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# Report on the Landfill Allowances and Trading Scheme (LATS) 2005/6

November 2006

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November 2006

## Contents

# Executive summary

This report covers the first year of the Landfill Allowances and Trading Scheme (LATS) in England. It summarises local authority compliance with the scheme, provides a regional resumé of the current position and looks at future pressures.

## Compliance headlines

All 121 Waste Disposal and Unitary Authorities in England achieved their 2004/5 allowance obligations by trading, borrowing and diverting BMW from landfill.

In 2005/6, the total amount of BMW that could be sent to landfill in England was 15,196,000 tonnes. The calculated amount landfilled was 12,386,666 tonnes, i.e. Waste Disposal and Unitary Authorities in England landfilled 18.5 per cent less BMW than they were allocated. This continues the downward trend in the quantity of BMW sent to landfill in England.

Ten local authorities traded or borrowed additional allowances in order to achieve their allowance allocations. Collectively they landfilled 36,796 tonnes more than their combined allocation. This demonstrates the flexibility the trading element of LATS provides in enabling the desired national outcome to be achieved. Nine out of 81 Unitary Authorities had a deficit of allowances in 2005/6 and had to buy or borrow additional allowances to meet their allocations. One out of 40 Waste Disposal Authorities had a deficit of allowances and needed to trade to meet its allocation for 2005/6.

Surrey County Council, Kent County Council, North London Waste Authority and Merseyside Waste Disposal Authority had the least headroom in achieving their allocations in 2005/6. These are four of the top 20 biggest[1] Waste Disposal Authorities in England and were within 3.4–5.4 per cent of having an allowance deficit.

Over the next 20 years, the allocations will get progressively harder to achieve and local authorities will trade and/or step up the diversion of BMW from landfill.

## Regional resumé

There were significant regional variations in 2005/6.

Three of the ten local authorities with a deficit of allowances were in the West Midlands, although this region had the largest surplus allowances, 23.4 per cent within its allowances for 2005/6. The South West region had the lowest surplus allowances, being only 12.2 per cent on average within its allowances for 2005/6.

All local authorities in the East Midlands, East of England, South West, and Yorkshire & Humber regions met their allowance allocations for 2005/6.

Four of the 12 local authorities in the North East region had a deficit of allowances for 2005/6. The total deficit was 8,957 tonnes and additional allowances were bought or borrowed to cover this shortfall.

[1] Biggest municipal waste producing authorities

Hampshire County Council (South East region) had the greatest individual surplus of allowances in 2005/6. It used only 94,361 tonnes of its allocation of 361,997 tonnes, leaving a surplus of 267,636 tonnes. This surplus was sold to other authorities. Hampshire used only 26 per cent of its allowance allocation for 2005/6 and, based on this performance, is likely to have surplus of allowances in the first Landfill Directive target year (2009/10).

East Sussex County Council (South East region) had the greatest single deficit of allowances (16,904 tonnes) and landfilled 113.9 per cent of their 2005/6 allowance allocation.

## Future pressures

Only 11,200,000 tonnes can be sent to landfill in England in the first Landfill Directive target year. Assuming the amount of BMW landfilled stays constant, the amount of BMW going to landfill will have to fall by 1,186,666 tonnes to achieve this target.

Indications are that Waste Disposal Authorities in the West Midlands region will have sufficient allowances. However, Waste Disposal Authorities in the South West, North West and London regions will need to divert more BMW from landfill and/or purchase allowances in order to meet their obligations.

# List of acronyms

| | |
|---|---|
| **BC** | Borough Council |
| **BMW** | biodegradable municipal waste |
| **CIWM** | Chartered Institute of Wastes Management |
| **Defra** | Department for Environment, Food and Rural Affairs |
| **ESI** | Environmental Statistics and Indicators Division [Defra] |
| **FAQ** | Frequently asked questions |
| **LATS** | Landfill Allowances and Trading Scheme |
| **LB** | London Borough |
| **MBC** | Metropolitan Borough Council |
| **MBT** | mechanical–biological treatment |
| **MRF** | material reclamation facility |
| **MSW** | Municipal Solid Waste |
| **UA** | Unitary Authority |
| **WCA** | Waste Collection Authority |
| **WDA** | Waste Disposal Authority |
| **WDF** | WasteDataFlow |

# 1. Introducing LATS

The LATS operates in England. Allowances and trading link together in LATS to achieve a common goal of diverting BMW collected by local authorities from landfill. Waste can be diverted via reuse, recycling, composting and recovery.

LATS is the way in which England aims to achieve the diversion targets in Article 5.2 of the Landfill Directive:

- by 2010 to reduce the amount of BMW going to landfill to 75 per cent of that produced in 1995;
- by 2013 to 50 per cent of the 1995 figure;
- by 2020 to 35 per cent of the 1995 figure.

2005/6 is the first year of LATS. There is only another three more years before the first Landfill Directive target year in 2009/10.

In the UK, trading is unique to England and allows local authorities the flexibility to achieve their allowance allocations by borrowing, buying, selling or banking allowances. The Department for Environment, Food and Rural Affairs (Defra) has allocated allowances to each authority for every year of the scheme from 2005/6 until 2019/20. One allowance represents one tonne of BMW that can be landfilled.

# Part 1 – Compliance

# 2. Reporting

## 2.1 Local authorities

Local authorities in England (see Table 1) are required to report data on municipal waste each quarter. WasteDataFlow (WDF) was launched in April 2004 and is used by all 394 local authorities to report municipal waste data. WDF is a web-based system (http://www.wastedataflow.org) initially developed by the Chartered Institution of Wastes Management (CIWM). It is now owned and operated by Defra and the devolved administrations.

**Table 1 Different types of local authorities in England**

| Type | Acronym | Function | Number |
|---|---|---|---|
| Waste Disposal Authorities | WDAs | County Councils | 40 |
| Waste Collection Authorities | WCAs | Grouping underneath the WDAs – the District Councils | 273 |
| Unitary Authorities | Uas | Take the role of both the WDAs and WCAs | 81 |
| **Total** | | | **394** |

The WDAs (or UAs) have a legal responsibility to landfill no more BMW than they have allowances for in each year. In two-tier areas, the WDAs can report data on behalf of their WCAs, though the majority chose not to do so, relying on their constituent WCAs to report.

Reporting deadlines for local authorities (see Table 2) are set out in the Landfill Allowances and Trading Scheme (England) Regulations 2004 (LATS Regulations). Defra twice extended the quarter 1 reporting deadline for 2005/6 because of the introduction of new statutory guidance in September 2005 and poor initial reporting rates. The revised deadline was 31 December 2005. Figure 1 shows that reporting rates improved steadily throughout the year; by quarter 4, over 90 per cent of authorities had reported by the deadline of 30 June.

**Table 2 LATS reporting deadlines**

| Quarter | Period | Reporting deadlines |
|---|---|---|
| 1 | Data from 1 April – 30 June | 30 September |
| 2 | Data from 1 July – 30 September | 31 December |
| 3 | Data from 1 October – 31 December | 31 March |
| 4 | Data from 1 January – 31 March | 30 June |

**Key fact 1**

All 394 local authorities in England reported data in WDF for all four quarters of 2005/6. That's a total of 1,576 returns.

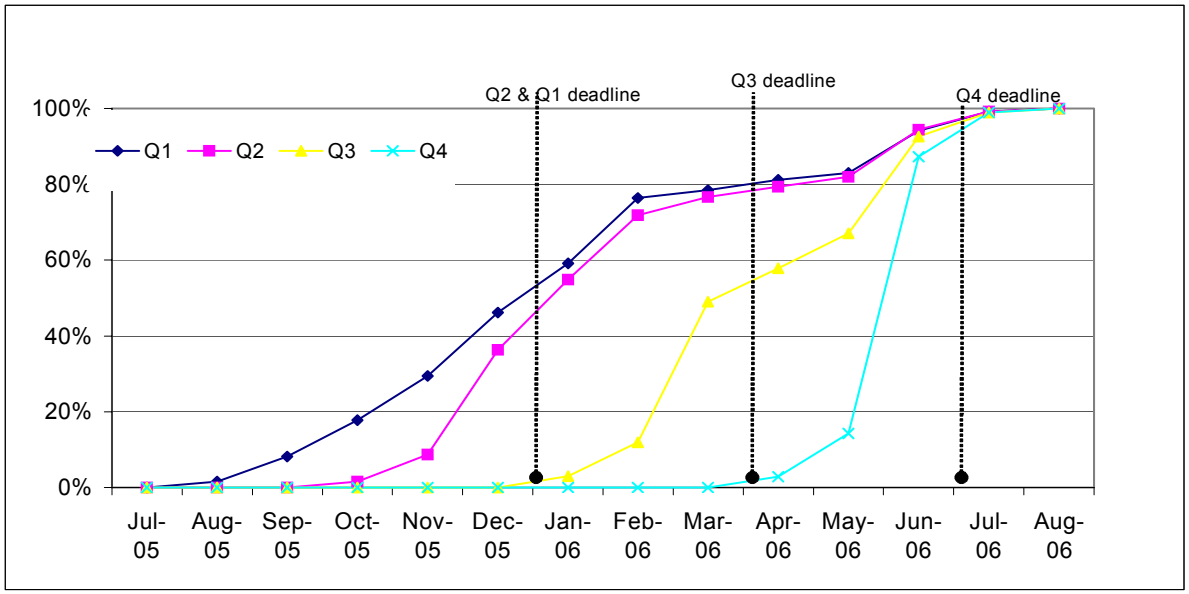


**Figure 1 Reporting profile of authorities reporting data to WasteDataFlow, 2005/6**
Reproduced with permission of Defra's Environmental Statistics and Indicators (ESI) Division

Senior managers within each local authority check and authorise data as part of their internal quality control processes. Data pass to Enviros Consulting Ltd, which works in partnership with the local authority to get the data through stage one of the auditing process (see Section 3 and Annex 1). It is vital that local authorities report promptly so that the two stages of the audit can be completed on time.

Prompt reporting by WDAs was generally good throughout the year. WCAs and UAs showed the greatest variability in promptness. Quarters 3 and 4 showed improvement in prompt reporting as local authorities became more familiar with WDF and the information required. Figure 2 shows the number of local authorities reporting promptly during each quarter of 2005/6.

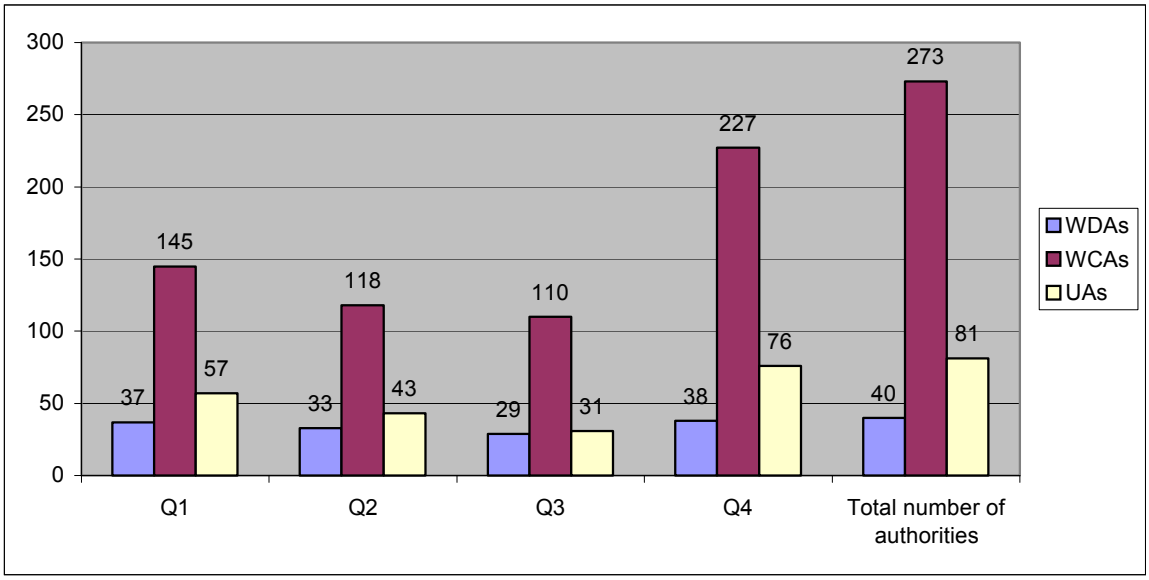


**Figure 2 Number of authorities reporting promptly in 2005/6**

**Key fact 2**

A comparison of prompt reporting by all 394 local authorities in England in 2005/6 showed that the best was Congleton Borough Council, a WCA in Cheshire.

Annex 2 gives more headlines for data reporting.

## 2.2 Landfill operators

Landfill operators are required to report each year the amount of municipal waste received by their sites. In 2005/6, 334 landfills in England received municipal waste. These sites are operated by 111 different waste companies.

Landfill operators reported that a total of 5,249,740 tonnes of municipal waste was landfilled by local authorities. Whilst this data is used as part of our validation process figures reported by the landfill operators for the amount of municipal waste landfilled cannot be directly compared with the figures calculated for the total BMW landfilled by local authorities for a number of reasons:

- Accurate reporting by landfill operators is limited to waste taken to landfill directly by a local authority or its contractor. It is almost impossible for landfill operators to report the exact origin of waste that arrives via one or several intermediate stages.
- To calculate the amount of BMW sent to landfill, you need to know the biodegradable percentage of each fraction of waste. In 2005/6, landfill operators used 31 different codes (from the European Waste Catalogue) for the reporting of municipal waste; none of these codes has been given a biodegradable percentage.
- Private contractors may take municipal waste to landfill in the same collection vehicles which they use to collect non-municipal waste. Accurate apportionment at the landfill is difficult.

Annual reporting by landfill operators of municipal waste sent to their sites is useful to gain a better understanding of waste movements, types and quantities. Within the next couple of years, we intend to develop a web-based system to collect this type of information directly from operators. This will form part of a general review of waste data capture in the Environment Agency.

# 3. Auditing

## 3.1 Stage one (Enviros)

The audit process begins once data from a local authority is accepted in WDF.

