

<b>Title:</b> <b>Landfill Allowance Trading Scheme</b> <b>Lead department or agency:</b> Defra <b>Other departments or agencies:</b>	<b>Impact Assessment (IA)</b>
	<b>IA No:</b> Defra 1317
	<b>Date:</b> 01/04/2012
	<b>Stage:</b> Final
	<b>Source of intervention:</b> Domestic
	<b>Type of measure:</b> Secondary legislation
	<b>Contact for enquiries:</b> Gillian Neville, 020 7238 4382

## Summary: Intervention and Options

**What is the problem under consideration? Why is government intervention necessary?**

The Landfill Directive sets the UK landfill diversion targets to meet. The Landfill Allowance Trading Scheme (LATS) was set up as the primary means for England to meet those targets. Following discussions with the EU the interpretation of municipal waste, and the targets, have been revised. As a result the policies necessary to meet the targets have been reviewed. The evidence from this review, including the views of stakeholders, was that LATS was no longer an effective policy tool. This finding is incorporated into the Waste Review which states that LATS should end after the 2012/13 scheme year. At the same time some changes are needed to the domestic legislation to reflect the new definition of municipal waste to ensure correct transposition of the Landfill Directive.

**What are the policy objectives and the intended effects?**

The objectives are to provide sufficient confidence that England will meet its share of the UK target to divert waste from landfill in 2020, at least cost to UK plc and without placing unnecessary burdens on local authorities, and that the policies in place are consistent with the direction of the Government's Waste Review. Furthermore to ensure domestic legislation is consistent with the revised interpretation of the definition of municipal waste. It is not anticipated that removing LATS will impact on the amount of waste diverted from landfill. However, it will remove a burden from Local Authorities and also remove a barrier to improved collection of waste from SMEs.

**What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)**

The policy options only apply to the legislative changes required to end LATS.

- No Change, Leave LATS in place until 2020
- End LATS immediately
- End LATS after 2012/13 Scheme year.

The preferred option is to end LATS after the 2012/13 scheme year. Evidence, and stakeholder views strongly indicate that whilst LATS was successful in encouraging diversion of waste from landfill in previous years, its effectiveness has been overtaken by the rapidly increasing rate of Landfill Tax. Ending the scheme after the 2012/13 scheme year will allow time for proper consideration of the legislative changes, provide a lead in time to local authorities to adjust to the end of the scheme, and not cut across trades in allowances already made for the 2012/13 scheme year.

**Will the policy be reviewed?** It will not be reviewed. **If applicable, set review date:** Month/Year

**What is the basis for this review?** Please select. **If applicable, set sunset clause date:** Month/Year

**Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?**

Yes

**SELECT SIGNATORY Sign-off** For final proposal stage Impact Assessments:

*I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.*

Signed by the responsible SELECT SIGNATORY: \_\_\_\_\_ Date: \_\_\_\_\_

# Summary: Analysis and Evidence

# Policy Option 1

## Description:

End LATS immediately

Price Base Year 2011	PV Base Year 2011	Time Period Years 9	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: Optional	Best Estimate: £7.44m

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	0	0	0

### Description and scale of key monetised costs by 'main affected groups'

None

### Other key non-monetised costs by 'main affected groups'

There would not be time to lay the relevant regulations. Some local authorities have committed to trading allowances up until 2012/13 and ending the scheme immediately would disturb these trades.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	0	£0.95m	£7.44m

### Description and scale of key monetised benefits by 'main affected groups'

A reduction in admin burdens for local authorities - £7.44m over the period to 2020.

### Other key non-monetised benefits by 'main affected groups'

Ends LATS removes any barriers there may be to local authorities collecting waste from businesses.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5%

Key risk: That landfill diversion is much lower than expected, leading to a need to develop further policy proposals in order to meet Landfill Directive diversion targets.  
Assumptions and sensitivities are set out in the Evidence Base

Direct impact on business (Equivalent Annual) £m):			In scope of OIOO?	Measure qualifies as
Costs: none	Benefits: none	Net: none	No	NA

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	England				
From what date will the policy be implemented?	01/04/2011				
Which organisation(s) will enforce the policy?	none				
What is the annual change in enforcement cost (£m)?	N/A				
Does enforcement comply with Hampton principles?	Yes				
Does implementation go beyond minimum EU requirements?	No				
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)	Traded:		Non-traded:		
Does the proposal have an impact on competition?	No				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs:		Benefits: 0		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro	< 20	Small	Medium	Large
Are any of these organisations exempt?	Yes	Yes	Yes	Yes	Yes

## Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
<b>Statutory equality duties<sup>1</sup></b> <a href="#">Statutory Equality Duties Impact Test guidance</a>	No	
<b>Economic impacts</b>		
Competition <a href="#">Competition Assessment Impact Test guidance</a>	Yes	18
Small firms <a href="#">Small Firms Impact Test guidance</a>	No	
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	No	
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	No	
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	No	
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	
Justice system <a href="#">Justice Impact Test guidance</a>	No	
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	No	
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	No	

<sup>1</sup> Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

# Summary: Analysis and Evidence

# Policy Option 2

## Description:

End LATS after the 2012/13 scheme year

Price Base Year 2011	PV Base Year 2011	Time Period Years 9	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: Optional	Best Estimate: £5.58m

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	0	0	0

### Description and scale of key monetised costs by 'main affected groups'

None

### Other key non-monetised costs by 'main affected groups'

None

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	0	£0.71m	£5.58m

### Description and scale of key monetised benefits by 'main affected groups'

A reduction in admin burdens for local authorities - £5.58m over the period to 2020.

### Other key non-monetised benefits by 'main affected groups'

Ends LATS removes any barriers there may be to local authorities collecting waste from businesses.

### Key assumptions/sensitivities/risks

Discount rate (%) 3.5%

Key risk: That landfill diversion is much lower than expected, leading to a need to develop further policy proposals in order to meet Landfill Directive diversion targets.  
Assumptions and sensitivities are set out in the Evidence Base

Direct impact on business (Equivalent Annual) £m):			In scope of OIOO?	Measure qualifies as
Costs: 0	Benefits: 0	Net: 0	No	NA

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	England				
From what date will the policy be implemented?	01/01/2012				
Which organisation(s) will enforce the policy?	None				
What is the annual change in enforcement cost (£m)?	N/A				
Does enforcement comply with Hampton principles?	Yes				
Does implementation go beyond minimum EU requirements?	No				
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)	Traded:		Non-traded:		
Does the proposal have an impact on competition?	No				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs:		Benefits: 0		
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro	< 20	Small	Medium	Large
Are any of these organisations exempt?	Yes	Yes	Yes	Yes	Yes

## Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
<b>Statutory equality duties<sup>1</sup></b> <a href="#">Statutory Equality Duties Impact Test guidance</a>	Yes/No	
<b>Economic impacts</b>		
Competition <a href="#">Competition Assessment Impact Test guidance</a>	Yes	18
Small firms <a href="#">Small Firms Impact Test guidance</a>	No	
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	No	
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	No	
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	No	
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	
Justice system <a href="#">Justice Impact Test guidance</a>	No	
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	No	
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	No	

<sup>1</sup> Public bodies including Whitehall departments are required to consider the impact of their policies and measures on race, disability and gender. It is intended to extend this consideration requirement under the Equality Act 2010 to cover age, sexual orientation, religion or belief and gender reassignment from April 2011 (to Great Britain only). The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

# Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

## References

Include the links to relevant legislation and publications, such as public impact assessments of earlier stages (e.g. Consultation, Final, Enactment) and those of the matching IN or OUTs measures.

No.	Legislation or publication
1	
2	
3	
4	

+ Add another row

## Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

### Annual profile of monetised costs and benefits\* - (£m) constant prices

	Y <sub>0</sub>	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>	Y <sub>4</sub>	Y <sub>5</sub>	Y <sub>6</sub>	Y <sub>7</sub>	Y <sub>8</sub>	Y <sub>9</sub>
<b>Transition costs</b>										
<b>Annual recurring cost</b>										
<b>Total annual costs</b>										
<b>Transition benefits</b>										
<b>Annual recurring benefits</b>			£0.95	£0.95	£0.95	£0.95	£0.95	£0.95	£0.95	£0.95
<b>Total annual benefits</b>			£0.95	£0.95	£0.95	£0.95	£0.95	£0.95	£0.95	£0.95

\* For non-monetised benefits please see summary pages and main evidence base section



Microsoft Office  
Excel Worksheet

# Evidence Base (for summary sheets)

## Background

The Landfill Directive (1999/31/EC) set challenging targets for Member States to reduce the amount of biodegradable municipal waste sent to landfill (the landfill diversion targets). The UK takes advantage of a four year derogation allowed by the Directive for Member States which landfilled 80% or more of their waste in 1995. Therefore the UK's targets are to reduce the amount of biodegradable municipal waste (BMW) sent to landfill to:

- 75% of the total amount produced in 1995 by 2010
- 50% of the total amount produced in 1995 amount by 2013
- 35% of the total amount produced in 1995 amount by 2020

In England these targets were implemented via the Waste and Emissions Trading Act 2003, with the introduction of the Landfill Allowance Trading Scheme regime, a cap and trade scheme. This uses a system of allowances allocated to Waste Disposal Authorities to determine how much biodegradable waste they can send to landfill. The allowances are tradable between Authorities so that those who landfill less waste than their allowances allow can sell the excess to others.

