

Wiltshire Municipal Waste Contract
Annual Service Review 2009/10



Services for everyday life

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Executive summary

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The 14th year of the Wiltshire Municipal Waste Contract saw the four district councils and the county council coming together to form a unitary authority. It also proved to be a challenging year for many industries as local and national businesses struggled to come to terms with the effects of global recession.

The amount of waste recycled under the contract totalled 111,137 tonnes and was almost 3,200 tonnes lower than the previous year. Whilst part of the reason for this fall was down to the obvious effect of recession, such as reduced tonnages of recycled newsprint, some has been as a result of the continued fall in the amount of waste generated by residents of Wiltshire. Despite the fall in tonnes diverted from landfill, this fall in total waste arisings meant that the contract landfill diversion rate rose to 45.37%.

The Lakeside Energy from Waste (EfW) contract commenced in June 2009, and although it took several months for the new facility to be fully commissioned, a further 26,567 tonnes of household waste were diverted from landfill in the year, meaning that 56.2% of the county's municipal waste was diverted from landfill. The Lakeside facility is now fully operational and 2010/11 will see 50,000 tonnes of Wiltshire's waste being used for energy recovery, further reducing the amount of waste sent to landfill.

Negotiations continued in respect of the proposed Mechanical Biological Treatment (MBT) facility at Northacre Trading Estate, Westbury, and alternative outlets have been secured for the fuel produced by the plant since the original plans were affected by the closure of Westbury Cement Works.

The new Warminster Household Recycling Centre (HRC) opened at Furnax Lane in September and has been generally well received by users. Work is underway on the new Marlborough HRC, which is expected to open in September 2010.

Hills Waste Solutions achieved ISO14001:2004 certification in the year and is working towards OHSAS18001 and ISO9001 in the coming year, further demonstrating Hills' commitment to providing a professional waste management service for the residents and businesses of Wiltshire.

Introduction

This 8th annual service review produced by Hills relates to the contract year April 2009 to March 2010. It reviews the waste management and recycling service provided by the company to Wiltshire Council and highlights particular successes and challenges during the year.

Recycling rate

The recycling rate for the year is 45.37% which equates to a diversion of 111,137 tonnes of municipal waste from landfill (a 3% reduction on 2008/09 performance).

The reduced recycling rate is a reflection on the continued national economic situation the industry has found itself in. The amount of waste in Wiltshire sent to landfill in 2009/10 was less than the total landfilled in 2002 and it is encouraging that residents of Wiltshire continue to manage their waste minimisation as a lifestyle choice. A breakdown of statistical data can be found on pages 4–6.

Landfill diversion

Hills will be working closely with Wiltshire Council to reduce the reliance on landfill by including alternative waste technology and improving the recycling and diversion rates required for 2011 and beyond.

The Lakeside EfW contract commenced on 22 June 2009. Over the first few months the plant experienced a number of engineering problems which resulted in the waste input being reduced against that originally scheduled, further comments can be found on pages 8–9.

The Mechanical Biological Treatment project at the Northacre Trading Estate in Westbury (which will process Wiltshire's residual waste) has moved a step closer, with final contractual agreement likely to be reached in Autumn 2010. It is anticipated that site works will begin in the latter part of 2010 ahead of a projected 2012 operational date.

Analysis of recycle

The 111,137 tonnes of recycle processed during 2009/10 fell by 3% compared to the previous year's collected material. Notable reductions were:

- dry recycle such as paper (-25%)
- textiles (-53%)
- cans (-43%)
- green waste (-3%) (attributed to the wet winter)

Despite the overall reduction in the recycling rate, some recycle materials continued to show an increase in volumes processed:

- cardboard (+16%)
- plastics (+16%)
- glass (+24%)
- WEEE small domestic appliances (+12%)

Household Recycling Centres (HRCs)

2009/10 landfill diversion was down by 6.9% to 51,060 tonnes. This reflects the downward trend of waste received from residents.