Stage one is independent auditing by Enviros Consulting Ltd on behalf of the Environment Agency. This step is vital for maintaining consistency across all 394 authorities in England. During this process, errors are resolved before the data are made available to the Environment Agency.

In two-tier areas, it is essential that WCAs participate actively in this stage of the process. Without audited WCA data, the mass balance calculation for their corresponding WDA cannot be performed.

This stage of the audit process should take no more than a month, but it is dependent on a combined effort. The data may go through up to seven iterations during this time.

Figure 3 shows the number of authorities that reported on time and then passed through stage one of the audit within a month. The picture was particularly poor in quarters 2 and 3, with only a small fraction of the total number of authorities completing this process on time.

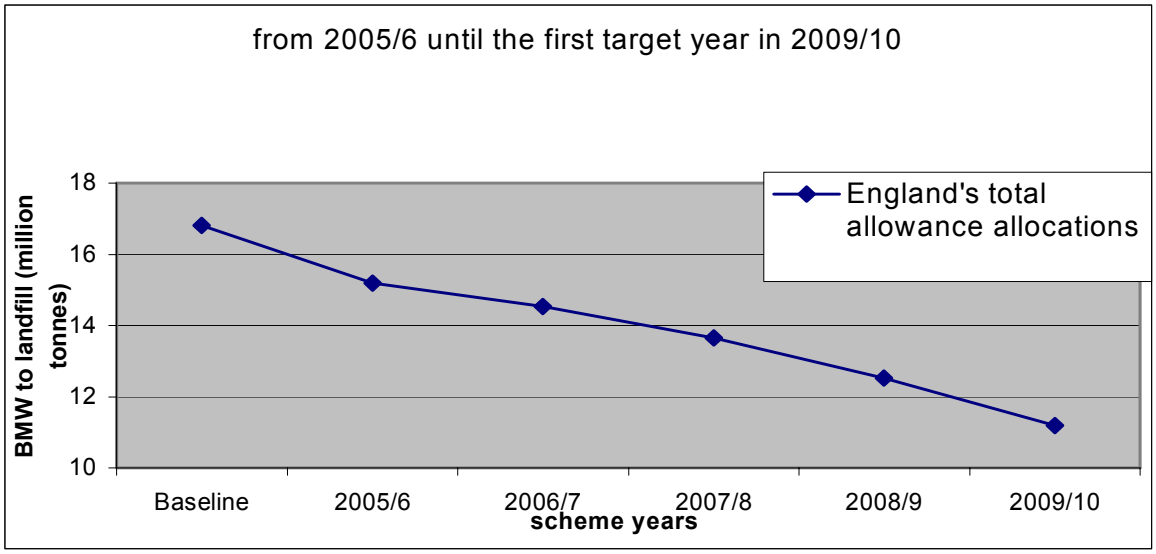


**Figure 3 Number of authorities making prompt and accurate reporting in 2005/6**

A number of factors slowed down stage one of the audit including:

- lack of familiarity by local authorities and the validator (Enviros) with the process;
- variable quality of local authority data;
- lack of understanding of why audited data were needed (e.g. to produce an accurate mass balance calculation);
- length of time taken by Enviros to contact local authorities at the start of this process;
- local authorities not being aware of the one month deadline to get their data to an acceptable quality;

- number of iterations required to complete stage one of the audit process;
- lack of clarity of Enviros' role in this process.

Many of the awareness issues were addressed through a series of regional training events and workshops during 2005/6. Training was aimed at those responsible for data entry and data authorisation. We attended each session to explain both LATS and how a local authority's data would be used to calculate performance. In addition, a series of Frequently Asked Questions (FAQs) and flowcharts were sent to all local authorities to explain in more detail the role of their data in LATS.

Stage one of the audit process checks quantitative data to ensure quality and consistency throughout England. The number of authorities completing this stage on time was variable during 2005/6 (Figure 4). There are a number of reasons for this and we anticipated that this would be the case in the first year of the scheme.

As authorities became more familiar with these checks, the time taken to pass through the stage one audit decreased. There were also delays in authorities being contacted by Enviros and delays in dealing with queries from authorities. During 2005/6, the efficiency of the stage one audit process improved as local authorities worked in partnership with Enviros and, by quarter 4, 93 per cent of the authorities reported promptly and cleared this stage within the target one-month window.

We are keen to improve the effectiveness of this process during 2006/7.

**Key fact 3**

In 2005/6, 100 per cent of quarterly reporting passed stage one of the audit process. That's 1,576 sets of data.

Local authorities worked in partnership with Enviros Consulting Ltd to complete stage one audits for all 1,576 reports.

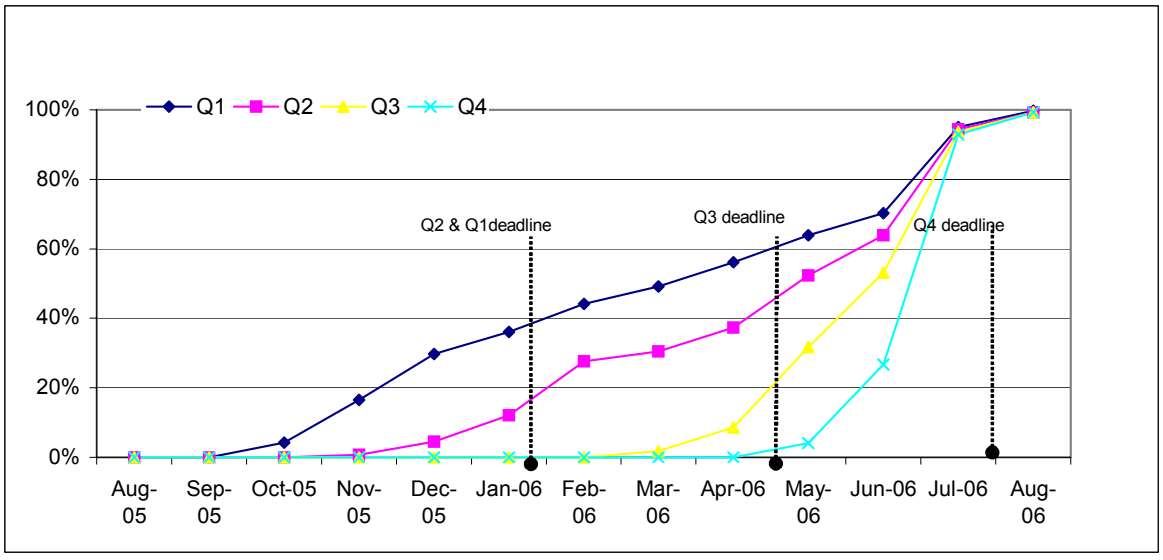


**Figure 4 Number of authorities completing stage one of the audit, 2005/6**
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The times taken to reach stage one of the audit process and then to complete it are monitored. There was a major improvement in these times between quarter 3 and quarter 4 of 2005/6 (Table 3). Quarters 1 and 2 are not included in this table because of extended deadlines and poor reporting rates.

**Table 3 Key timings during stage one of the audit process, 2005/6***

| Parameter | Q3 | Q4 |
|---|---|---|
| Average number of working days from data entry to first contact response by a validator (Enviros) | 19.3 | 6.7 |
| Average number of working days to complete stage one | 41.2 | 17.2 |

*Reproduced with permission of Enviros Consulting Ltd

## 3.2 Stage two (Environment Agency)

Our role in stage two of the audit process is qualitative assessment of the data in WDF, looking mainly at where waste streams are sent for reprocessing and recovery. This allows us to be confident that municipal waste has been recycled legitimately.

Waste being reprocessed within the UK is relatively easy to track. But when it is sent abroad or when it passes through a number of intermediaries, the trail becomes more difficult to follow. Over the coming years, the focus of our audit will be on tracking these routes to make sure waste is being:

- reprocessed and recovered appropriately;
- diverted from landfill.

Part of our audit role involves examining the use of material reclamation facilities (MRFs) to process municipal waste. Most MRFs produce a reject fraction, which goes to landfill. This contains contaminants and wastes that cannot be reprocessed. We need to take into account this reject fraction when calculating the diversion of BMW from landfill.

We are also aware that the reject rates reported by MRFs can vary considerably from 0 to 25 per cent of the total tonnage going through the gate.

Some MRFs receive waste from a number of different local authorities and so we need to ensure consistency in reporting WDF by local authorities using the same facility.

Over the coming years we will:

- work to ensure that the reject rates from MRFs are accurately and consistently reported throughout England;
- audit reject rates from companies receiving materials from MRFs to ensure we support quality recycling programmes;
- discount volumes that are rejected back to landfill against local authorities' allowances.

# 4. Trading

During 2005/6, 339,792 allowances were traded with a total value of £5,704,100. During the year, 31 local authorities traded allowances.

Most trading activity in 2005/6 took place at the start of the year in quarter 1 Trading activity then fell in quarters 2 and 3, before increasing again in quarter 4. The general cost of buying allowances also fell progressively across each of the four quarters of 2005/6. Using all trades from the start of the scheme year (1 April 2005), the average trade price was £16.79 per allowance. Future prices will reflect the market conditions prevailing in any one year.

The ten local authorities that borrowed or bought allowances in order to achieve their 2005/6 allocations collectively had a deficit of 36,796 tonnes. However, this total deficit was only one per cent of the total number of allowances traded in 2005/6.

Some authorities have also used the scheme to trade allowances for future scheme years. In England, allowances can be traded in the Landfill Directive target years, but they cannot be banked or borrowed into or out of target years. The total value of all trades is now approaching £14 million.

Three local authorities borrowed allowances in 2005/6 from their 2006/7 allocations, thus increasing the total allowances by 9,518 tonnes to 15,205,517 tonnes. This means that the total allowance allocation for 2006/7 will be reduced from 14,530,000 tonnes to 14,520,482 tonnes.

**Key fact 4**

In 2005/6, seven local authorities bought extra allowances and three local authorities borrowed in order to meet their allocations.

This demonstrates how the flexibility of England's trading scheme can help achieve allocations.

# 5. Reconciliation process

We have a duty under the LATS Regulations to report performance against an authority's annual allowance allocation. We are responsible for reconciling the allowances available to each local authority with the amount of BMW we calculate it sent to landfill. We calculate the amount of BMW sent to landfill using a mass balance. Annex 3 explains how we make this calculation.

We are obliged to provide an authority with audited data by 31 July (following the end of the scheme year) and a draft LATS reconciliation figure by 31 August.

On 2 October 2006, the final reconciliation figures for 2005/6 were made available by Defra to local authorities on the Electronic Register of Landfill Allowances. Defra has also created a Public LATS Register. Both Registers are available from the Defra website (http://www.defra.gov.uk/environment/waste/localauth/lats/register.htm).

Any authority exceeding its allowance allocation and not having borrowed or bought sufficient additional allowances would be reported to Defra and could face financial penalties

For 2005/6, 99 out of the 121 Waste Disposal and UAs had audited data by the July deadline. These 99 local authorities received their draft reconciliation figures by 31 August 2006. A further 12 authorities completed data after 31 July, but all audits were completed by the middle of August. These 12 authorities received a draft reconciliation figure by 6 September.

The final ten authorities continued completing their data returns (or that of their constituent WCAs) during the end of August and into September. The last complete return for 2005/6 was audited on 11 September 2006, some ten weeks after the scheme year reporting deadline of 30 June. We were unable to provide a draft reconciliation figure to authorities reporting this late and final reconciliation figures only were reported for these last ten authorities on 2 October 2006.

For 2005/6, 108 out of the 121 WDAs and UAs agreed their reconciliation figures. This information was placed on the Public LATS Register (http://lats.defra.gov.uk/Default.aspx?Menu=register&Module=publicRegister/registerMain). Their accounts have been successfully retired.

All surplus allowances from 105 authorities have been banked for use in 2006/7.

A further 12 authorities disagreed with their reconciliation figures. Defra subsequently invited these authorities to submit their case for amending their reconciliations for consideration by Defra and the Environment Agency. Of these 12 authorities, two have been successful in having their data amended and we provided a new mass balance calculation. Ten local authorities have been unsuccessful in their representations and one is still under consideration. These remaining accounts will be retired by the Environment Agency in due course.

# 6. Local authority performance

**Key fact 5**

In 2005/6, BMW allowances allocated amounted to 15,196,000 tonnes.

The calculated amount of BMW sent to landfill was 12,386,666 tonnes.

England was 18.5 per cent within its total allocations for the first year of the scheme.

2005/6 was the first year of LATS, so this is the first time we have measured how local authorities are doing against their annual allowance allocations. The overall aim is to ensure that, by the first Landfill Directive target year in 2009/10, England can meet its share of the UK target. We provide local authorities with quarterly information to help them monitor their own performance against their individual allocations. Authorities then have the opportunity to trade or borrow allowances to meet their annual allowance allocation or to sell their surplus.

Nine out of the 81 UAs had a deficit of allowances in 2005/6 and had to buy or borrow additional allowances to ensure they had sufficient allowances to meet their allocations. Only one out of the 40 WDAs had a deficit of allowances and needed to buy allowances to meet their allocation for 2005/6.

**Key fact 6**

Surrey County Council, Kent County Council, North London WDA and Merseyside WDA were close to having an allowance deficit in 2005/6. These are four of the top 20 biggest[2] WDAs in England. They were within 3.4–5.4 per cent of going over their allowance allocation.

The 20 authorities generating the most municipal waste in England are ranked in Table 4 according to allowance allocation used. The authorities with the smallest percentage have the greatest headroom in terms of meeting their future targets, and those with highest percentages the least headroom for meeting their future targets. All achieved their allowance obligations during 2005/6.

[2] Biggest in terms of amount of municipal waste produced.

