



Report of the Strategic Director of Environment and Neighbourhoods

Executive Board

Date: 11th September 2007

Subject: Waste Strategy

Electoral Wards Affected: All

Specific Implications For:
Equality and Diversity <input type="checkbox"/>
Community Cohesion <input type="checkbox"/>
Narrowing the Gap <input type="checkbox"/>

Eligible for Call In

Not Eligible for Call In
(Details contained in the report)

EXECUTIVE SUMMARY

On the 18th October 2006, Members of the Executive Board adopted the Integrated Waste Strategy for Leeds 2005-2035. This report sets out a number of alterations to the strategy. It also sets out a number of principles for the procurement of a residual waste facility, more details of which will be contained in a report next month. The report, however, concentrates on changes to the recycling strategy.

It is now proposed that the key Waste Strategy targets would read as follows:

1. To reduce the annual growth in waste per household to 0.5% by 2010 and to eliminate growth per household by 2020;
2. To achieve a combined recycling and composting rate of greater than 50% of household waste by 2020;
3. To recover value from 90% of all household waste by 2020.

The service developments proposed to enable Leeds to meet the combined recycling and composting rate of over 50% are as follows:

- Increasing the frequency of existing kerbside SORT collections (dry recyclables) to fortnightly;
- Adding glass to the range of materials collected;
- Introducing garden waste collections to all suitable properties;
- Providing weekly black bin collections of food waste and, where this is done, introducing residual waste collections on a fortnightly basis.

In particular, Members of the Executive Board at this meeting are requested to:

- Approve increasing the recycling target outlined in the Waste Strategy to “greater than 50% by 2020”;
- Support the proposed recycling service developments, in particular the commitment to weekly collections of food waste;
- Note the projected financial implications of the strategy and agree that provision be included within the City Council’s future financial plans, commencing in the 2008/09 financial year, subject to regular review;
- Note that the Outline Business Case for a residual waste treatment facility is currently being developed and that approval for its submission to DEFRA will be sought from Members at their next meeting on 17th October.

1.0 PURPOSE OF THIS REPORT

The purpose of this report is to seek Members’ approval to:

1. Increasing the recycling and composting target within the Integrated Waste Strategy for Leeds;
2. The recycling strategy for Leeds outlined in the report;
3. The integration of the proposed short to medium term strategy (from 2007/08 to 2013/14) for recycling and composting into the City Council’s Corporate Financial Plans.

2.0 BACKGROUND INFORMATION

- 2.1 The Integrated Waste Strategy for Leeds sets out aims to reduce the impact of waste management on the environment and significantly reduce the amount of waste going to landfill, with an aspiration to send zero waste to landfill. The proposals to increase the Council’s recycling target and introduce weekly collections of food waste are in line with the Government’s Waste Strategy 2007 which introduced increased targets for recycling and recovery. The Government has also accelerated the rate of growth in landfill tax to £8 per annum from April 2008 until March 2011. This will take landfill tax to £32 per tonne next year and increase disposal costs by over £2 million each year if we continue to landfill waste at the current rate.
- 2.2 The Landfill Allowance Trading Scheme (LATS) was introduced in 2005/06 as a means of ensuring compliance with the European Union targets on the reduction of biodegradable waste sent to landfill. Leeds is issued with ever decreasing numbers of LATS permits. Permits can be bought from other local authorities at a price determined by market forces. A penalty of £150 per tonne is payable for each tonne of waste landfilled without a permit. Penalties become a reality if there are insufficient permits nationally to cover the total amount of waste landfilled. It is estimated that Leeds could potentially face cumulative penalties of £178 million by 2020 if no action is taken.
- 2.3 On the 18th October 2006, Members agreed the Integrated Waste Strategy for Leeds 2005-2035. The report set out the Strategy’s ultimate vision for Leeds to become a ‘zero waste’ city through a range of measures to reduce, reuse, recycle and recover value from all waste with, ultimately, no waste being disposed of to landfill.
- 2.4 The strategy contains three main targets relating to waste growth, the level of recycling and the recovery of value from waste.