Following discussion with the European Commission, Defra agreed that the UK's approach to meeting those targets should be changed to include much more commercial waste collected by the private sector, where this is similar in nature or composition to household waste. As a result of this changed approach, Defra has reviewed the mix of policies, including LATS, needed to ensure that England meets its share of the UK Landfill targets.

In addition there are consequential changes needed to Waste and Emissions Trading Act and the Landfill (Scheme Year and Maximum Landfill Amount) Regulations 2004 to ensure that it reflects the revised interpretation of municipal waste. This is both to ensure that the domestic legislation correctly transposes the requirements of the Landfill Directive, but also provides the statutory basis for equivalent schemes to LATS in the devolved administrations.

## Rationale for Intervention

The primary market failure that Government intervention in the waste management market seeks to tackle is that of environmental externalities – the damage done to the environment, where decisions around production, consumption and disposal do not fully factor in their impact on the environment.<sup>1</sup> The Landfill Directive targets aim to reduce the environmental impacts of landfilling.

---

<sup>1</sup> The Economic Annex and Impact Assessment which accompany the Waste Review expand upon the rationale for intervention in waste management more generally.

This IA is not an assessment of the Landfill Directive targets themselves, and therefore does not consider whether they are optimal. Rather, given the Landfill Directive targets that are in place, and given the context of a change in the interpretation of municipal waste, the aim of policy becomes to meet the defined target in the most cost-effective manner possible. The Government must have confidence that, based on reasonable assumptions, the range of policies in place to divert biodegradable municipal waste from landfill are sufficient for England to meet its share of the EU target, addressing the risk of infraction. At the same time these policies should be consistent with the direction of the Government's wider review of waste policies which aims to minimise the burden on local authorities and businesses. As such a review was conducted, including a written consultation, of the policies in place following the revision to the interpretation of municipal waste.

## **Policy Objective**

The policy objective is to meet the Landfill Diversion targets in the least burdensome manner and ensuring fit with wider waste policy, as well as minimising disruption to authorities who have planned on the existence of LATS until 2013. At the same time, until LATS ends we need to ensure that the legislation is consistent with the new interpretation of municipal waste and new local authority waste terms, hence the need to make consequential changes to the legislation.

The new interpretation of municipal waste includes a much larger proportion of commercial waste, collected by private companies. LATS does not apply to private companies. In ending LATS we would remove a burden that has been placed on local authorities but not on the private sector.

Removing LATS should also remove any barriers to local authority collections from SMEs. Local authorities can, under existing legislation (the Environmental Protection Act 1990), collect waste from businesses if requested to do so. Since collection of commercial waste contributes to the need to purchase allowances to cover the landfilling of biodegradable waste, ending LATS would enable local authorities to better integrate their management of household and commercial waste collections.

## **Description of Options Considered**

The policy options considered are set out below:

- (i) Baseline – do nothing (leave LATS in place until 2020)
- (ii) Option 1 – End LATS immediately
- (iii) Option 2 – End LATS after the 2012/13 scheme year (preferred option)

In assessing the options, there is a two-part analysis required to determine whether: (a) current policy measures will achieve Landfill Directive targets, and, (b) whether LATS is still required. The primary method to assess these questions is through internal economic modelling. Alternatively, approaching the question from the infrastructure angle can provide additional confidence to the economic modelling results for the first question. Stakeholder views do likewise for the second question.

- (a) Will the landfill Directive targets be met on the basis of current policy measures?

Table 1 illustrates the England-specific portion of the revised UK targets (kt), and Table 2 details progress towards meeting the targets from 2005-2009 (the most recent data point):

Table 1: Revised England targets

Targets		
2010	2013	2020
21,773	14,515	10,161

Table 2: Progress towards targets

2005	2006	2007	2008	2009
21,213	19,187	19,826	17.41	14.59

### Economic modelling:

The economic modelling produces projections of biodegradable municipal waste going to landfill in future years to 2020. The available models means that the projections distinguish between household and commercial and industrial waste. The projections are clearly subject to uncertainty, an uncertainty which increases further in the future. However, by using a range of assumptions, it is possible to observe how sensitive the ability to meet the revised target is to those differing assumptions.