**Table 4 Landfilling against allowance of the top 20 biggest WDAs in England***

| Authority | BMW allowance 2005/06 | BMW landfilled 2005/6 | % of allowance allocation used |
|---|---|---|---|
| Hampshire County Council | 361,997 | 94,361 | 26.1 |
| Nottinghamshire County Council | 222,405 | 153,016 | 68.8 |
| Norfolk County Council | 236,145 | 173,324 | 73.4 |
| Greater Manchester Waste Authority | 820,739 | 620,044 | 75.5 |
| Hertfordshire County Council | 290,472 | 226,526 | 78.0 |
| North Yorkshire County Council | 219,053 | 176,306 | 80.5 |
| Lancashire County Council | 371,516 | 300,874 | 81.0 |
| Leeds City Council | 237,062 | 198,721 | 83.8 |
| Western Riverside Waste Authority | 311,126 | 262,096† | 84.2 |
| Derbyshire County Council | 232,504 | 196,306 | 84.4 |
| Devon County Council | 217,183 | 183,387 | 84.4 |
| Cheshire County Council | 233,204 | 198,328 | 85.0 |
| West Sussex County Council | 256,974 | 219,283 | 85.3 |
| West London Waste Authority | 505,370 | 438,417 | 86.8 |
| Essex County Council | 375,877 | 331,638 | 88.2 |
| East London Waste Authority | 299,129 | 270,560 | 90.4 |
| Merseyside Waste Authority | 488,572 | 462,418 | 94.6 |
| North London Waste Authority | 312,933 | 298,373 | 95.3 |
| Kent County Council | 413,785 | 399,140 | 96.5 |
| Surrey County Council | 315,583 | 305,919 | 96.9 |

* Ranked in order of percentage of allowance allocation used.
† This is a provisional figure and subject to change pending the outcome of discussions between the authority, Defra and the Environment Agency.

The four authorities with greatest headroom are:

- Hampshire County Council
- Nottinghamshire County Council
- Norfolk County Council
- Greater Manchester Waste Authority.

The four authorities with the least headroom are:

- Surrey County Council
- Kent County Council
- North London Waste Authority
- Merseyside Waste Authority.

Allocations will get progressively harder to achieve over the next 20 years, requiring more waste to be diverted from landfill and/or the purchase of additional allowances. Rather than drawing a straight line between 2005/6 and the first Landfill Directive target year in 2009/10, there is a 'back-end loaded trajectory'. This means that, next year, the average allocation falls by 15 per cent, then 20 per cent, then 25 per cent and then 30 per cent to achieve the first Landfill Directive target year.

Figure 5 shows the profile of the total amount of BMW that can be landfilled in the next three years. It has a substantial shift downwards between 2007/08 and 2008/09. A number of WDAs indicated during the Government's consultation on LATS that they plan to bring new facilities on stream in 2008.

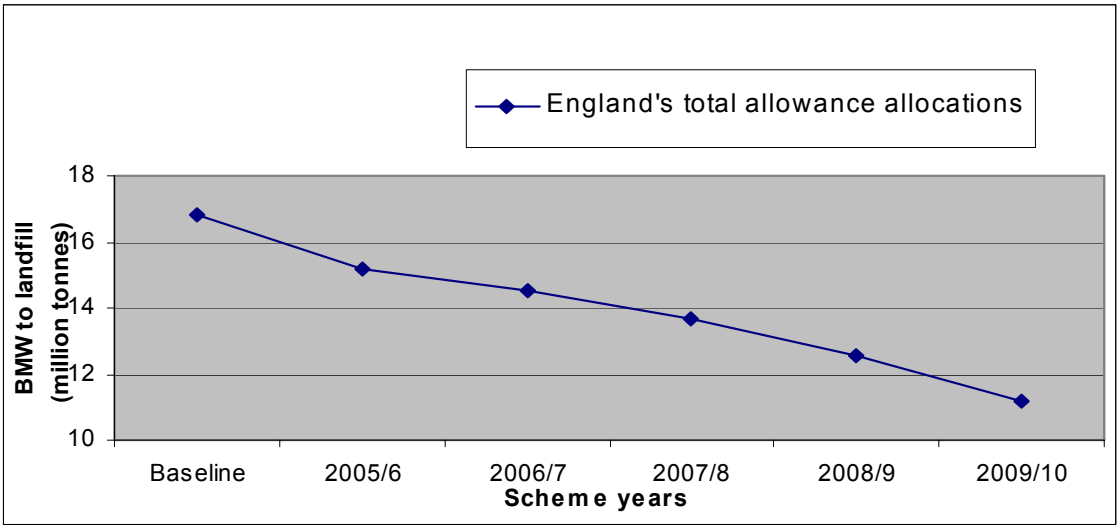


**Figure 5 Total amount of BMW that can be landfilled in England from 2005/6 until the first target year in 2009/10**

In Figure 6, the blue area represents the surplus of allowances for the top 20 biggest WDAs in England in 2005/6. The authority with the greatest actual surplus of allowances was Hampshire County Council – the seventh largest WDA. It used only 94,361 tonnes of its allocation of 361,997 tonnes, leaving a surplus of 267,636 tonnes of allowances which it has sold to other authorities. Hampshire County Council used only 26 per cent of its allowance allocation for 2005/6 and, on this year's performance, is already easily able to meet its allowance allocation of 270,180 tonnes for the first Landfill Directive target year.

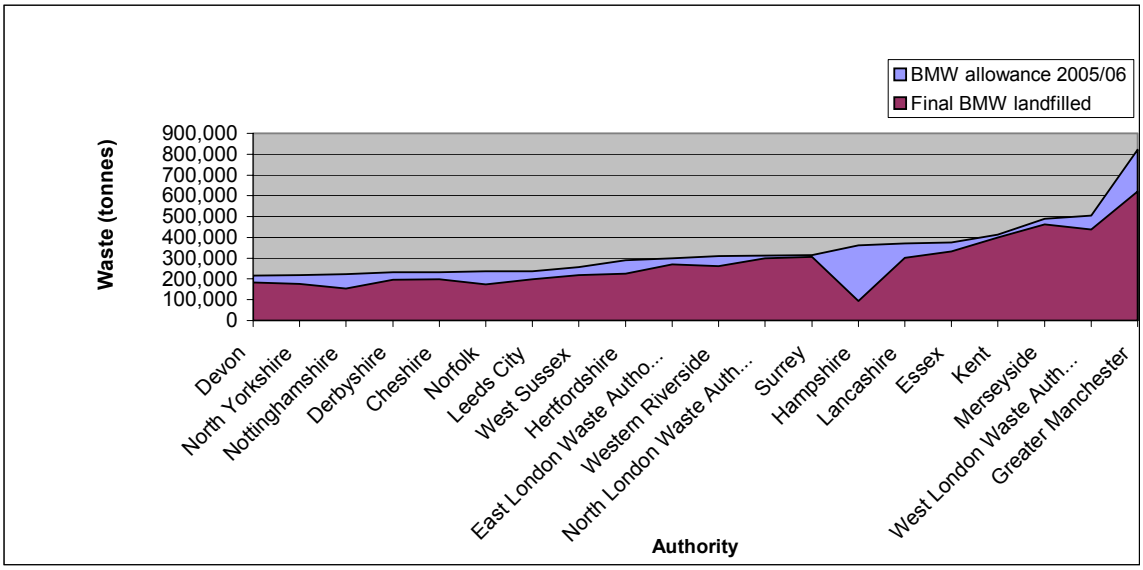


**Figure 6 Allowance allocations used by the 20 biggest WDAs in England**

# Part 2 – Regional resumé and looking forward

## 7. Regional comparisons

The nine regions used in this report are those of the Government Office network.[3] In Figure 7, the blue area represents the surplus of allowances for each region of England in 2005/6. The nine regions are arranged in order of the amount of municipal waste they produce; the North East is the smallest producer and the North West the largest producer. Figure 7 shows considerable variations between regions compared with their allocations for 2005/6.

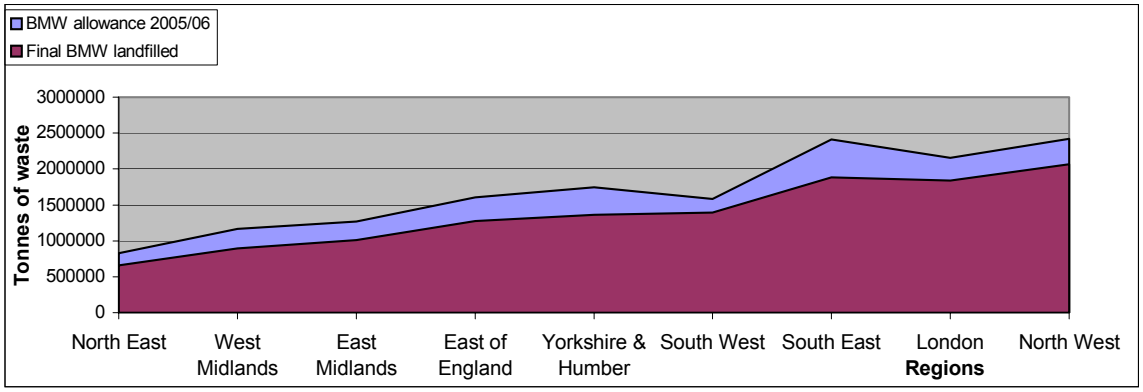


**Figure 7 Regional comparisons against allocations for the first year of LATS (2005/6)**

Figure 8 shows the amount of surplus allowances for each region. The surplus gives an indication of the headroom each region had in achieving allowance allocations for 2005/6. The nine regions are shown from left to right in order of the ease with which they achieved their 2005/6 allocations.

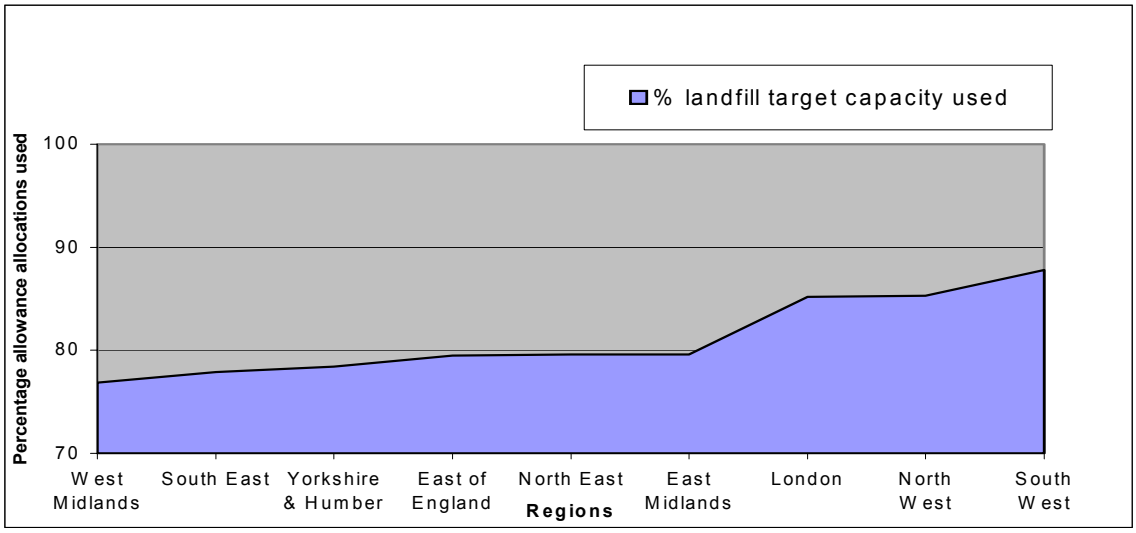


**Figure 8 Regional surplus of allowances, 2005/6**

[3] See http://www.gos.gov.uk/national/

**Key fact 7**

The West Midlands region landfilled within its allocations in the first year of LATS with an average of 76.9 per cent of landfill allowances used. The South West region met its first year allowance allocations with an average of 87.8 per cent of allowances used.

Within each region, it is possible to look more closely at an authority level. Figures 9–17 cover the regions in turn and show the allowance allocation for each authority and the actual BMW sent to landfill in 2005/6. The blue area of the graphs denotes surplus allowances.

There are differences within a region, with some authorities fairing better than their neighbours. On average, the North East and West Midlands have the most number of authorities with a deficit of allowances. All local authorities in the East Midlands, East of England, South West, and Yorkshire & Humber regions are within their allowance allocations for 2005/6.

## 7.1 East Midlands region

The nine local authorities within the East Midlands region (Figure 9) range in the amount of municipal waste produced from Rutland County Council as the smallest to Derbyshire County Council as the largest. The greatest percentage surplus in relation to allowance allocation is for Nottinghamshire County Council, followed by Northamptonshire County Council, Leicester City Council and Leicestershire County Council. Each has a surplus of allowances of greater than 20 per cent.

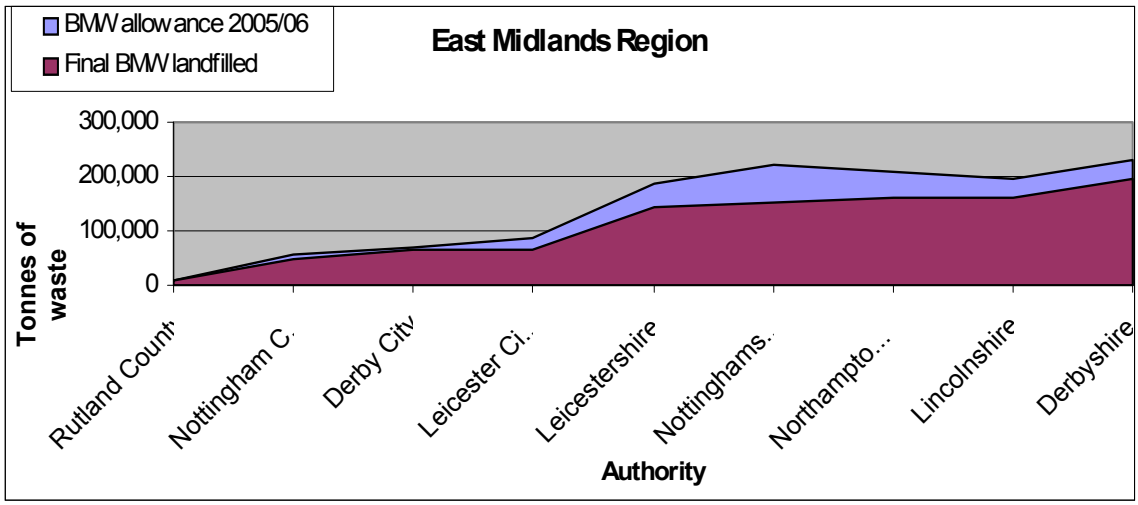


**Figure 9 BMW sent to landfill in the East Midlands region, 2005/6**

## 7.2 East of England region

The 10 local authorities within the East of England region (Figure 10) range in the amount of municipal waste generated from Peterborough City Council as the smallest to Essex County Council as the largest. The greatest percentage surplus in relation to allowance allocation is for Bedfordshire County Council, followed by Norfolk County Council and Suffolk County Council. Each has surplus of allowances of greater than 20 per cent.