3.0 MAIN ISSUES

3.1 This report proposes an increase in the recycling targets previously agreed in order to acknowledge the performance of the city and public demand for more opportunities to recycle. Targets would therefore read as follows:

1. To reduce the annual growth in waste per household to 0.5% by 2010 and to eliminate growth per household by 2020 (with the effect of reducing our overall arisings by 10% as compared to previous forecasts);
2. To achieve a combined recycling and composting rate of greater than 50% by 2020 (an increase on the previous target of 40%);
3. To recover value from 90% of all household waste by 2020.

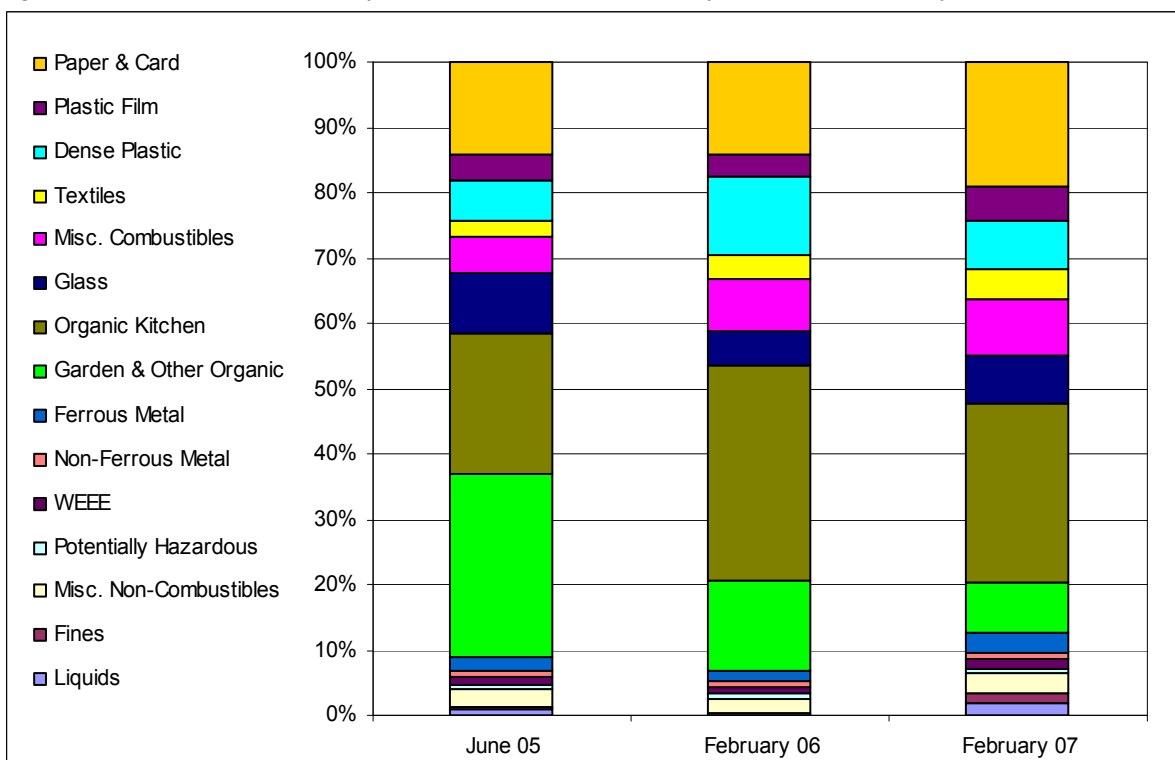
3.2 The means to achieving these three main targets are firstly through continuing to develop opportunities to reduce and reuse waste, but also through the implementation of a short to medium term strategy for the period 2008 to 2014 that will require a range of recycling service developments, and through a long term technology solution for residual waste programmed to commence operations in 2014.

3.3 Short to Medium Term Recycling Strategy

3.3.1 In addition to our efforts to reduce and re-use waste, the period from 2008 will require significant enhancements to the existing recycling collection service in order to accelerate the increase in the proportion of household waste that is recycled from the current level of 26% (June 2007) and to reduce the amount of household waste going to landfill.

3.3.2 The composition of Leeds' waste has been studied by analysing the individual waste streams from a demographically representative sample of both residual waste and recycling bins from across the City. Figure 1 below provides a summary of the findings from recent studies, with the latest full report attached at Appendix 1 for information.