Notable recycling streams that contributed to the overall performance at HRCs were:

- plasterboard (a legislation change in April 2009 required plasterboard to be diverted from landfill)
- domestic batteries (a legislation change in January 2010 required batteries to be diverted from landfill)
- food and drink cartons (+63%)



Kerbside black box service

Replacement collection vehicles were delivered into service in January 2010 in the new Council white livery. The vehicles are equipped with camera recording systems which provide improved vision to the driver enhancing the safety of the crew.

All LGV drivers undertook SAFED training, (Safe And Fuel Efficient Driving) to improve their driving skills. This has enabled Hills to reduce the carbon footprint of its transport operations.

An impressive 3,670 tonnes of co-mingled plastic bottles and cardboard collected at the kerbside were received at Thorny Down Transfer Station for reprocessing at Southampton.

Mini Recycling Sites (MRS)

The overall performance at these sites saw a 6.3% increase in tonnage collected compared to 2008/09.

The plastic bottle and cardboard MRS collections from the west and north areas proved popular with residents. A total of 1,259 tonnes of cardboard and 596 tonnes of plastic bottles were received at these sites.

Performance data

Numbers that add up to a quality service and overall performance for the year (to 31st March 2010)

2009/10 Non-Landfill Achievements

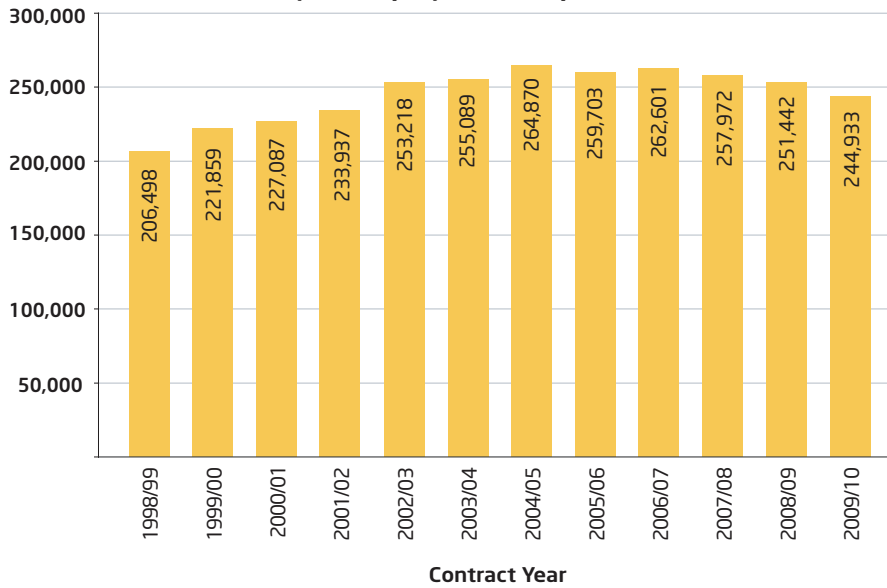
Recycling Initiative	North Tonnes	East Tonnes	South Tonnes	West Tonnes	Wiltshire Tonnes
District Bring Sites Scheme	2,237	1,597	1,268	2,216	7,319
Kerbside Mixed Plastic/Card	0	0	3,670	0	3,670
Multi-Material Kerbside	6,032	5,365	6,517	6,359	24,272
Kerbside Green Waste	3,209	3,942	2,075	10,119	19,344
Bulky Collections	175	212	124	0	511
Street Sweepings	1,754	1,542	1,407	1,455	6,158
DC Depot Tyres	0	0	4	0	4
Everleigh HRC	0	2,412	0	0	2,412
Devizes HRC	0	4,509	0	0	4,509
Stanton HRC	6,418	0	0	0	6,418
Purton HRC	4,984	0	0	0	4,984
Honeyball HRC	3,361	0	0	0	3,361
Melksham HRC	0	0	0	4,874	4,874
Warminster HRC	0	0	0	5,409	5,409
Trowbridge HRC	0	0	0	6,780	6,780
Salisbury HRC	0	0	7,712	0	7,712
Amesbury HRC	0	0	4,600	0	4,600
Household Clinical Waste (KDC)	0	7	0	0	7
Green Waste Rejects	0	0	0	0	-686
MRF Rejects	0	0	0	0	-522
Non-Landfill Achieved	28,170	19,585	27,378	37,212	111,137