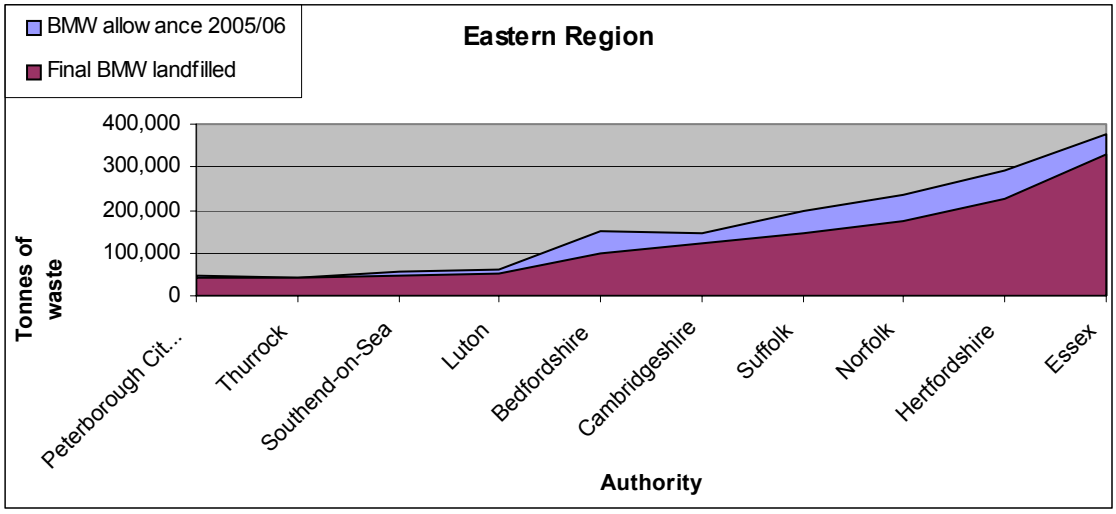


**Figure 10 BMW sent to landfill in the East of England region, 2005/6**

## 7.3 London region

The 16 local authorities within the London region (Figure 11) range in the amount of municipal waste generated from Greenwich London Borough (LB) as the smallest to West London Waste Authority as the largest. The greatest percentage surplus in relation to allowance allocation is for Greenwich LB, followed by Westminster LB, Bromley LB and City of London. Each has a surplus of allowances of greater than 20 per cent. Tower Hamlets LB had a 2.5 per cent deficit in 2005/6 and had to buy additional allowances to achieve its allocation.

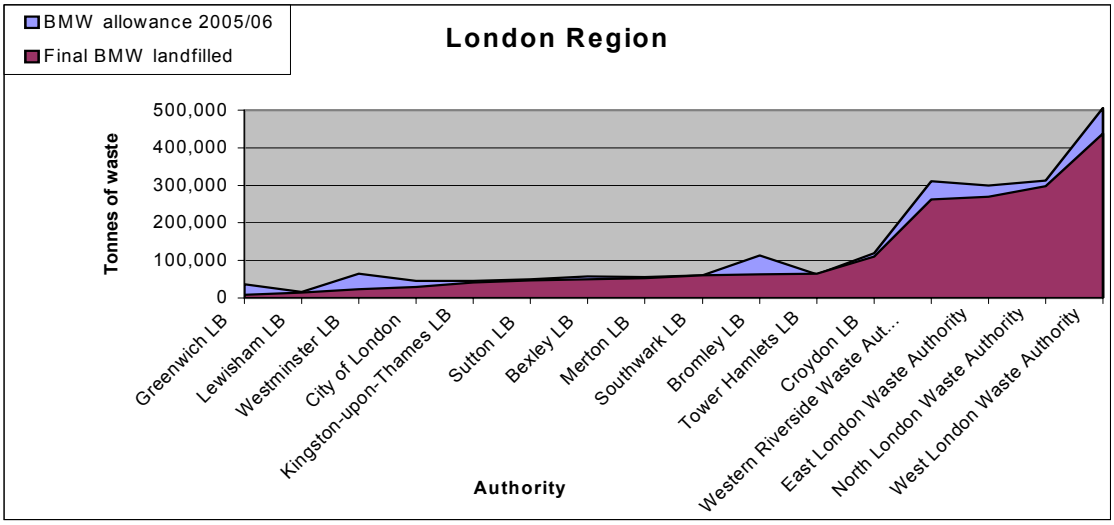


**Figure 11 BMW sent to landfill in the London region, 2005/6**

## 7.4 North East region

The 12 local authorities within the North East region (Figure 12) range in the amount of municipal waste generated from Redcar and Cleveland Borough Council (BC) as the smallest to Durham County Council as the largest. The greatest percentage surplus in relation to allowance allocation is for Redcar and Cleveland BC, followed by Gateshead Metropolitan Borough Council (MBC), Northumberland County Council and Durham County Council. Each has surplus allowances of greater than 20 per cent. Stockton-on-Tees BC had a 1.8 per cent deficit, Middlesbrough Council had a deficit of 71.2 per cent, North Tyneside MBC had a deficit of 2.6 per cent and South Tyneside MBC had a deficit of 2.8 per cent. All four authorities had to buy or borrow additional allowances to achieve their allocation.

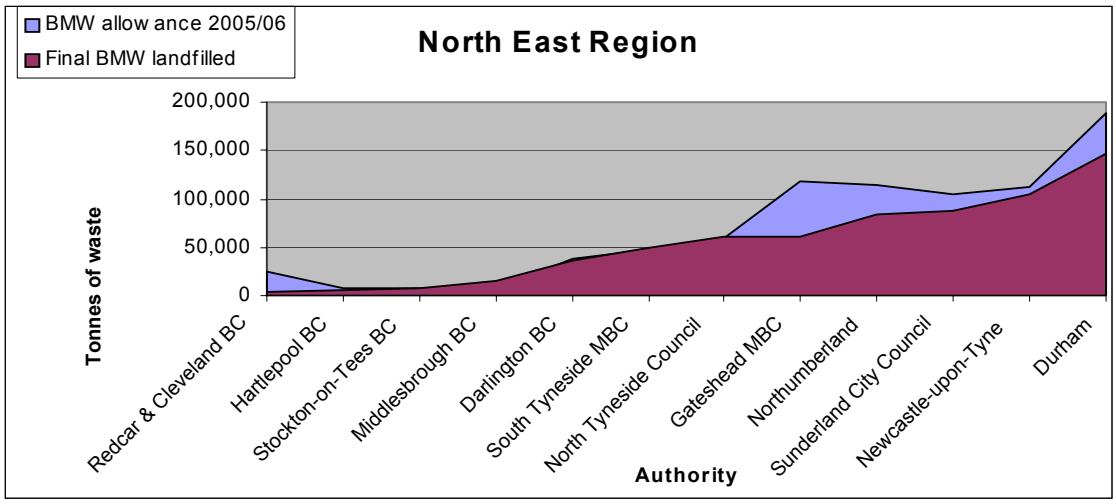


**Figure 12 BMW sent to landfill in the North East region, 2005/6**

## 7.5 North West region

The 10 local authorities within the North West region (Figure 13) range in the amount of municipal waste produced from Halton BC as the smallest to Greater Manchester WDA as the largest. Greater Manchester WDA is also the largest WDA in England. Only Greater Manchester WDA had surplus allowances of greater than 20 per cent. Wigan MBC had a deficit of 3.5 per cent and had to buy additional allowances to achieve its allocation.

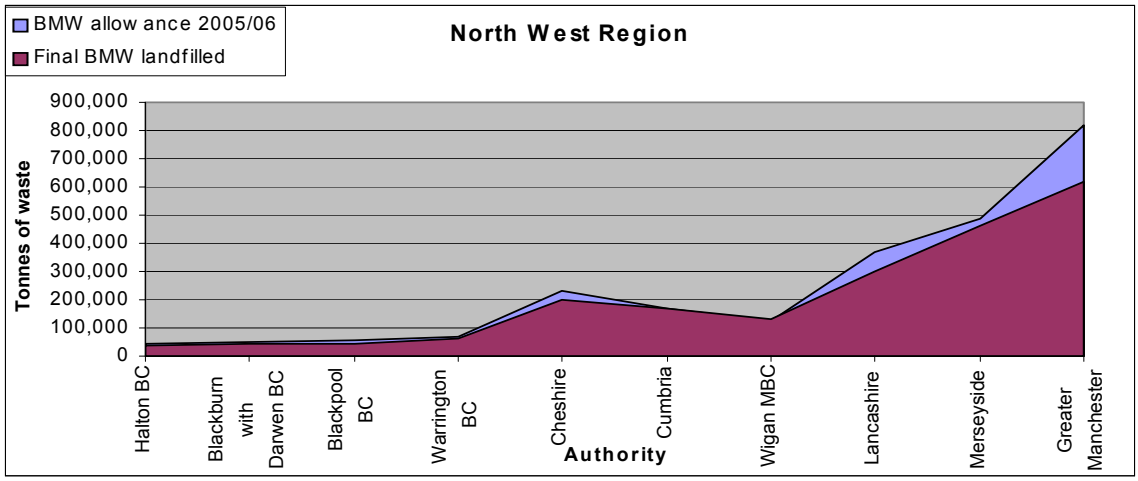


**Figure 13 BMW sent to landfill in the North West region, 2005/6**

## 7.6 South East region

The 19 local authorities within the South East region (Figure 14) range in the amount of municipal waste produced from Portsmouth City Council as the smallest to Kent County Council as the largest. The greatest percentage surplus in relation to allowance allocation is for Portsmouth City Council, followed by Hampshire County Council, Southampton City Council, Royal Borough of Windsor and Maidenhead, Medway Council, and Isle of Wight Council. Each had surplus allowances greater than 20 per cent. East Sussex County Council had a deficit of 13.9 per cent and had to buy additional allowances to achieve its 2005/6 allocation.

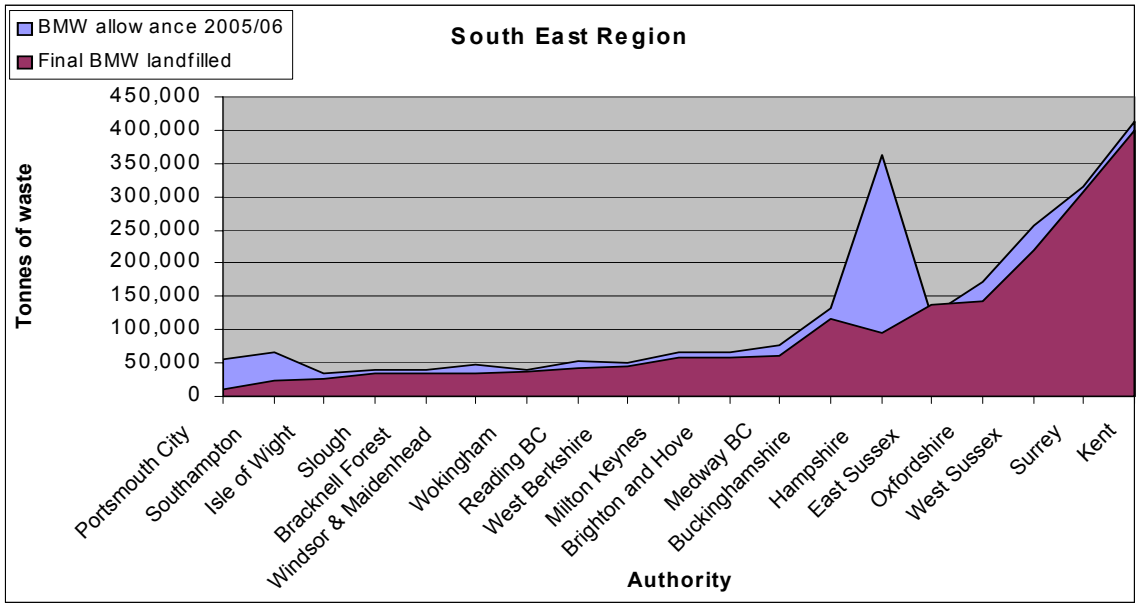


**Figure 14 BMW sent to landfill in the South East region, 2005/6**

## 7.7 South West region

The 16 local authorities within the South West region (Figure 15) range in the amount of municipal waste produced from the Isles of Scilly Council as the smallest to Devon County Council as the largest. The greatest percentage surplus in relation to allowance allocation is for the Isles of Scilly Council, which used none of its 136 tonnes of allowance allocation for 2005/6. It is followed by Somerset County Council, Swindon BC and South Gloucestershire Council. Each had surplus allowances greater than 20 per cent.