In the modelling, it is not possible to estimate the trajectory of the specific codes of the European Waste Catalogue (EWC) that are being included in the new definition<sup>2</sup>. These codes do not distinguish whether a waste stream is household, or commercial and industrial (C&I). However, in modelling the new baselines and targets, we have been able to estimate what proportion of the total municipal waste is attributable to the household, and commercial and industrial waste streams. Combining this information with projections of what will happen to the landfilling of these two streams (in general) enables us to arrive at an overall estimate of our progress towards meeting the revised targets. Implicit in these estimates are several assumptions:

- (i) That the proportional split of the waste categorised against the codes between C&I and household is correct. If, for example, we expect household waste to landfill to fall much faster than C&I, but our estimated split of municipal waste is too heavily-weighted towards the household sector, then we will overestimate our progress towards the target. Using 2009 EWC landfill data (see Table 2 above), and combining with Waste Data Flow information for local authority waste allows us to estimate with a fair degree of certainty the split between household and non-household municipal waste (see below)
- (ii) That the progress in landfilling of the respective streams in general is consistent with that of the particular EWC codes included in the new definition, as reported at the landfill site. Given that projections do not provide such information this assumption is necessary. It is also reasonable, as the codes included in the new definition cover a significant proportion (or all in the case of household) of the waste streams.
- (iii) Further to the above, that the reduction in landfilling under the included codes is proportionately the same, or that differences in future reductions across codes do not impact on overall biodegradability of the waste sent to landfill. Although there maybe some changes amongst streams (such as more landfilling of MBT residues which have assumed 50% biodegradability rather than 68%), there would have to be a large increase in such landfilling to materially affect biodegradability.
- (iv) That the biodegradability of mixed municipal waste assumption (68%) used is correct, and does not change over time (as a result of either improved data/estimation, or as a result of diversion of particular wastes out of the residual stream). An upward change to this

<sup>2</sup> Please see consultation for further details

assumption would present a larger risk to meeting the targets than the assumption in (iii) above. Defra is carrying out primary research in order to improve understanding of current biodegradability.

(v) That the diversion of the household stream is proportional to that of the old-definition municipal stream. Any differences would have to be very large to materially affect results.

The projections set out below are based on indexing our estimates of household and C&I wastes to the current estimate of that sent to landfill (14.6mt in 2009), and applying an index of our projections in order to generate forecasts to 2020. A simplified example is set out below:

Example:

Of the 14.6mt of biodegradable waste landfilled against the relevant codes for municipal waste in 2009, 47% is assumed to be of commercial and industrial origin<sup>3</sup>. Therefore, the landfilled tonnages from the household and C&I streams are 7.77mt and 6.82mt respectively.

If we know that household index is to have fallen by 20% by 2013, and the C&I by 15%, then the projection for 2013 is simply  $(0.8 \times 7.77) + (0.85 \times 6.82) = 12.01\text{mt}$ . Thus, in this illustrative situation, the target for 2013 (14.5mt) is easily met.

The amount of household biodegradable waste landfilled has dropped sharply since 2005 as a result of the effect of a combination of the LATS scheme and the escalation of landfill tax. The amount of all waste landfilled by local authorities has dropped by more than 30% between 2005/06 and 2009/10. The forecast is for continued improvement, both because of the coming on-stream of already planned/in construction waste infrastructure becoming operational, and because of the continuing impact policy instruments.

In terms of C&I waste, the primary instrument is the landfill tax. Overall standard-rated taxable tonnages have dropped by over 37% from 2005/06 to 2009/10. Therefore, the reduction in landfilling from the C&I stream alone is in excess of 40% over the period.<sup>4</sup>

On the basis of our projections and keeping in mind the assumptions above, Table 3 below shows the projected performance of England in reaching Landfill Directive targets, on a central projection basis.

**Table 3: Projections of progress towards Landfill Directive targets: Central case**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Household	7,766	6,223	5,316	4,474	4,000	3,937	3,954	3,963	3,960	3,839	3,571
C&I	6,822	6,084	5,846	5,551	5,308	5,180	5,114	5,114	5,114	5,114	5,114
<b>Total</b>	<b>14,588</b>	<b>12,307</b>	<b>11,162</b>	<b>10,025</b>	<b>9,308</b>	<b>9,117</b>	<b>9,068</b>	<b>9,077</b>	<b>9,074</b>	<b>8,952</b>	<b>8,685</b>

This illustrates that England will meet the 2010 target, and has almost reached the 2013 target level, on the basis of 2010 data - England is comfortably on course to meet the 2013 target. The projections also suggest that the 2020 target will be met, in the central case. The margin of error, however, around this is less than for the 2010 and 2013 target years. In addition, projection uncertainty is clearly greater farther into the future.