2009/10 Non-Landfill by Material

	Wiltshire Tonnes	Year 08/09	Variance
Paper	17,928	22,457	-25%
Yellow Pages ¹	3	37	-1101%
Cardboard	7,481	6,312	16%
Glass	11,909	9,053	24%
Cans	2,099	3,007	-43%
Plastic Bottles	1,684	1,416	16%
Food and Drink Cartons	38	14	63%
Rigid Plastic	2	739	-43888%
Scrap Metals	3,073	3,038	1%
Garden Waste	31,200	32,098	-3%
Timber/Chipboard/MDF	8,036	8,394	-4%
Rubble	12,139	12,810	-6%
Soil	3,271	3,240	1%
Gully Sweeping	6,158	5,027	18%
Car Batteries	187	187	0%
Oil	65	61	6%
Textiles	992	1,515	-53%
Carpet	814	636	22%
Furniture	41	43	-4%
Tyres	206	182	12%
Gas Bottles	51	56	-10%
WEEE (A) - Large Household Appliances	1,395	1,448	-4%
WEEE (B) - Fridges/Freezers	832	1,144	-38%
WEEE (C) - TVs/PC Monitors	1,283	1,184	8%
WEEE (D) - Gas Discharge Lamps	6	6	-2%
WEEE (E) - Small Domestic Appliances	979	862	12%
Household Clinical Waste (KDC)	7	4	45%
Green Waste Rejects	-686	-171	-75%
Residual Tonnage ex MRF	-522	-484	-7%
Total	111,137	114,315	-3%

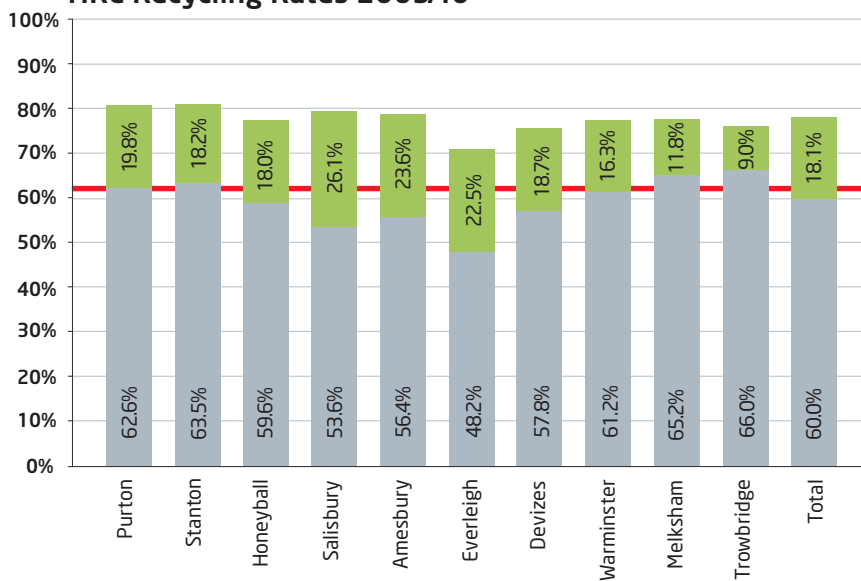
1. Now included in kerbside collected paper.

Total Contract (Municipal) Waste up to 2009/10



Note: Municipal Waste includes all household waste, commercial waste collected as part of the household round, rubble, soil, parks and highways.