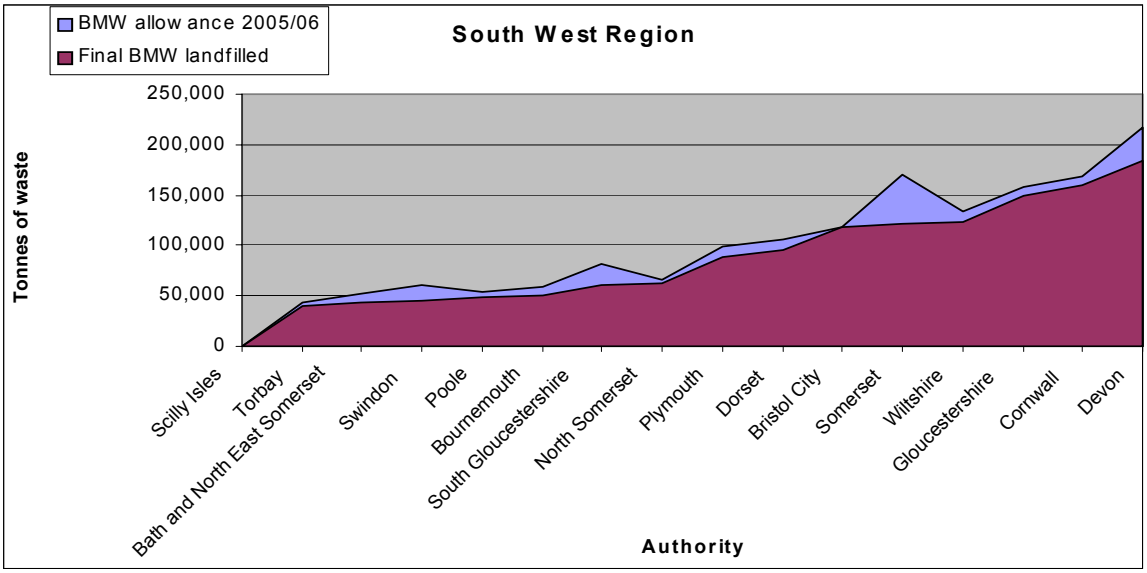


**Figure 15 BMW sent to landfill in the South West region, 2005/6**

## 7.8 West Midlands region

The 14 local authorities within the West Midlands region (Figure 16) range in the amount of municipal waste produced from Solihull MBC as the smallest to Worcestershire County Council as the largest. The greatest percentage surplus in relation to allowance allocation is for Solihull MBC, followed by Birmingham City Council, Staffordshire County Council, Dudley MBC, Telford and Wrekin BC, and Shropshire County Council. Each has surplus allowances greater than 20 per cent. Coventry City Council had a 3.6 per cent deficit, Wolverhampton City Council had a deficit of 6.5 per cent and Stoke-on-Trent City Council had a deficit of 11.9 per cent. All three authorities had to buy or borrow additional allowances to achieve their allocation.

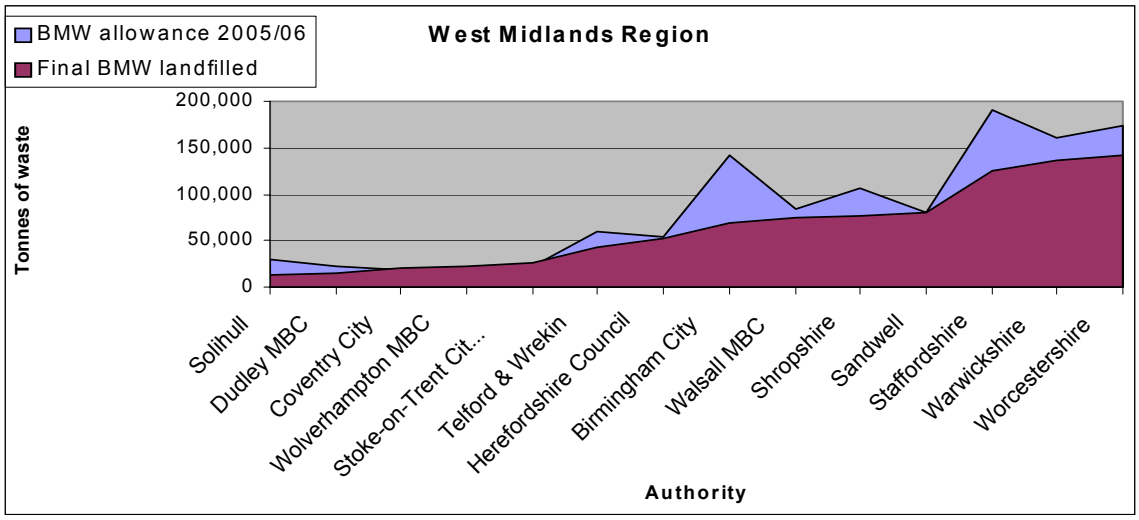


**Figure 16 BMW sent to landfill in the West Midlands region, 2005/6**

## 7.9 Yorkshire & Humber region

The 15 local authorities within the Yorkshire & Humber region (Figure 17) range in the amount of municipal waste produced from North East Lincolnshire Council as the smallest to Leeds City Council as the largest. The greatest percentage surplus in relation to allowance allocation is for North East Lincolnshire Council, followed by Kirklees MBC, Sheffield City Council, City of Wakefield MDC and Rotherham MBC. Each has surplus allowances greater than 20 per cent.

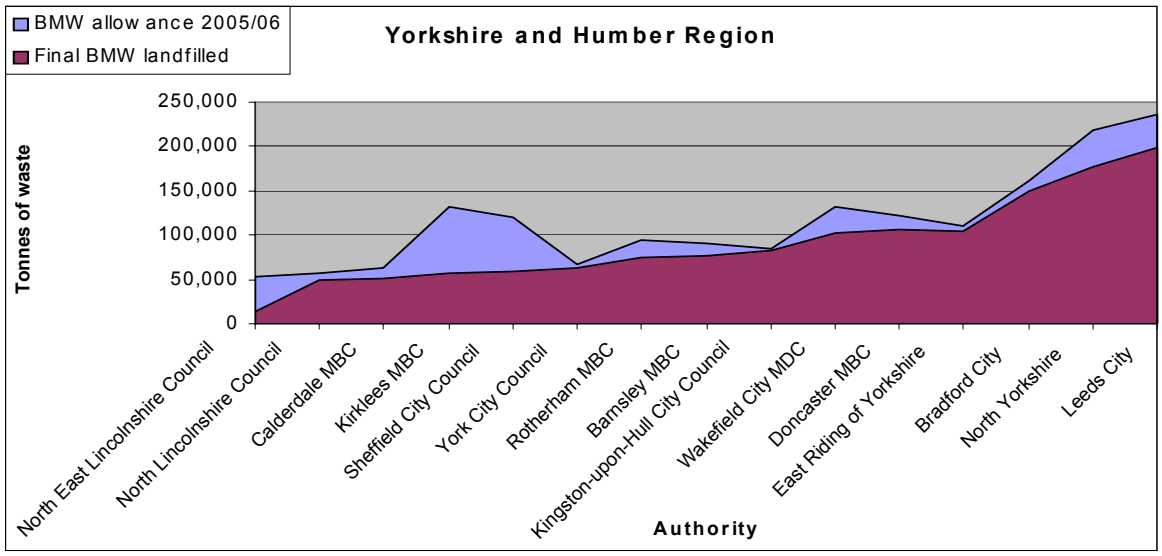


**Figure 17 BMW sent to landfill in the Yorkshire & Humber region**

# 8. Forward look

## 8.1 What the Landfill Directive targets mean for England

**Key fact 8**

In 2005/6, the calculated amount of BMW sent to landfill in England was 12,386,666 tonnes.

In 2009/10, the amount of BMW that can be sent to landfill is only 11,200,000 tonnes.

The UK is required to achieve each of three Landfill Directive targets (Table 5). The first target is for 2009/10 while the second one arrives only three years later. Assuming no growth in BMW, England will have to reduce the amount of BMW going to landfill by 1,186,666 tonnes to achieve the first Landfill Directive target.

**Table 5 Landfill Directive targets for the UK**

| Country | Maximum amount (tonnes) in target year ending in: 2010 | 2013 | 2020 |
|---|---|---|---|
| UK | 13,700,000 | 9,130,000 | 6,390,000 |
| England | 11,200,000 | 7,460,000 | 5,220,000 |
| Scotland | 1,320,000 | 880,000 | 620,000 |
| Wales | 710,000 | 470,000 | 330,000 |
| Northern Ireland | 470,000 | 320,000 | 220,000 |

To achieve the Landfill Directive target it will be necessary to:

- increase the diversion of BMW from landfill;
- reduce the amount of municipal waste generated; or
- adopt a combination of both these options.

Between 2000/1 and 2004/5, the amount of municipal waste generated increased on average by 1.5 per cent each year. Last year the average rate of recycling increased by four per cent compared with the previous year; however, this is recycling of both the biodegradable and non-biodegradable fractions.

## 8.2 Predicting the future

Looking to the future, we can compare the current amount of BMW sent to landfill (2005/6) by each authority against the amount they can landfill in the first Landfill Directive target year (2009/10). This comparison is made below for each of the nine regions of England.

We have identified those local authorities with a **surplus** of at least 50,000 tonnes between their 2009/10 target and the amount of BMW they landfilled in 2005/6. These authorities are:

- Sheffield City Council
- Coventry City Council
- Staffordshire County Council
- North London Waste Authority
- Westminster London Borough.

Assuming the amount of BMW sent to landfill remains constant, the two authorities with the potentially highest surplus in 2009/10 will be:

- Hampshire County Council at approximately 175,000 tonnes;
- Birmingham City Council at approximately 140,000 tonnes.

We have identified those local authorities with a **deficit** of at least 50,000 tonnes between their 2009/10 target and the amount of BMW they landfilled in 2005/6. These authorities are:

- Western Riverside Waste Authority
- East London Waste Authority
- Wigan Metropolitan Borough Council
- Cumbria County Council
- Greater Manchester Waste Disposal Authority
- Surrey County Council.

Assuming the amount of BMW sent to landfill remains constant, the three authorities with the potentially highest deficit in 2009/10 will be:

- Merseyside Waste Disposal Authority at approximately 151,000 tonnes;
- Kent County Council at approximately 108,000 tonnes;
- West London Waste Authority at approximately 108,000 tonnes.

## 8.3 Regional comparisons

Within each region it is possible to focus more closely at authority level. Figures 18–26 show the actual amount of BMW sent to landfill in 2005/6 by the individual authorities in each of the nine regions against their 2009/10 targets. In each case, the blue area of the graph denotes how much BMW the local authorities sent to landfill in 2005/6 and the yellow line indicates their individual targets for 2009/10.

**East Midlands region**

Figure 18 shows that three local authorities – Rutland County Council, Nottingham City Council and Nottinghamshire County Council – in the East Midlands region are close to or are already within their 2009/10 targets. The remaining six local authorities have some way to go to achieve the first target. Lincolnshire County Council and Derbyshire County Council need to make the biggest increases in diversion over the next three years in the run-up to 2009/10. East Midlands region currently has a deficit against its 2009/10 targets of approximately 76,000 tonnes.

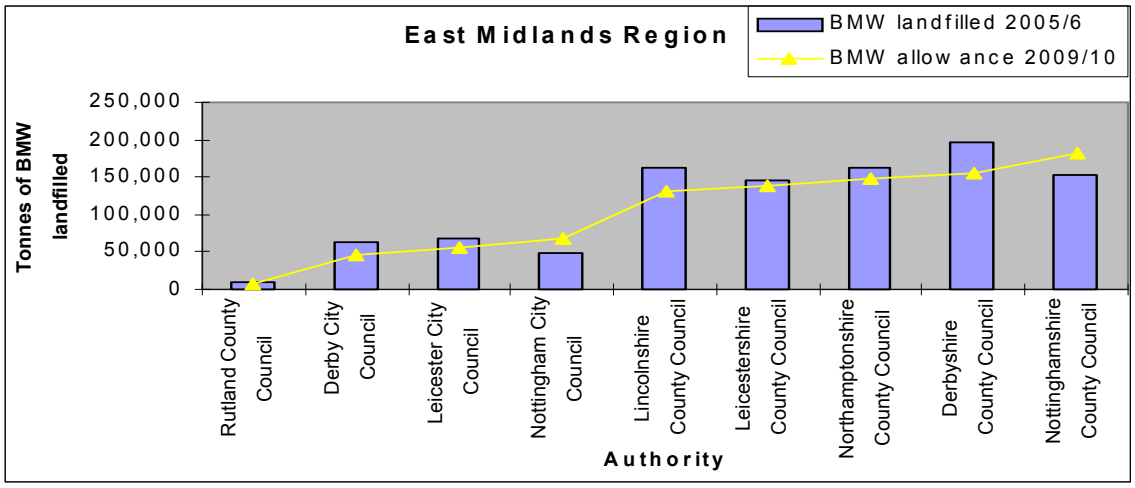


**Figure 18 BMW sent to landfill in 2005/6 against 2009/10 targets in East Midlands region**

## East of England region

Figure 19 shows that nine of the local authorities in East of England region are close to or are already within their 2009/10 targets. Essex County Council needs to make significant increases in diversion over the next three years in the run-up to 2009/10. East of England region currently has a deficit against its 2009/10 targets of approximately 115,000 tonnes.

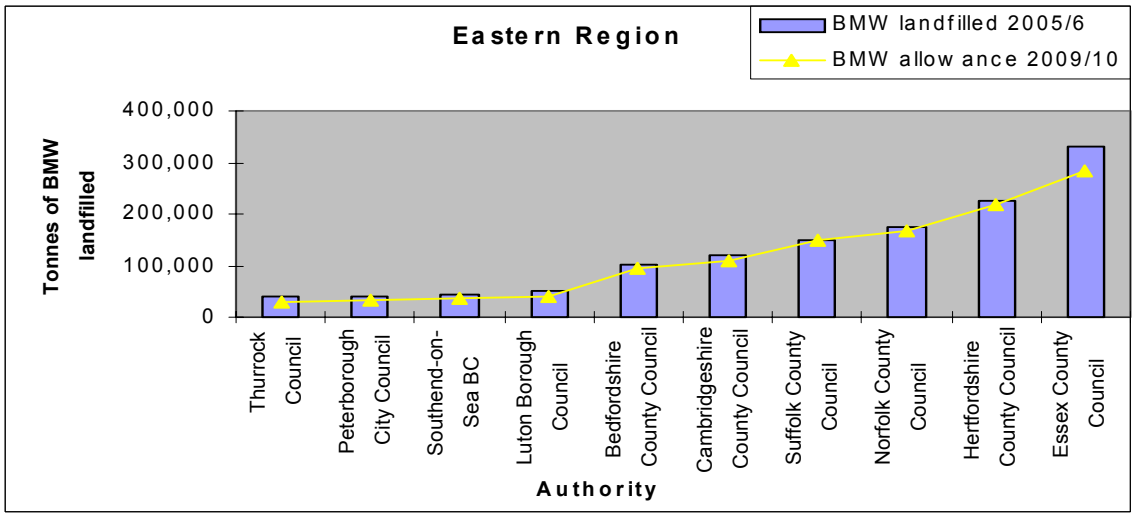


**Figure 19 BMW sent to landfill in 2005/6 against 2009/10 targets in East of England region**

## London region

The London Boroughs (LBs) of Lewisham, Greenwich, Bexley, Bromley, Westminster and North London Waste Authority are close to, or are already within, their 2009/10 targets (Figure 20). Croydon LB, Western Riverside Waste Authority, East London Waste Authority and West London Waste Authority all need to make significant increases in diversion over the next three years in the run-up to 2009/10. London region currently has a deficit against its 2009/10 targets of approximately 110,000 tonnes.