It is notable that C&I projections to landfill flatline post-2015/16 - projections in this sector do not extend beyond this year. However, this is probably conservative given the lags in behaviour and investments coming on line in response to policy – in reality, diversion may continue to occur.

<sup>3</sup> This has been arrived at by estimating the landfilling of household wastes (which is assumed to be classified entirely in the included EWC codes), on the assumption that the proportion of household wastes sent to landfill is in the same proportion as old-definition municipal waste. Taking the 68% biodegradability assumption allows estimation of biodegradable household wastes sent to landfill. Subtracting this figure from the overall 14.6mt figure for 2009 allows an estimate of the amount of waste in the included EWC codes which is of C&I origin.

<sup>4</sup> Although a significant amount of the reduction has occurred in the last two years where the effect will be partly a result of the steep landfill tax escalator, but also a result of the economic downturn.

Hence, we *may* actually have more confidence in meeting the 2020 target than is implied by the figures above.

### Sensitivities

(i) In order to reflect the potential lags noted above, an illustrative modelling sensitivity is shown below to reflect ongoing diversion from landfill of C&I waste. As we do not have projections, we have instead made an illustrative assumption on what diversion may be. The assumption is that diversion continues at a rate of half of that of the previous 5 years, reflecting the fact that ongoing diversion is likely to be lower than in previous years (as the landfill tax is no longer assumed to rise in real terms) but there may be continued diversion as a result of infrastructure and behavioural lags.

**Table 4: Progress towards Landfill Directive targets – C&I extrapolated**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Household	7,766	6,223	5,316	4,474	4,000	3,937	3,954	3,963	3,960	3,839	3,571
C&I	6,822	6,084	5,846	5,551	5,308	5,180	5,114	5,027	4,941	4,857	4,774
<b>Total</b>	<b>14,588</b>	<b>12,307</b>	<b>11,162</b>	<b>10,025</b>	<b>9,308</b>	<b>9,117</b>	<b>9,068</b>	<b>8,990</b>	<b>8,901</b>	<b>8,696</b>	<b>8,345</b>

The results of this sensitivity clearly shows the 2020 target is met more comfortably (other target years are unchanged).

(ii) Should household waste growth turn out to be higher than expected, then we should expect landfilling to increase. A sensitivity scenario showing this is contained in Table 5 below. This uses alternative Defra estimates of household waste growth.

**Table 5: Progress towards Landfill Directive targets – higher HH waste growth**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Household	7,766	6,453	5,693	5,046	4,613	4,613	4,630	4,616	4,586	4,466	4,123
C&I	6,822	6,084	5,846	5,551	5,308	5,180	5,114	5,114	5,114	5,114	5,114
<b>Total</b>	<b>14,588</b>	<b>12,537</b>	<b>11,539</b>	<b>10,598</b>	<b>9,921</b>	<b>9,793</b>	<b>9,744</b>	<b>9,730</b>	<b>9,699</b>	<b>9,580</b>	<b>9,236</b>

The increase in BMW landfilled over the central scenario does not produce any concerns in target years to 2013 (the margin is nearly 4mt). In 2020, however, the margin of comfort is reduced by 550kt to around 0.9mt, a reduction of around 35% in the margin.

(iii) It is noticeable from the above tables that the reduction in landfilling is more concentrated in the household sector than the C&I sector. This is partly a function of the reductions in C&I only continuing until 2015/16 in the central case. However, even accounting for this, the household sector still diverts greater relative amounts over the time period. A potential reason for this is that the C&I sector has previously diverted more, and hence there is more remaining potential in the household sector. In order to represent a much more pessimistic scenario of household waste diversion, illustrated below is a modified version of Table 4, where household waste is assumed to be diverted at the same rate as C&I waste.

**Table 6: Progress towards Landfill Directive targets – Lower HH diversion**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Household	7,766	7,495	7,224	6,888	6,611	6,466	6,390	6,281	6,174	6,069	5,966
C&I	6,822	6,084	5,846	5,551	5,308	5,180	5,114	5,114	5,114	5,114	5,114
<b>Total</b>	<b>14,588</b>	<b>13,579</b>	<b>13,070</b>	<b>12,439</b>	<b>11,919</b>	<b>11,646</b>	<b>11,504</b>	<b>11,395</b>	<b>11,288</b>	<b>11,183</b>	<b>11,080</b>

Table 6 demonstrates that in such a situation, the 2020 would not be met (although 2010 and 2013 would still be comfortably met). As noted, this does represent a pessimistic scenario so should be treated as such, but monitoring of the targets should bear in mind such a trajectory.