HRC Recycling Rates 2009/10



■ % Composted (contract)
 ■ % Recycled (contract)

Performance data (continued)



Performance overview

Developments in 2009/10

ISO 14001:2004

Hills has achieved independent certification for its Environmental Management System (EMS) to the international standard ISO 14001:2004.

The standard applies across all activities and operations of the company, including waste minimisation, recycling, treatment, transport and collection, transfer, and landfill with energy recovery.

Management procedures and key performance indicators have been put in place to ensure that activities which affect the environment are managed effectively to prevent pollution, comply with legislation and improve performance.



Terry March (right) president of the Chartered Institution of Wastes Management congratulates Hills on achieving ISO 14001:2004 certification

Carbon footprint

Hills is committed to reducing its carbon footprint and has commissioned an independent energy efficiency review of its operations to Carbon Trust specification. The results of this review will be available by end of June 2010.

Hills will assess the report and look to implement viable efficiency gains. The first step was to collect data to calculate the company's carbon footprint. Hills aim to produce a carbon footprint calculation for 2008/09 and 2009/10 following which targets will be set for 2010/11.



Landfill gas management

Hills in partnership with Novera Energy generates electricity by burning landfill gas in specially built engines, which is then exported to the National Grid.

The combustion of methane in the engines and flares produces carbon dioxide. This conversion of methane to carbon dioxide significantly reduces the carbon footprint of Hills because each molecule of methane has 21 times the global warming potential of a carbon dioxide molecule.

A fifth engine (1MW) was installed at Chapel Farm in November 2009 and gas utilisation is under review at Lower Compton with a view to the installation of a third engine.

Landfill Site	Amount of electricity generated (net) by the engines (MW)	Amount of electricity generated (net) by the engines (MWh)	Potential number of homes supplied
Chapel Farm	3.9	34,582	7,685
Lower Compton	2.0	17,461	3,880
Total	5.9	52,043	11,565

Data supplied by Novera Energy. Conversion factor sourced from the Renewable Energy Association. On average one house in the UK consumes 4.5 MWh of electricity a year

Compliance with permit conditions

Environment Agency audit inspections were carried out at all permitted facilities. Where a non-compliance is identified a standardised score is given, ranging from C1 (very serious) to C4 (technical breach with no effect). Hills performance for the period 1 April 2008 – 31 March 2010 is summarised below, based on Environment Agency data.

01/01/2008 - 31/12/2008	C 1	C 2	C 3	C 4	Total
Number of breaches	0	0	28	9	37
01/01/2009 - 31/12/2009	C 1	C 2	C 3	C 4	Total
Number of breaches	0	0	13	8	21

Performance overview (continued)

An Enforcement Notice was issued by the Environment Agency to achieve disputed improvements to fencing at Everleigh, which Hills complied with by erecting a new site fence.

Based on the Environment Agency assessment, Hills' environmental performance has improved significantly in 2009 with a score almost half that in 2008.

No prosecutions were taken against Hills in the period 2009/10.



The visitor centre at Lakeside

Lakeside Energy from Waste (EfW)

Hills' contract with Lakeside EfW commenced on 22 June 2009 to deliver 50,000 tonnes of household waste a year. During the start-up period a few engineering issues caused the plant to shut down over lengthy periods with one of the causes being the receipt of non-compliant waste from many different locations. An audit carried out by the plant management confirmed that waste from Wiltshire was compliant as it undergoes rigorous pre-inspection processes to remove waste that is unsuitable for processing at Lakeside. Regular meetings between the Council and Hills ensure that the required standard of waste material fit for incineration is maintained.