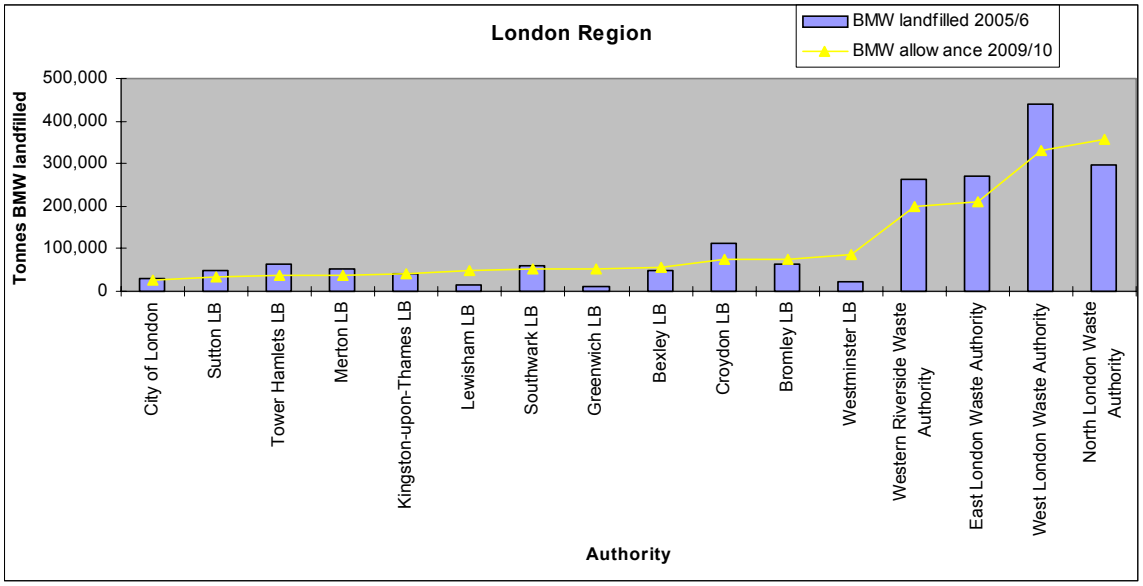


**Figure 20 BMW sent to landfill in 2005/6 against 2009/10 targets in London region**

## North East region

In the North East region Hartlepool BC, Middlesbrough BC, Redcar and Cleveland BC, Stockton-on-Tees BC and Gateshead MBC are already within their 2009/10 targets (Figure 21). Darlington BC, South Tyneside MBC, North Tyneside Council, Sunderland City Council, Newcastle-upon-Tyne MBC and Durham County Council all need to make significant increases in diversion over the next three years in the run-up to 2009/10. North East region currently has a deficit against its 2009/10 targets of approximately 52,000 tonnes.

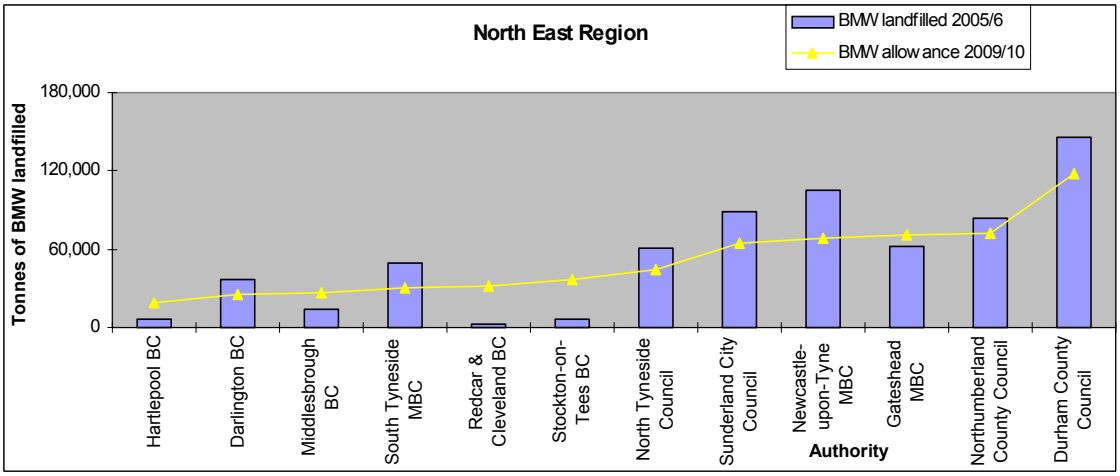


**Figure 21 BMW sent to landfill in 2005/6 against 2009/10 targets in North East region**

### North West region

Halton BC, Blackburn with Darwen BC, Blackpool BC, Warrington BC and Cheshire County Council in the North West region are already close to their 2009/10 targets (Figure 22). Wigan MBC, Cumbria County Council, Merseyside County Council and Greater Manchester Waste Disposal Authority all need to make significant increases in diversion over the next three years in the run-up to 2009/10. North West currently has the largest regional deficit against its 2009/10 targets of approximately 445,000 tonnes.

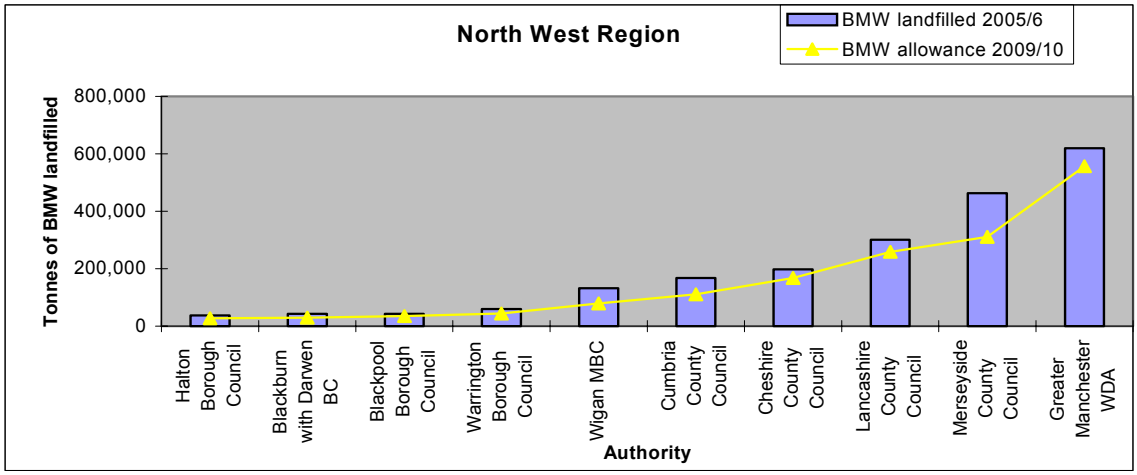


**Figure 22 BMW sent to landfill in 2005/6 against 2009/10 targets in North West region**

### South East region

The majority of the 19 local authorities within the South East region are already close to or within their 2009/10 targets (Figure 23). East Sussex, West Sussex, Surrey and Kent County Councils all need to make significant increases in diversion over the next three years in the run-up to 2009/10. South East region currently has a deficit against its 2009/10 targets of approximately 148,000 tonnes.

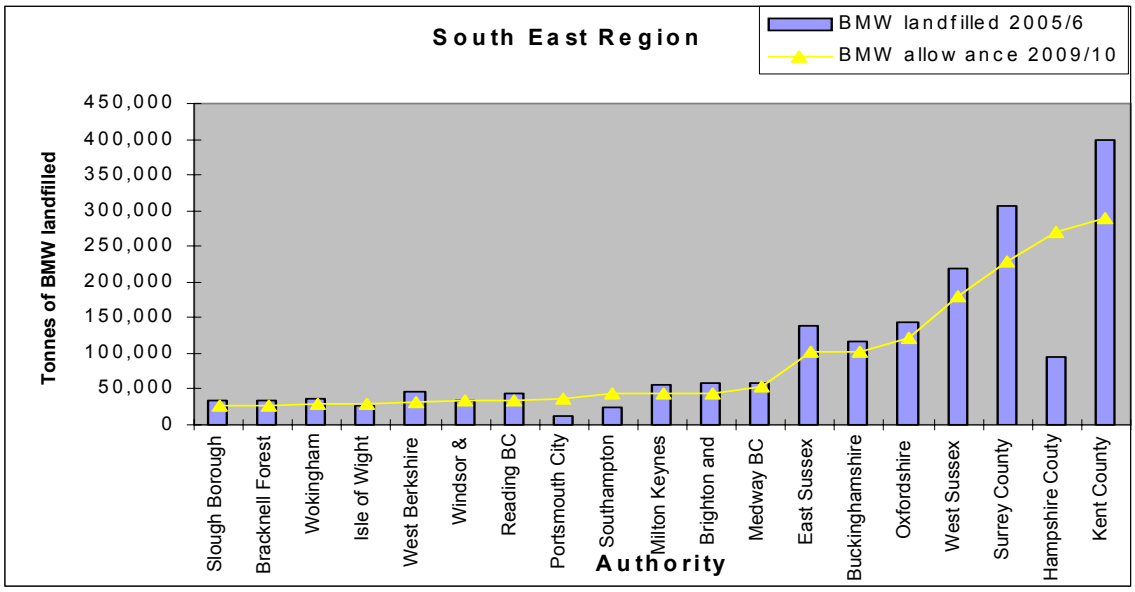


**Figure 23 BMW sent to landfill in 2005/6 against 2009/10 targets in South East region**

### South West region

Figure 24 shows that only one local authority in the South West region, Somerset County Council, is already close to its 2009/10 target. The remaining 15 local authorities all need to make significant increases in diversion over the next three years in the run-up to 2009/10. South West currently has the second largest regional deficit against its 2009/10 targets of approximately 294,000 tonnes.

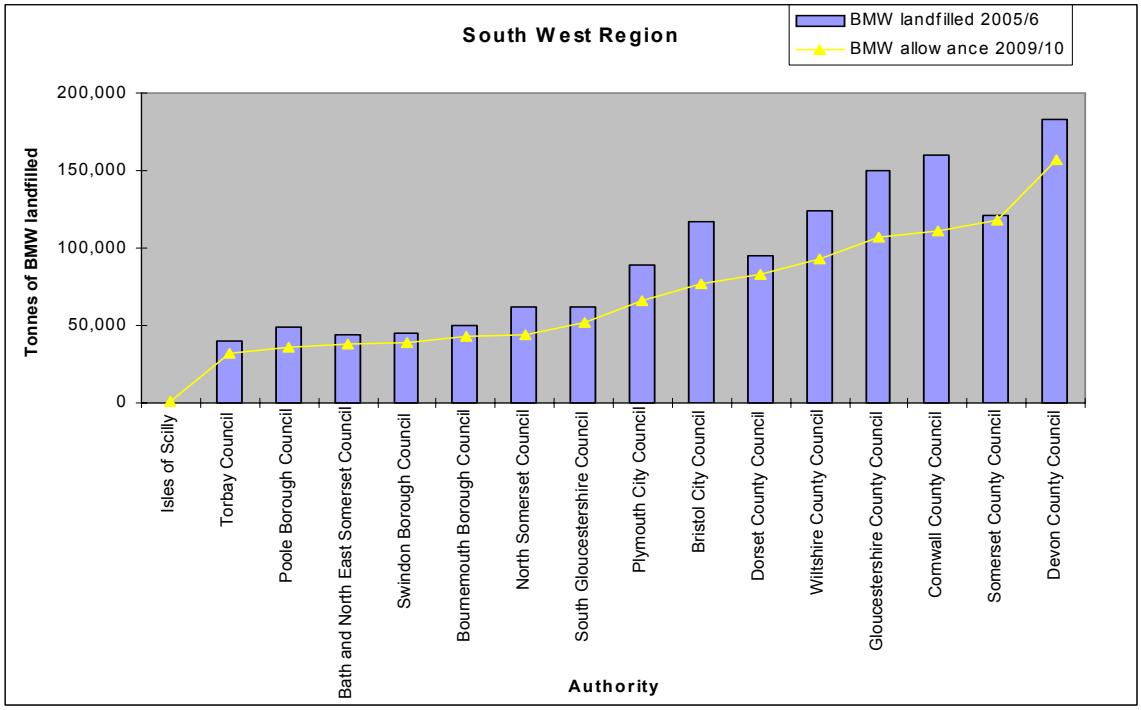


**Figure 24 BMW sent to landfill in 2005/6 against 2009/10 targets in South West region**

### West Midlands region

Of the 14 local authorities in the West Midlands region, Solihull MBC, Dudley MBC, Stoke-on-Trent City Council, Wolverhampton MBC, Coventry City Council, Staffordshire County Council and Birmingham City Council are already within their 2009/10 targets (Figure 25). Herefordshire, Warwickshire and Worcestershire County Councils all need to make significant increases in diversion over the next three years in the run-up to 2009/10. West Midlands is currently the only region to have a surplus against its 2009/10 targets – approximately 260,000 tonnes.