### Infrastructure modelling:

The economic modelling takes account of infrastructure, however it is not solely based on knowledge of planned infrastructure – the modelling simulates decision-making in light of the

various constraints. Defra also undertakes modelling based around waste growth projections and knowledge of planned and proposed infrastructure capacity. Defra has recently published work showing how such infrastructure modelling work has been used to inform the Spending Review of October 2010<sup>5</sup>. As part of the Spending Review process Defra concluded that seven waste infrastructure projects should not receive the PFI credits which had provisionally been allocated to them, on the basis that, on reasonable assumptions, these projects would no longer be needed in order to meet the 2020 landfill diversion targets.

This work summarises expected infrastructure delivery and waste arisings growth. In concluding that some waste infrastructure partly funded through PFI was not required, it demonstrated that on a bottom-up infrastructure basis, England is on course to meet our Landfill Directive targets, even here waste growth is significantly higher than central projections suggest.

### Summary:

On the basis of the evidence presented above, on both the basis of economic and infrastructure modelling, the Landfill Directive targets are expected to be met with the current suite of policy instruments. This is particularly the case for the nearer-term targets of 2010 and 2013. Should diversion from landfill be *significantly* lower than expected, there is a possibility that the 2020 target level could be exceeded. This is unlikely, but should be monitored,

As such, the analysis does not consider the cost of meeting the targets, as no new policy measures are currently proposed. The projections detailed above stem from the expectation of what current policy will deliver, and thus there are no additional costs and benefits. Should any new policy proposals arise in future, there would be an assessment of the likely costs and benefits at that time.

The figures above do not reflect the impact of the recent publication of new Commercial and Industrial waste statistics<sup>6</sup>. These statistics show a 29% decrease in the total amount of commercial and industrial (C&I) waste generated since the last survey in 2002/03 (to 48 million tonnes). Industrial waste has declined by 36% (to 13.4 million tonnes) and commercial waste by 21% (to 6.5 million tonnes) during this period. This indicates a significantly lower amount of municipal C&I waste than had been assumed in previous modelling. Assuming these C&I statistics do not indicate a blip (as a result of the time of the survey in 2009, during the recession), it is likely that less waste would be landfilled in future years than previously projected. As such, this would give further confidence that England will meet its portion of the revised landfill diversion targets.

### (b) Does LATS contribute to meeting Landfill Directive targets?

#### Economic Theory:

The landfilling of biodegradable waste by local authorities is regulated by two market-based instruments – the landfill tax and LATS. There is clearly some overlap between the instruments – for each tonne of waste landfilled a local authority will pay landfill tax, and will also have to ensure that they have sufficient LATS allowances to cover the biodegradable portion of that tonne. As such, the policy-related incentive to avoid landfilling a tonne of waste is equal to the landfill tax plus the value of LATS allowances.<sup>7</sup> For an authority to divert sufficient waste from landfill, the value of these two incentives combined must equal the additional cost of non-landfill treatments.<sup>8</sup>

<sup>5</sup> See: <http://www.defra.gov.uk/environment/economy/waste/widp/pfi-funding/>

<sup>6</sup> <http://www.defra.gov.uk/statistics/environment/waste/wrfg03-indcom/>

<sup>7</sup> Assuming only mixed wastes are sent to landfill by local authorities.

<sup>8</sup> Assuming no residues from the process.

If it is assumed that the additional cost of diversion from landfill stays constant in real terms, then the combined incentive should remain at the same level (i.e. constant allowance prices). However, if added to this scenario, is a rising landfill tax, the value of LATS allowances must fall to keep the combined incentive level constant<sup>9</sup>. Of course as targets become more difficult over time, the marginal cost of diversion from landfill may rise, in which case the allowance price could rise, even in the presence of a rising landfill tax.

Fullerton, Leicester and Smith (2010) describe how it is the quantity constraint of LATS that sets the binding environmental outcome, with the value of allowances dependent upon the rate of landfill tax and marginal cost of diversion, rather than the landfill tax, although they do also note that the tax acts as a floor price if the LATS targets are easy to meet. It is this latter situation which has occurred (see below) – authorities are overachieving against their LATS targets and will continue to do so. As well as reflecting the continued escalation of the landfill tax, this phenomenon may also have been caused by risk-averse behaviour by authorities

### Economic modelling:

As set out above, it is expected that England meets its portion of landfill diversion targets, based on the current suite of policy instruments. Would this still be the case if LATS were removed? In addition, would the behaviour of local authorities change their behaviour if LATS was removed?