Mike Hill, CEO of Hills inspects the furnace at Lakeside

The £180 million EfW plant can incinerate in excess of 400,000 tonnes of household waste per annum, generating 38 mega watts of electricity for distribution via the National Grid. Lorries deliver waste through one of the eight bays within the tipping hall into a 20 metre deep bunker. The waste is then mixed using electric overhead cranes to ensure an even burn in the furnace, which has a 5,000 tonne capacity. The mixed waste is fed into a hopper which travels down a chute into the furnace. Inside the furnace, a series of grate bars move the waste along where it is dried and incinerated using a combustion air fan. The bottom ash generated by the incineration process is used as an aggregate.

Hills' staff and Wiltshire Council officers have toured the facility to gain an insight into what happens to the waste delivered from Wiltshire.

New Warminster HRC

The new HRC in Warminster was officially opened on 29 September 2009 by Wiltshire Council's portfolio holder for waste Councillor Linda Conley. The facility replaced the previous civic amenity site which had been identified as being on contaminated land formerly used by gas works.

The HRC has additional facilities compared to that of the old site which mirror existing HRCs managed by Hills for Wiltshire Council. Warminster HRC is expected to handle around 7,000 to 8,000 tonnes of material a year of which at least 75% will be recycled.

Users of the site raised complaints with regards to the new layout and adjustments to the traffic flow system have resolved this issue.

Other complaints were centred around not being able to dispose of green waste onto the concrete pad, however permit restrictions no longer allow this practice and with time the public have become used to using the green waste compactor.

Members of the public now express satisfaction with the improvements and the number of users continues to increase.



Councillor Linda Conley with the cut ribbon at the opening of the Warminster HRC pictured with staff from both Wiltshire Council and Hills

Challenges and Issues

Additional sites

Planning permission was granted for the construction of an HRC in Marlborough within the Salisbury Road Business Park. Construction commenced in June 2010 and it is planned for the site to open for business in September 2010.

Approval for the waste contract between Hills and Wiltshire Council, which will see the construction of a Mechanical Biological Treatment plant in Northacre Trading Estate, Westbury, was granted by Cabinet in March 2010. The MBT will treat 60,000 tonnes of Wiltshire's residual waste.

In addition to the MBT, the proposal includes an HRC for the Westbury area. The MBT plant is a key element in the overall strategy for waste in Wiltshire and will bring the county close to diverting at least 85% of waste from landfill.

MBT is a process that is relatively new to the UK but is already widely used across Europe where it works successfully to complement recycling. It employs natural microbes within the waste to accelerate the decomposition process. The whole process takes up to 14 days and is carried out in a sealed building with a filtration system to control odours. As the material dries, it loses over 30 per cent of its original weight.

Once dried, it is further processed to remove metals for recycling. It is from the remaining material that a solid recovered fuel, often referred to as SRF, is manufactured to a tight specification. The final fuel is a dry and sanitised material that can be safely handled.

Following the closure of Lafarge Cement in Westbury, Hills will send the 20,000 tonnes of SRF produced each year to Germany under a five-year contract.



An example of dry, sanitised solid recovered fuel (SRF)

Fire incident at Lower Compton landfill site

On 13 February 2010 on-site staff from Hills discovered a fire on a small section of the landfill and instigated the site emergency plan. Wiltshire Fire & Rescue Service attended the site where a 100m² section of HDPE¹ membrane covering an area of cell 16 had ignited.

Following investigations it is likely that the cause of the fire was oxygen ingress to active gas management in the area, despite the very low extraction in the area at that time. This was sufficient to draw in air through areas in the HDPE membrane as well as through the end of the liner, the location of the ignition point. There was evidence that the flank was not adequately compacted and this practice now forms part of the improvement programme for the capping process in future.

No injuries from the fire were reported and no environmental impact was found. The landfill site was closed to operations for half a day. In addition to keeping Wiltshire Council informed Hills also provided regular communication updates to the local liaison committee members.

Odour improvements for compost

A new Air Spectrum system was installed to control odours from the compost operation at Lower Compton. This replacement equipment uses less water than the previous system and further improvements will ensure that the nozzles do not freeze in extreme weather conditions. Refurbished odour fans are being installed on the southern perimeter to reduce odours when there is a change of wind direction.