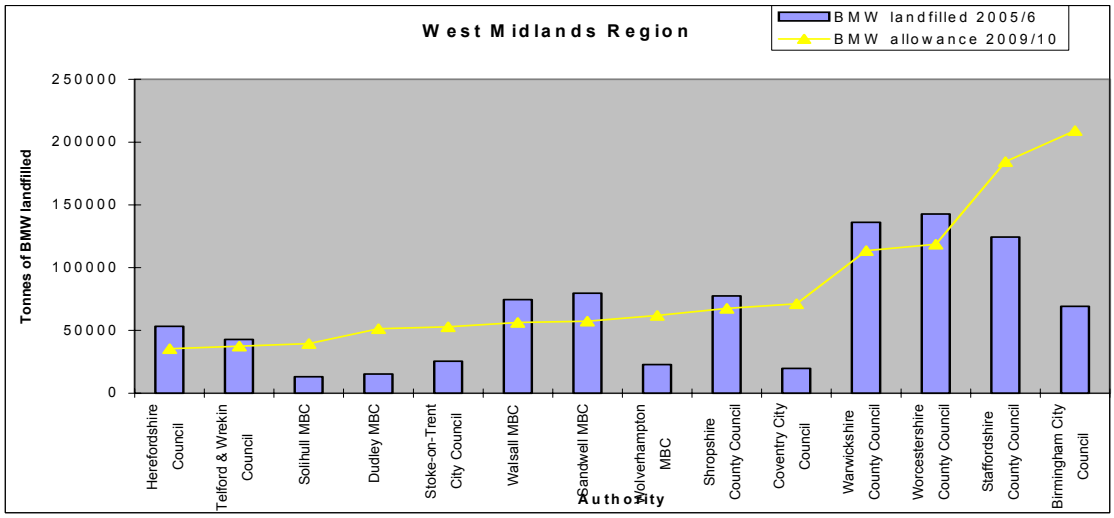


**Figure 25 BMW sent to landfill in 2005/6 against 2009/10 targets in the West Midlands region**

### Yorkshire & Humber region

The Yorkshire & Humber region has 15 local authorities. North East Lincolnshire Council, Kirklees MBC and Sheffield City Council are already within their 2009/10 targets (Figure 26). The remaining 12 authorities all need to make significant increases in diversion over the next three years in the run-up to 2009/10. Yorkshire & Humber region currently has a deficit against its 2009/10 targets of approximately 199,000 tonnes.

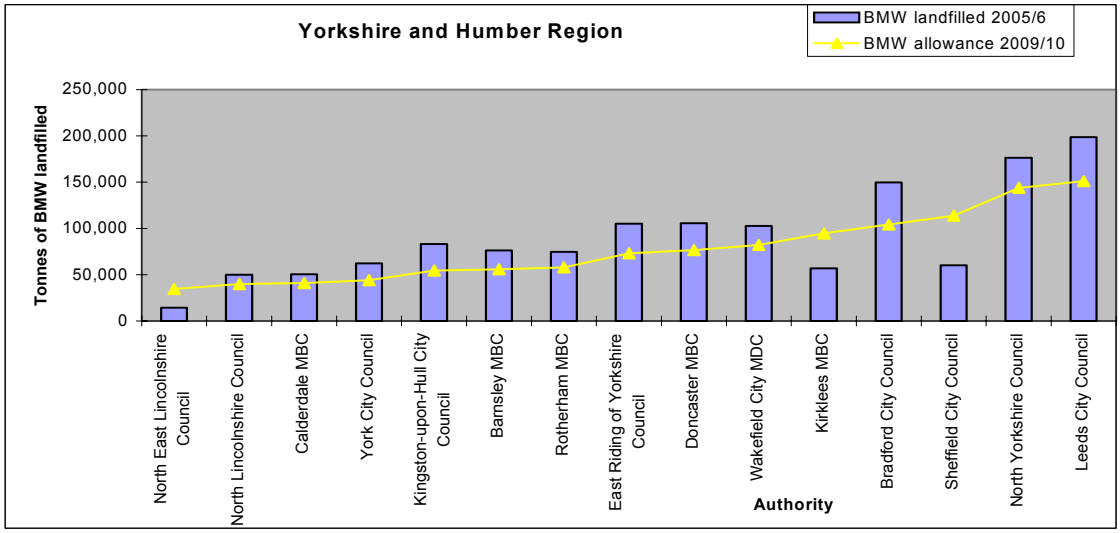


**Figure 26 BMW sent to landfill in 2005/6 against 2009/10 targets for Yorkshire & Humber region**

# 9. Improving LATS

There are a number of ways in which LATS could be improved:

- **Promptness and accuracy of reporting by authorities.** Reporting varied in 2005/6. Without prompt and accurate data we cannot provide authorities with information at the end of each quarter. This is a measure of their performance during the year against their year-end allowance allocations.

  WDAs are dependent on WCAs to make prompt and accurate reports. Without a complete set of prompt and accurate reports from all constituent WCAs, we are unable to provide the WDA with predicted out-turns.
- **Promptness of validation.** Promptness of validation by Enviros (stage one of the audit process) is vital to provide local authorities with quarterly information on time. In 2005/6, the time taken to start the validation process and the time taken to complete validation varied considerably between authorities and across the year. Greater consistency in delivering validation is needed to allow us to perform the second stage of the audit and complete the performance review for each authority.
- **MRF reject rates.** Many local authorities send recyclates and residual waste to an MRF or a reprocessor. When reporting data in WDF, an authority must specify the reject rate associated with each facility. The reject rate is the amount of residue sent for disposal and is information is needed for the mass balance calculation. The reject rates reported varied widely from 0 to 25 per cent. There were also wide variations in the reject rate reported by authorities using the same facility.

  Greater consistency and accuracy of reject rate reporting is needed. This issue will be addressed during 2006/7 as our part of the auditing process.
- **Final destination of waste materials.** Many local authorities send recyclates and residual waste to brokers, intermediaries and reprocessors. Sometimes the waste is reprocessed and recovered in the UK, and at other times it is exported. Reporting the final destination of municipal waste by local authorities is variable. We need this information so that we can carry out a complete audit of LATS. It is important that we can demonstrate that reprocessing and recovery is legitimate and has diverted waste from landfill. We intend to examine the recyclate streams from a number of local authorities during 2006/7 to determine reject rates associated with final end use and to calculate their impact on local authority allowances.
- **Achieving future municipal waste targets.** If the rate of landfilling of all types of waste (municipal, commercial, industrial and demolition) remains constant, there will be increasing pressures on available landfill void space to dispose of BMW.

# 10. Recommending solutions

- **Reporting by WCAs**. We recommend that WCAs have a statutory obligation to make reports under LATS. Without this information we cannot monitor the performance of their WDA. This is frustrating for us and for those WDAs and their constituent WCAs that have reported promptly and accurately. We recommend that WCAs are covered by the same statutory reporting obligations as those applying to WDAs.
- **Recognising the need for reporting accuracy.** We recommend that statutory guidance is published which outlines the process by which data submitted by local authorities achieve clearance for stage one of the audit process. At this point, we can use these data for the mass balance calculation. We recommend a period of one month is allowed for data to pass stage one of the audit.
- **Final destination of waste materials.** We recommend clarification of the reporting obligations for UAs and WDAs. In particular that they place an obligation on these authorities to provide accurate information on the final destinations of municipal waste materials. Without information on the final destination of recyclates and recovered waste, we have no way of confirming treatment or disposal activity is legitimate and diverting waste from landfill. Failure to provide this information should be a breach of the reporting obligations.

# Annex 1 – Auditing: the process

## The role of the Environment Agency

We are the monitoring authority and have a duty to see how well each WDA diverts BMW from landfill. We audit data reported by each authority in England and each quarter we calculate if they have met their targets. The calculation is called mass balance and recognises waste diverted from landfill for reuse, recovery, recycling and composting. Currently home composting is not actively recognised within the scheme but plans are underway to see if this can be included in future years.

Borrowing, selling or buying of allowances is included when we compare an authority's performance with its annual target. Each quarter we publish a report for Defra.

## The audit process

The audit is made up of two stages:

- stage one is quantitative checks;
- stage two is qualitative checks.

Stage one includes checking all tonnages against trends and tolerance values, making sure that what gets collected can be balanced against what is treated and disposed of.

The qualitative check in stage two looks at the final destination of the individual waste types in addition to the facilities used for residual waste streams. Facilities may be in the UK or worldwide. Wherever possible, we need to check that diversion is legitimate and that no waste is being sent for 'sham' recovery.

We have only two months following the end of the reporting period to carry out the draft reconciliation process. Enviros have one month to complete stage one and we have one month to complete stage two. The two stages are outlined below.

## Stage one (Enviros)

We contract Enviros to provide an independent stage one audit. This is a quantitative check on each authority's data. It includes checking tonnes of arisings versus disposal/treatment and looking at trends with previous quarters/historic data.

Enviros are in daily contact with authorities regarding the outcome of their audit. If changes need to be made to the data, then they are rolled back down to the authority to level 0 of WDF's quality assurance procedure for data revision. The authority then re-authorises the data to level 20 and resubmits data to level 30. The stage one audit then continues.

The stage one audit should be completed within one month of data reaching level 30. Completing stage one audit moves the data to level 35 and Enviros advises the authority of this. Authorities are not compliant with LATS unless their data is of sufficient quality to achieve level 35 within one month of reaching level 30.

A summary of data at level 35 is transferred to a secure electronic storage facility (held by a business collaborator), at which point we can access the data.

## Stage two (Environment Agency)

We can only process data that is at level 35 of the WDF quality assurance process and has completed stage one of the audit. In addition, we need WCA data on reuse, recycling and composting to perform mass balance calculations in two-tier areas.

We must complete stage two of the audit within one month of data completing stage one. This is a qualitative check using baseline data from a variety of sources including:

- records of transfrontier shipments;
- a recent detailed audit of MRFs;
- landfill returns;
- information from the Office of Government Commerce.

Our stage two audit process is published as an Agency Management System procedure.

Our Service Level Agreement with Defra requires us to provide a draft reconciliation to authorities completing stage two of the audit.

# Annex 2 – Reporting

Prompt quarterly reporting is a requirement of the LATS Regulations. There are two audit steps, which follow prompt reporting. At the end of stage one, we can give an authority a predicted out-turn.

For prompt reporting and completing stage one of the audit, the best **Waste Disposal Authorities** in 2005/6 were:

| | |
|---|---|
| First place | Buckinghamshire County Council |
| Second place | Shropshire County Council |
| Third place | Hertfordshire County Council |
| Fourth place | Kent County Council |
| Fifth place | Durham County Council |

For prompt reporting and completing stage one of the audit, the best **Unitary Authorities** in 2005/6 were:

| | |
|---|---|
| First place | South Gloucestershire Council |
| Second place | Rotherham Metropolitan Borough Council |
| Third place | Poole Borough Council |
| Fourth place | Wigan Metropolitan Borough Council |
| Fifth place | Torbay Council |

For prompt reporting and completing stage one of the audit, the best **Waste Collection Authorities** in 2005/6 were:

| | |
|---|---|
| First place | Congleton Borough Council |
| Second place | South Holland District Council |
| Third place | Shrewsbury and Atcham Borough Council |
| Fourth place | Wealden District Council |
| Fifth place | Babergh District Council |

# Annex 3 – Calculating performance: mass balance

Each year we calculate the amount of BMW landfilled by each WDA/UA using a mass balance calculation. This is set out in the LATS Regulations and explained below.

There are three steps to the calculation:

Step 1 Calculate the amount of BMW by weight in the amount of collected municipal waste for each scheme year.

Step 2 If components of collected municipal waste are sent to any waste facilities, subtract the amount of BMW by weight sent to these facilities from the amount calculated under step 1.

Step 3 If any of the collected municipal waste is sent to landfills either after treatment or as rejects from facilities, add the amount of BMW by weight sent to those landfills.

**Step 1**

1. In two-tier authorities, information relating to collected municipal waste is reported by WCAs and WDAs.
2. In England, the biodegradable component of collected municipal waste is 68 per cent. In England only, we are required to keep this under review.
3. To calculate the amount of BMW by weight for each WDA in each scheme year, we multiply the amount of collected municipal waste for the scheme year by 68 per cent.

**Step 2**

4. We calculate each separated fraction of waste diverted from landfill by multiplying its weight by a biodegradable percentage given in Table A1.
5. The biodegradable percentages in Table A1 are from the National Household Waste Analysis Programme published by the then Department of the Environment in 1993. This is not wholly accurate but is pragmatic. This table appears in the Schedule to the Landfill Allowances and Trading Scheme (England) Regulations 2004.
6. Local authorities provide us with the type and weight of any collected municipal waste diverted to waste facilities irrespective of whether the waste is biodegradable or not. They also need to tell us the final destination of all collected municipal waste.

**Table A1 Percentage biodegradability of separated fractions of Municipal Solid Waste (MSW)**

| Type of waste | Amount of biodegradable municipal waste (percentage by weight) |
|---|---|
| Paper and card | 100 |
| Putrescible waste | 100 |
| Vegetable oil | 100 |
| Footwear | 50 |
| Furniture | 50 |
| Textiles | 50 |
| Mineral oil | 0 |
| Electrical and electronic equipment | 0 |
| End-of-life vehicles | 0 |
| Glass | 0 |
| Inert construction and demolition waste | 0 |
| Metal | 0 |
| Plastic | 0 |
| Soil | 0 |

**Step 3**

7. If waste is pre-treated before landfilling, we need to know if the biodegradable content of the waste has been reduced. If so, we take this into account in the mass balance calculation.

**The mass balance calculation is shown below.** The questions (Q) in WDF we use for each part of the calculation are indicated.