In the central case projections outlined above, there is leeway below the 2020 target level of nearly 1.5mt biodegradable municipal waste. Hence, on the central projection, local authority landfilling of biodegradable municipal waste would have to increase by that much for England to miss its target level.

We have undertaken analysis of this question using Defra's LAWRRD model. This model provides projections for the local authority (and also household) sector and can be run with and without the impact of the LATS policy instrument. Rather than increasing landfilling of biodegradable waste by 1.5mt, in our central case the modelling suggests that LATS has no effect at all on the projections of waste to landfill, biodegradable waste to landfill, recycling rates, or indeed on any of the outcomes. This suggests that LATS is not a binding constraint on local authority behaviour, rather it is the landfill tax which is driving diversion decisions. This is not surprising given the evolution of landfill tax rates over the time period in question.

Clearly it is prudent to consider sensitivities around this result, to ensure that it is robust to less favourable outcomes, and to ensure a robust evidence base around the decision to discontinue LATS or not. The sensitivities considered relate to waste growth – higher levels of waste growth lead to greater infrastructure demands and more waste being sent to landfill. The sensitivity cases illustrate that annual waste growth in local authority collected waste must approach 2.5% in order for LATS to have any impact at all, and even then only in the latter years of the target regime. This level of waste growth is far higher than that recently observed, as well as being over 1% per annum in excess of the 'higher' waste growth scenario in Table 5 above. This suggests that LATS has been superseded by the landfill tax, a conclusion that is robust to sensitivity.

### Stakeholder views:

Given the importance of making the right decision, it is also important to consider the views of stakeholders with regard to the effectiveness of LATS. In responding to the consultation the majority view (including the leading local authority and industry bodies NAWDO, ADEPT, CIWM and ESA) was that, although LATS had been a driver to kick start diversion of waste from

---

<sup>9</sup> Fullerton, Leicester and Smith follow a similar argumentation in 'Environmental Taxes', Dimensions of Tax Design: the Mirrlees Review (2010). Available at: <http://www.ifs.org.uk/mirrleesReview/dimensions>

landfill, it had now been superseded by the Landfill Tax. This is currently £56 per tonne (in 2011/12) rising to £80 per tonne by 2014/15 for active waste, and set at this floor until at least 2020. In contrast the level of tax was £9 and £12 a tonne in the years when LATS was introduced. Similar views were expressed at the stakeholder workshop in May 2010.

Further, under the revised interpretation of “municipal waste”, LATS was seen by some as inequitable, placing an additional burden on local authorities, and subjecting them to potential financial penalties, which do not apply to the private sector. One reason given for relying on the Landfill Tax instead is that it addresses both the previous and new interpretations of “municipal waste”, rather than differentiating, as does LATS, between wastes which are similar in nature and composition.

Local authorities who responded to the consultation consider that LATS presents a barrier to local authority collection of waste from businesses. Ministers have also advised that removing perverse incentives which currently prevent local authorities providing a better service to SMEs would be a positive development. In addition to local authorities the Federation of Small Businesses has said that “there is a strong case to be made” for ending LATS, as it acts as a disincentive for local authorities to provide business waste collection services, and distorts the market price for those services provided by private companies

## **Costs**

One of the reasons that ending LATS after the end of scheme year 2012/13 is preferred to an immediate ending is because of the existence of agreed trades up until that year. Therefore, ending the scheme will have no direct financial implications for authorities in terms of trading (even though these would, in any case, be distributional in nature rather than real resource costs). Ending LATS would however reduce the reporting burden on local authorities. This is likely to be realised through streamlining the requirements for entering data into the WasteDataFlow system. Using information around the likely time savings from the Environment Agency, we have estimated that administration burden to local authorities of administering the Scheme would fall by approximately £950,000 pa.

### Assessment of options

The analysis and evidence base used is set out in detail above. How this analysis and evidence applies to the particular options is discussed below.

#### (i) Baseline – do nothing

This option would leave LATS in place until 2020. To do so would mean there was an unnecessary policy burden in place for local authorities – the objective which LATS was implemented to address can now be achieved without LATS. It would also keep in place the barriers to local authorities collecting commercial waste if requested to do so. Any trades between local authorities would have purely distributional effects, transferring money between authorities.

#### (ii) Policy Option 1 - End LATS immediately

Ending LATS would have no impact on the amount of waste sent to landfill, and hence would not affect progress towards landfill diversion targets. It would remove any burden that LATS places on local authorities. It would also remove the barrier to local authority collection of waste from businesses, allowing the potential to better integrate their collections of commercial waste with their household collections.