Progress on wood operation

The wood recycling operation has seen reduced tonnages probably as a result of the economic situation affecting manufacturing and building projects. 9,893 tonnes of waste wood was sent to Germany for biofuel. This tonnage included external commercial input to the operation. A further 1,581 tonnes of clean wood was processed for the panel board and animal bedding industries and a small proportion of clean wood was sold for mulch through HRC sites. The remainder of the material, approximately 2,757 tonnes was used as an engineering layer on the landfill site prior to capping.

Rigid plastic reprocessing

Further to the media coverage last year of the investigation into plastics sent for reprocessing and returned from Sao Paolo in Brazil, Hills and Wiltshire Council have been assisting the Environment Agency in the gathering of evidence on Worldwide Biorecyclables, the waste processor responsible for the shipments and that ceased to trade early last year.

During a trial period 7,000 tonnes of rigid plastic collected at HRCs, and a small amount of commercial plastic, were sold to Worldwide Biorecyclables for further sorting, compacting and bulk baling. Hills provided Worldwide Biorecyclables with bins for the disposal and return of any material which was not suitable for recycling.

1. HDPE membrane is an engineering plastic well-suited to the construction of landfill cells.

Community spirit



Adverse weather

Staff from Lower Compton provided assistance during the heavy winter snow and helped clear pathways for local residents and comprehensive schools in the surrounding area.

These staff would normally be collecting recycling but operations across the county were suspended due to the adverse weather conditions. Discussions have taken place with Wiltshire Council to put in place an effective emergency programme to improve liaison and assistance at times when adverse weather causes countywide disruption in the future.

Sponsored sites

Hills has continued the Sponsored Sites Scheme for charity/ community groups in the west area. Sites that collect more than five tonnes of recycle per annum are paid £10 per tonne in exchange for accommodating the recycling bins and providing a tidying service. The fund paid out £3,860 (2009/10).

School paper scheme and education

The purpose of the scheme is to support and inspire young people to reduce waste at school, at home and in the community, and demonstrate the links between actions in these three areas.

Hills, via the Landfill Community Fund, continue to support the Wiltshire Wildlife Trust's (WWT) work on waste education within schools. Hills provide and collect paper recycling bins at all participating schools. In 2009/10, the 326 tonnes of paper collected earned the schools £3,260 (£10 per tonne). The paper is taken to the Material Recycling Facility (MRF) in Lower Compton for bulking up and transportation to a reprocessor for recycling into newspaper.

Hills, in partnership with WWT, host a number of school visits to the MRF as part of the Schools Recycling Scheme. Similar tours are also provided for local community groups to help raise awareness on ways to manage waste.

Charity/group collections

There are five charitable groups in the west area that receive payments at £10 per tonne for paper and textiles collected. In 2009/10 the payments to these organisations were as follows:

- **Salvation Army - £519**
- **British Heart Foundation - £472**
- **SCOPE - £135**
- **Southwick and North Bradley Scouts - £893**
- **Save the Children - £1,072**

Health and safety

Made simple

In order to promote a more unified approach to health and safety management with responsibilities cascading throughout the organisation, an independent specialist was commissioned to develop a new Health and Safety Management System (HSMS) for Hills.

The new HSMS enables Hills Waste Solutions to systematically identify hazards and control risk using a significantly less bureaucratic approach. Legal jargon has been replaced with an emphasis on explaining how the company meets its obligations to protect the health and safety of employees and others affected by Hills' activities.

The tailored HSMS reflects the varying requirements of the industry in which Hills operates.

An educational process associated with the implementation and ongoing development of the system has been put in place with all employees undergoing risk assessment training at various levels of NVQ's in Health, Safety and Environment.

Ultimately, Hills aims to maintain a high standard of health and safety with an incident free workplace for all. Work has begun on a programme to achieve OHSAS 18001 certification for Hills Waste Solutions.



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