----------------|
| Incineration with energy recovery | 489 | 413 | 435 | 961 |
| Incineration without energy recovery | 11,953 | 10,186 | 8,975 | 9,268 |
| Landfill | 15,769 | 18,385 | 29,388 | 20,695 |
| Long term storage | 2,973 | 15,434 | 4,461 | 3,331 |
| Other Fate | 0 | 22 | 3 | 2 |
| Recovery | 115,774 | 118,623 | 131,200 | 123,805 |
| Rejected | 61 | 122 | 58 | 53 |
| Transfer (D) | 18,331 | 19,491 | 18,619 | 18,889 |
| Transfer (R) | 39,549 | 42,616 | 33,470 | 37,005 |
| Treatment | 49,803 | 66,332 | 48,027 | 49,408 |
| Total | 254,701 | 291,625 | 274,636 | 263,415 |

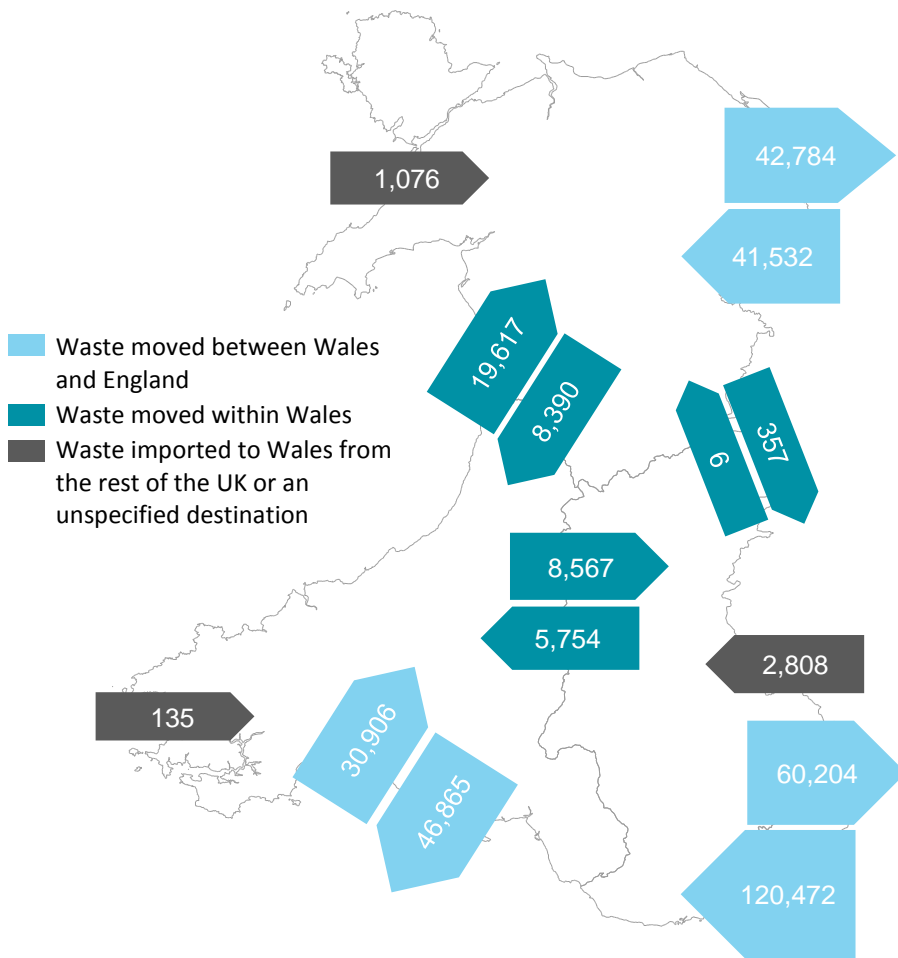


Figure 7: Hazardous waste movements in 2013 in tonnes.

More hazardous waste is imported into Wales for treatment, recovery or transfer than is exported from Wales for management in facilities in England.