However, ending LATS immediately i.e. after the 2010/11 scheme year would have disadvantages procedurally, and for local authorities. It would not enable factoring in time for laying the regulations,

and would not allow local authorities time to adapt to the change, especially since WDAs have committed to trades of allowances up to 2013 – authorities could try and pull out of agreed deals causing conflict between themselves.

The present value of the admin burden savings to local authorities are estimated at £7.44 m.

### (iii) Policy Option 2 -End LATS after 2012/13 scheme year. (Preferred Option)

Ending LATS after 2012/13 has some of the same advantages as ending it immediately. As with immediate ending, it would have no impact on waste sent to landfill or on meeting landfill diversion targets. It would remove any burden that LATS places on local authorities. It would also remove the barrier to local authority collection of waste from businesses, allowing the potential to better integrate their collections of commercial waste with their household collections.

In contrast to option (ii), ending LATS after the 2012/13 scheme year would avoid the disadvantages caused by ending LATS immediately i.e. it allows sufficient time to lay the required legislation before Parliament, and allow LAs to honour any trades already agreed.

The present value of the admin burden saving for local authorities, at £5.58m, is slightly lower under this option as the scheme runs for 2 years more than option 1.

## **Legislative Changes**

As referred to in the background section, changes are required to align relevant references in legislation to the revised definition. Previously municipal waste was used to refer to waste collected by local authorities. This same term was used in relation to the EU Landfill Directive targets to reduce biodegradable municipal waste to landfill, and in the related Landfill Allowance Trading Scheme. Given the revised approach to municipal waste now used for the EU landfill diversion targets there is a need to find an alternative term for waste managed by local authorities. This is for both ongoing statistical reporting of local authority performance and for the landfill allowance schemes operated across the UK. The term to be used is Local Authority Collected Municipal Waste (LACMW). LACMW refers to the previous 'municipal' element of the waste collected by local authorities. That is household waste and C&I waste where collected by the local authority and which is similar in nature and composition as required by the Landfill Directive.

These changes are a consequence of the revised interpretation of municipal waste. They are necessary to ensure the soundness of the legal and administrative basis to the UK's approach. They will not have a real world impact on the way waste is managed, or on the costs and benefits to either the public or private sector.

## **Risks and Assumptions**

LATS directly controls the amount of BMW that local authorities can send to landfill – it is an absolute quantity constraint, enabled by trading and penalties for non-compliance. By removing it there is a risk that authorities may lose focus on the need to continue to reduce their waste sent to landfill, however, the analysis above demonstrates that the landfill tax driver should prevent this occurring.

Some of the key assumptions behind the projections are set out previously.

## **Direct costs and benefits to business**

There are no direct costs or benefits to business as LATS is an instrument that has been applied to local authorities.

## Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

### Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

<p><b>Basis of the review:</b> [The basis of the review could be statutory (forming part of the legislation), i.e. a sunset clause or a duty to review, or there could be a political commitment to review (PIR)];</p> <p>N/A. We do not intend to carry out a Review of this type. However, we will continue to monitor progress against meeting the Landfill Diversion Targets.</p>
<p><b>Review objective:</b> [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?]</p>
<p><b>Review approach and rationale:</b> [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach]</p>
<p><b>Baseline:</b> [The current (baseline) position against which the change introduced by the legislation can be measured]</p>
<p><b>Success criteria:</b> [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives]</p>
<p><b>Monitoring information arrangements:</b> [Provide further details of the planned/existing arrangements in place that will allow a systematic collection of monitoring information for future policy review]</p>
<p><b>Reasons for not planning a review:</b> [If there is no plan to do a PIR please provide reasons here]</p>

### **Specific Impact Tests**

No Specific Impact Tests have been carried out as part of the analysis of policy options, apart from the Competition Assessment Impact Test. Removing LATS is not expected to change the way waste is managed or impact on the amount of waste diverted from landfill, and this policy change is not therefore expected to have environmental or sustainable development impacts. It is also not expected to impact on health or other inequalities, the justice system, rural areas, or have human rights implications.

### **Competition Assessment:**

We do not expect a significant impact on competition as a result of the withdrawal of LATS. However, as noted above, the proposal does remove a potential barrier to local authorities collecting business waste – the need to submit allowances for any biodegradable waste landfilled discourages authorities from collecting such waste. As a result of the ending of LATS it may be the case that some local authorities choose to better integrate their collections of household and business waste by offering more business waste collection, in which case there could be a boost to the range of services offered and competition in the market.