$MSW_T$ = total collected municipal waste

$BMW_T$ = total biodegradable municipal waste

$Div_T$ = total collected municipal waste diverted

$Div_B$ = biodegradable content of diverted waste

$Res_T$ = total residual waste

$Res_B$ = biodegradable content of residual waste

RB% = residual biodegradable percentage

$L_D$ = directly landfilled municipal waste

$L_{Th}$ = landfilled after thermal treatment (landfill tonnes from Q54, Q55, Q57)

$L_{MBT}$ = landfilled after mechanical–biological treatment (MBT) (landfill tonnes from Q59)

$MBT_{RF}$ = MBT reduction factor (i.e. the amount by which MBT reduces RB%)

$L_{OT}$ = landfilled after other treatments (landfill tonnes from Q56, Q58, Q60 to 65)

$Div_R$ = rejected diverted waste

$BMW_L$ = biodegradable municipal waste landfilled

**Step 1** $BMW_T = 68\% \times MSW_T$

$Res_T = MSW_T - Div_T$

$Res_B = BMW_T - Div_B$

**Step 2** $RB\% = (Res_B/Res_T) \times 100$ or $\frac{(BMW_T - Div_B)}{(MSW_T - Div_T)} \times 100$

**Step 3** $BMW_L = (L_D \times RB\%) + (L_{Th} \times 0\%) + (L_{MBT} \times (RB\% \times MBT_{RF})) + (L_{OT} \times RB\%) + (Div_R \times RB\%)$

# Annex 4 – Reconciling: the final figures

**Actual BMW landfilled by local authorities against their allowance allocations for 2005/6**

| Authority* | BMW allowance allocation 2005/06 | Actual BMW landfilled 2005/6 |
|---|---|---|
| Barnsley MBC | 91,095 | 76,434 |
| Bath and North East Somerset Council | 52,186 | 44,232 |
| Bedfordshire County Council | 151390 | 100,931 |
| Bexley LB | 58,064 | 49,573 |
| Birmingham City Council | 141,233 | 69,210 |
| Blackburn with Darwen BC | 47,240 | 43,495 |
| Blackpool BC | 53,784 | 43,469 |
| Bournemouth Council | 59,708 | 49,742 |
| Bracknell Forest Council | 39,630 | 34,135 |
| Bradford City Council | 162,134 | 149,616 |
| Brighton and Hove Council | 67,346 | 59,377 |
| Bristol City Council | 117,631 | 117,209 |
| Bromley LB | 113,868 | 63,956 |
| Buckinghamshire County Council | 133,183 | 116,310 |
| Calderdale MBC | 62,704 | 50,435 |
| Cambridgeshire County Council | 145,772 | 120,350 |
| Cheshire County Council | 233,204 | 198,328 |
| City of London | 45,247 | 29,440 |
| Cornwall County Council | 168,374 | 159,673 |
| Coventry City Council | 19,030 | 19,722 |
| Croydon LB | 118,839 | 110,919 |
| Cumbria County Council | 171,647 | 168,072 |
| Darlington BC | 38,781 | 36,130 |
| Derby City Council | 71,476 | 63,641 |
| Derbyshire County Council | 232,504 | 196,306 |
| Devon County Council | 217,183 | 183,387 |
| Doncaster MBC | 121,911 | 105,622 |
| Dorset County Council | 105,154 | 95,469 |
| Dudley MBC | 23,225 | 15,219 |
| Durham County Council | 188,120 | 146,091 |
| East London Waste Authority | 299,129 | 270,560 |
| East Riding of Yorkshire | 109,397 | 105,157 |
| East Sussex Council | 121,615 | 138,519 |
| Essex County Council | 375,877 | 331,638 |
| Gateshead MBC | 117,299 | 61,550 |
| Gloucestershire County Council | 158,634 | 150,033 |
| Greater Manchester WDA | 820,739 | 620,044 |
| Greenwich LB | 37,285 | 9,560 |
| Halton BC | 41,732 | 37,160 |
| Hampshire County Council | 361,997 | 94,361 |
| Hartlepool BC | 7,837 | 6,610 |
| Herefordshire County Council | 53,716 | 53,155 |
| Hertfordshire County Council | 290,472 | 226,526 |
| Isle of Wight Council | 34,492 | 26,990 |

| Authority* | BMW allowance allocation 2005/06 | Actual BMW landfilled 2005/6 |
|---|---|---|
| Kent County Council | 413,785 | 399,140 |
| Kingston-upon-Hull City Council | 85,361 | 83,336 |
| Kingston-upon-Thames LB | 45,327 | 41,973 |
| Kirklees MBC | 131,787 | 56,872 |
| Lancashire County Council | 371,516 | 300,874 |
| Leeds City Council | 237,062 | 198,721 |
| Leicester City Council | 86,933 | 67,377 |
| Leicestershire County Council | 185,075 | 145,178 |
| Lewisham LB | 16,184 | 14,764 |
| Lincolnshire County Council | 194,120 | 161,238 |
| Luton Council | 61,437 | 50,108 |
| Medway BC | 77,918 | 59,573 |
| Merseyside Waste Disposal Authority | 488,572 | 462,418 |
| Merton LB | 56,701 | 53,785 |
| Middlesbrough BC | 8,413 | 14,399 |
| Milton Keynes Council | 66,028 | 57,082 |
| Newcastle-upon-Tyne City Council | 112,396 | 104,780 |
| Norfolk County Council | 236,145 | 173,324 |
| North East Lincolnshire Council | 53,067 | 14,413 |
| North Lincolnshire Council | 57,848 | 49,877 |
| North London Waste Authority | 312,933 | 298,373 |
| North Somerset Council | 66,697 | 62,493 |
| North Tyneside Council | 59,022 | 60,552 |
| North Yorkshire County Council | 219,053 | 176,306 |
| Northamptonshire County Council | 209,871 | 161,903 |
| Northumberland County Council | 114,509 | 83,551 |
| Nottingham City Council | 54,713 | 49,375 |
| Nottinghamshire County Council | 222,405 | 153,016 |
| Oxfordshire County Council | 173,351 | 143,259 |
| Peterborough City Council | 46,037 | 40,570 |
| Plymouth City Council | 98,155 | 89,264 |
| Poole BC | 52,991 | 48,518 |
| Portsmouth City | 55,412 | 11,194 |
| Reading BC | 54,127 | 43,598 |
| Redcar & Cleveland BC | 24,537 | 2,898 |
| Rotherham MBC | 93,990 | 74,838 |
| Rutland County Council | 10,620 | 10,497 |
| Sandwell MBC | 80,694 | 79,633 |
| Scilly Isles Council | 136 | 0 |
| Sheffield City Council | 119,826 | 60,029 |
| Shropshire County Council | 105,609 | 77,420 |
| Slough BC | 40,428 | 33,339 |
| Solihull MBC | 28,979 | 13,113 |
| Somerset County Council | 170,000 | 121,059 |
| South Gloucestershire Council | 81,215 | 61,626 |
| South Tyneside MBC | 47,904 | 49,223 |
| Southampton City Council | 66,822 | 23,633 |
| Southend-on-Sea | 54,734 | 45,432 |
| Southwark LB | 60,886 | 59,835 |
| Staffordshire County Council | 190,294 | 124,400 |

| Authority* | BMW allowance allocation 2005/06 | Actual BMW landfilled 2005/6 |
|---|---|---|
| Stockton-on-Tees BC | 6,707 | 6,829 |
| Stoke-on-Trent City Council | 22,689 | 25,395 |
| Suffolk County Council | 199,880 | 147,402 |
| Sunderland City Council | 104,808 | 88,514 |
| Surrey County Council | 315,583 | 305,919 |
| Sutton LB | 49,453 | 47,494 |
| Swindon BC | 60,117 | 44,822 |
| Telford & Wrekin BC | 58,994 | 42,761 |
| Thurrock Council | 43,803 | 40,924 |
| Torbay Council | 43,481 | 40,424 |
| Tower Hamlets LB | 64,008 | 65,622 |
| Wakefield City MDC | 131,657 | 102,773 |
| Walsall MBC | 84,406 | 74,577 |
| Warrington BC | 66,776 | 60,214 |
| Warwickshire County Council | 161,107 | 136,105 |
| West Berkshire Council | 49,585 | 45,621 |
| West London Waste Authority | 505,370 | 438,417 |
| West Sussex Council | 256,974 | 219,283 |
| Western Riverside Waste Authority | 311,126 | 262,096 |
| Westminster LB | 64,258 | 23,569 |
| Wigan MBC | 127,850 | 132,379 |
| Wiltshire County Council | 134,012 | 123,584 |
| Windsor & Maidenhead | 47,342 | 35,266 |
| Wokingham District Council | 40,239 | 36,234 |
| Wolverhampton MBC | 21,348 | 22,742 |
| Worcestershire County Council | 173,628 | 138,962 |
| York City Council | 67,289 | 62,203 |
| **Total tonnes for England 2005/6** | **15,195,999** | **12,386,666** |
| **Overall percentage within target (%)** | **82** | |

* Listed in alphabetical order

# Annex 5 – Reconciliation ranking

**Top 45 local authorities ranked in descending order based on the number of surplus allowances in 2005/6**

| Region | Local authority | BMW allowance 2005/06 | BMW landfilled 2005/6 | Surplus allowances in 2005/6 |
|---|---|---|---|---|
| South East | Hampshire County Council | 361,997 | 94,361 | -267,636 |
| North West | Greater Manchester Waste Authority | 820,739 | 620,044 | -200,695 |
| Yorks & Humber | Kirklees MBC | 131,787 | 56,872 | -74,915 |
| West Midlands | Birmingham City Council | 141,233 | 69,210 | -72,023 |
| North West | Lancashire County Council | 371,516 | 300,874 | -70,642 |
| East Midlands | Nottinghamshire County Council | 222,405 | 153,016 | -69,389 |
| London | West London Waste Authority | 505,370 | 438,417 | -66,953 |
| West Midlands | Staffordshire County Council | 190,294 | 124,400 | -65,894 |
| Eastern | Hertfordshire County Council | 290,472 | 226,526 | -63,946 |
| Eastern | Norfolk County Council | 236,145 | 173,324 | -62,821 |
| Yorks & Humber | Sheffield City Council | 119,826 | 60,029 | -59,797 |
| North East | Gateshead MBC | 117,299 | 61,550 | -55,749 |
| Eastern | Suffolk County Council | 199,880 | 147,402 | -52,478 |
| Eastern | Bedfordshire County Council | 151390 | 100,931 | -50,459 |
| London | Bromley LB | 113,868 | 63,956 | -49,912 |
| London | Western Riverside Waste Authority | 311,126 | 262,096 | -49,030 |
| South West | Somerset County Council | 170,000 | 121,059 | -48,941 |
| East Midlands | Northamptonshire County Council | 209,871 | 161,903 | -47,968 |
| Eastern | Essex County Council | 375,877 | 331,638 | -44,239 |
| South East | Portsmouth City Council | 55,412 | 11,194 | -44,218 |
| South East | Southampton City Council | 66,822 | 23,633 | -43,189 |
| Yorks & Humber | North Yorkshire County Council | 219,053 | 176,306 | -42,747 |
| North East | Durham County Council | 188,120 | 146,091 | -42,029 |
| London | Westminster LB | 64,258 | 23,569 | -40,689 |
| East Midlands | Leicestershire County Council | 185,075 | 145,178 | -39,897 |
| Yorks & Humber | North East Lincolnshire Council | 53,067 | 14,413 | -38,654 |
| Yorks & Humber | Leeds City Council | 237,062 | 198,721 | -38,341 |
| South East | West Sussex County Council | 256,974 | 219,283 | -37,691 |
| East Midlands | Derbyshire County Council | 232,504 | 196,306 | -36,198 |
| North West | Cheshire County Council | 233,204 | 198,328 | -34,876 |
| West Midlands | Worcestershire County Council | 173,628 | 138,962 | -34,666 |
| South West | Devon County Council | 217,183 | 183,387 | -33,796 |
| East Midlands | Lincolnshire County Council | 194,120 | 161,238 | -32,882 |
| North East | Northumberland County Council | 114,509 | 83,551 | -30,958 |
| South East | Oxfordshire County Council | 173,351 | 143,259 | -30,092 |
| Yorks & Humber | Wakefield City MDC | 131,657 | 102,773 | -28,884 |
| London | East London Waste Authority | 299,129 | 270,560 | -28,569 |
| West Midlands | Shropshire County Council | 105,609 | 77,420 | -28,189 |
| London | Greenwich LB | 37,285 | 9,560 | -27,725 |
| North West | Merseyside Waste Authority | 488,572 | 462,418 | -26,154 |
| Eastern | Cambridgeshire County Council | 145,772 | 120,350 | -25,422 |
| West Midlands | Warwickshire County Council | 161,107 | 136,105 | -25,002 |
| North East | Redcar & Cleveland BC | 24,537 | 2,898 | -21,639 |
| South West | South Gloucestershire Council | 81,215 | 61,626 | -19,589 |

# Annex 6 – Pre-treating BMW

Pre-treatment can reduce the biodegradability of the waste. In working out a mass balance for an authority, we have to take into account any municipal waste pre-treated before landfilling.

We have issued non-statutory guidance to help in advising on methods of monitoring the reduction in biodegradability across a mechanical–biological treatment (MBT) process. If an authority wants this to be taken into account, then we need monitoring data from the MBT plant. The monitoring plan for each plant sets out what samples will be collected and how they will be tested.

Currently, no monitoring data have been published for 2005/6 and so we have not taken into account any reduction in biodegradability given by pre-treatment when working out a mass balance.

Monitoring of MBT or other new technology used for pre-treatment is only required for waste destined for landfill. Currently we know of four MBT that which are either operational or likely to be in the near future (Table A2).

**Table A2 Known MBT plants in England, November 2006**

| Plant | Authorities using plant | Comments |
|---|---|---|
| Biffa Leicester | Leicester City Council | Initial monitoring plan under discussion. Only small amount of waste going to landfill so the cost/benefit may rule out monitoring. |
| Premier Waste Durham | Durham County Council | No monitoring plans received. Premier says it cannot afford monitoring cost. |
| New Earth Solutions Poole (pilot plant) | Dorset County Council and Bournemouth BC | No monitoring plan. Unlikely for diversion to be claimed by Bournemouth BC. |
| Shanks East London | East London Waste Authority | Not operational 2005/6. Monitoring plan agreed for 2006/7. |

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