Transfer, Treatment & Metal Recycling

Over 5.5 million tonnes of waste was handled through permitted transfer, treatment and metal recycling facilities in Wales during 2013.

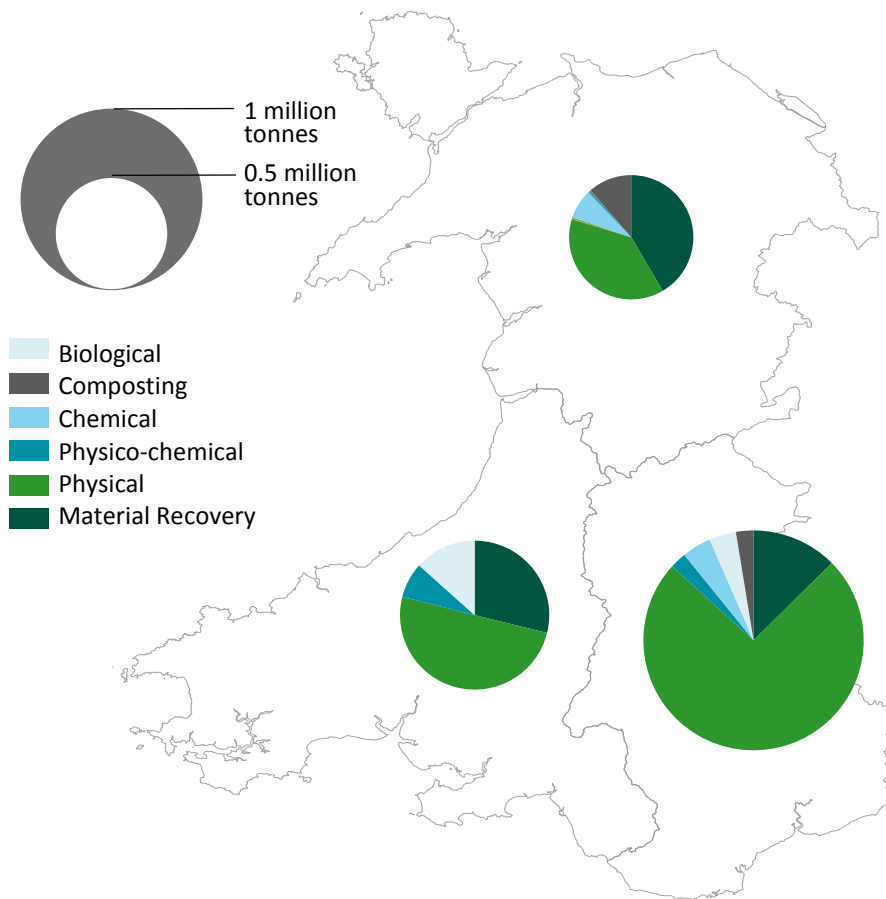


Figure 8: Waste inputs to permitted treatment facilities in Wales in 2013 Waste inputs shown in tonnes by regional waste plan area and site type

- Waste inputs to Metal Recycling sites increased by 2% (15,000 tonnes) compared to that of the 2012 data.
- 2013 saw approximately 2.6 million tonnes of waste treated at permitted facilities in Wales (Fig. 4). This is a 3% increase (85,000 tonnes) compared to 2012.
- In 2013, there was a 10% (147,000 tonnes) increase in waste going to Physical Treatment sites in comparison to the 2012 data.

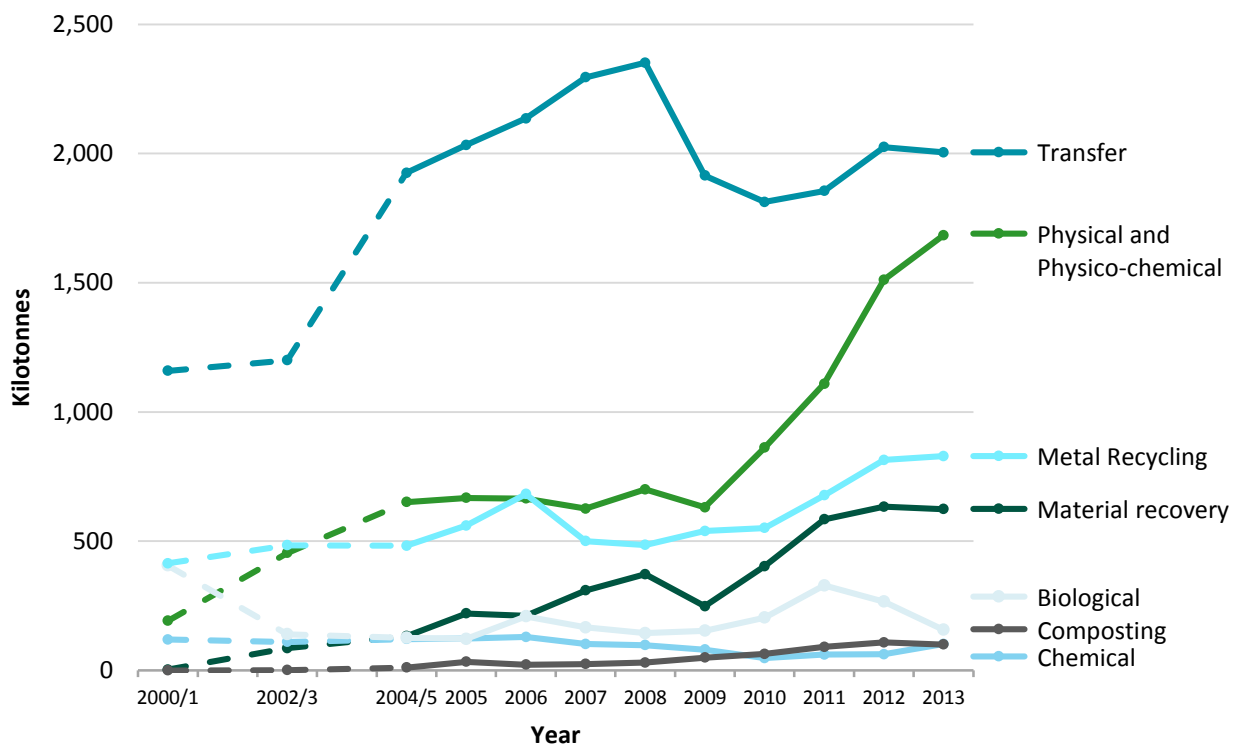


Figure 9: Waste inputs to permitted transfer, treatment and metal recycling facilities in Wales from 2001 - 2013 Waste inputs shown in kilotonnes by site type

Transfer Stations

Over 2 million tonnes of waste was accepted at Welsh transfer stations in 2013. Wastes from transfer stations will go onto other facilities in Wales or will be exported to the rest of the UK. 285,614 tonnes of waste was sent on to further transfer sites during 2013. This is a 4% increase on the 2012 figures.

Table 5: Waste outputs from transfer stations in Wales in 2013 Waste outputs shown in kilotonnes by destination facility type. Note: The same waste may be moved between multiple facilities and each separate movement is recorded. This double counting should be taken into account when using this data.

| Destination facility type | Transfer station output | |
|---------------------------|-------------------------|------------|
| | kilotonnes | percentage |
| Incinerator | 17 | 1% |
| Landfill | 486 | 27% |
| Recovery | 632 | 35% |
| Transfer | 286 | 16% |
| Treatment | 76 | 4% |
| Unknown | 292 | 16% |

79% (1.416 million tonnes) of waste leaving Welsh transfer stations went to further facilities in Wales, with the remaining 21% (373,000 tonnes) being exported to England or further afield for final disposal or recovery. 16% of destinations are not reported.

Mechanical biological treatment, Composting & Anaerobic Digestion

A total of 257,000 tonnes of waste was biologically treated & composted in Wales in 2013. This is a decrease of 117,000 tonnes to 2012 reported tonnages.

- 100,000 tonnes of biodegradable waste was composted in Wales during 2013. This is a 8% decrease compared to 2012 tonnages.
- 51,000 tonnes of waste was treated by anaerobic digestion in 2013. This is a 216% increase compared to 2012 tonnages.

Incineration

We only report on facilities that accept waste from off-site sources, this does not include facilities that burn their own in-house process waste.

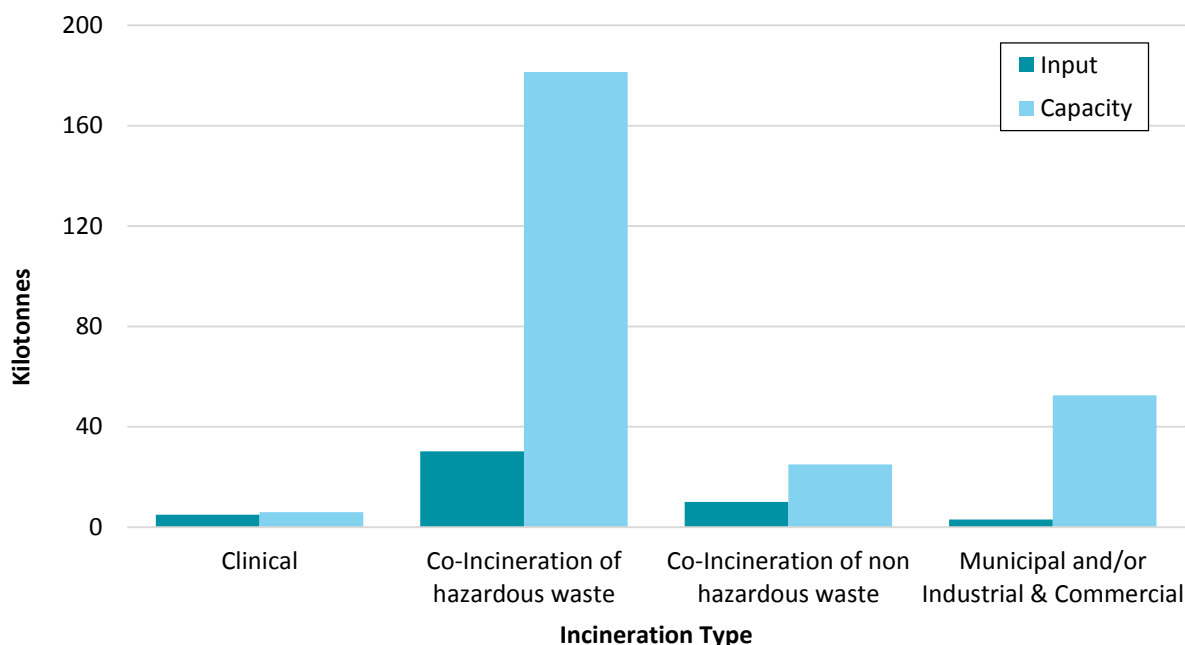


Figure 10: Utilisation of incineration capacity in 2013 in Wales Waste shown in kilotonnes by incineration type. There are no facilities of the following incineration types in Wales: Animal By-Products, Animal Carcasses, Hazardous, Sewage Sludge.

- 48,141 tonnes of waste were incinerated during 2013 at facilities in Wales - a slight decrease from 2012.
- 43,185 tonnes of this waste was incinerated at facilities with energy recovery in Wales taking municipal and other wastes.
- There were 264,868 tonnes of permitted waste incineration capacity in Wales at the end of 2013.

Two cement kilns are permitted to co-incinerate refuse derived fuel (RDF). Their estimated capacity as based on production process restrictions is approximately 181,000 tonnes per annum in North Wales and 25,000 tonnes in South East Wales. However, very little of this capacity is currently utilised for RDF. There should not be a reliance on this capacity for future planning.



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