Figure 1 Residual Waste Composition, June 2005, February 2006 and February 2007



3.3.3 The latest waste composition report shows that, on average, just over 35% of the weight of residual bins was organic kitchen or garden waste. These streams therefore offer the most significant opportunities to increase the levels of recycling. Glass is the only other stream currently not collected at the kerbside that offers a significant opportunity to increase recycling. The report also highlights that there is a significant amount of waste being disposed of through the residual waste bin, which, if sorted, could be recycled as part of the existing green bin collection.

3.3.4 Analysis of the current residual waste has led to the development of five key elements of the recycling strategy:

- Enhanced education leading to better participation in recycling;
- Increase the frequency of kerbside SORT collections;
- A garden waste collection service;
- The provision of a glass recycling service;
- A food waste collection service.

3.3.5 We have assessed a number of options for the collection of waste in Leeds in order to:

- provide value for money and best value in service delivery;
- minimise the amount of waste going to landfill;
- increase the percentage of waste being recycled and composted in order to meet our statutory recycling and composting targets;
- specifically minimise the amount of biodegradable municipal waste going to landfill and hence reduce the number of Landfill Allowance Trading Scheme (LATS) permits required to be purchased;
- be operationally deliverable;
- encourage waste minimisation;
- minimise any harmful environmental effects;
- be as easy for the public to understand as possible;
- avoid adversely affecting any section of the population;
- avoid a deterioration in the quality of street cleanliness.

3.3.6 Service enhancements modelled originally for Leeds' Waste Strategy included the introduction of garden waste collections, increased dry recyclables collections and the introduction of glass collections. Officers have worked with specialist advisers to model further enhancements to the collection options with the objective of achieving 50% recycling of household waste as a minimum. The key addition that will enable Leeds to increase its recycling target will be the introduction of segregated weekly collections of food waste. These enhancements reflect national best practice.

3.3.7 In order to meet the objectives outlined above and enable the Council to reach its 50% recycling target by 2020 we propose the following changes to refuse collection in the city:

3.3.8 Increase the frequency of kerbside SORT collections to fortnightly

The kerbside collection of commingled dry recyclable waste is working well. Consultation shows that the major driver for participation is convenience and the current service is easy to use and explain and yields good results.

When the public were consulted in 2006, 63% said that they would recycle more if their green bins were emptied more often. 77% of people said that their green bin was full when collected, supporting evidence from the first composition analysis which showed that over 50% of green bins were full when collected. The latest waste composition analysis suggests that there is still a large proportion of waste in the residual waste bin that could be recycled if it was sorted into the green bin. This evidence suggests that the capacity of the green bin is restricting the amount of waste being recycled.

Increasing the frequency of collection of kerbside SORT collections to fortnightly would immediately double the capacity in the green bin and increase the amount of waste recycled. It is proposed that implementation of this enhanced service would commence in 2008/9 and be completed in 2009/10.

3.3.9 Add glass to the range of materials collected at kerbside

Glass is the only significant dry recyclable waste stream that is not currently collected at kerbside. Removal of this from the waste stream would contribute to an increase in recycling and would reduce the overall tonnage of waste landfilled.

Glass is easily sorted and recognisable by the public as something that can and should be recycled. Taking bottles to bottle banks is well established, and 7,560 tonnes were collected from our household waste sites and bring banks in 2006/07.

There are a number of different methods by which glass could be collected. If it is co-mingled with other dry recyclables a new or improved Material Recycling Facility (MRF) would need to be developed in Leeds. Alternatively, a separate container could be used for glass and this could be collected with other materials and segregated on the vehicle or through an independent collection. It is anticipated that kerbside glass collections could be implemented in 2010/11, although a full options appraisal now needs to be completed to determine the most effective collection method.

3.3.10 Introduce garden waste collections to all suitable properties (fortnightly)

A pilot collection service of garden waste was introduced in October 2006. This has been available to over 20,000 households. The scheme has proved successful with over 1,700 tonnes collected, exceeding original forecasts. There has also been a corresponding reduction in the waste collected in residual waste bins in the relevant areas.

Garden waste is easily recognised by the public and makes up a large proportion of waste in the residual waste bin, especially during the summer months. The removal of this waste from the residual waste bin would result in a significant diversion of biodegradable municipal waste from landfill, and the associated reduction in carbon emissions contributing to climate change, and increased performance against our recycling targets.

Garden waste can be composted using relatively simple open windrow composting sites making processing relatively cheap and accessible so that the roll-out of this service could commence in 2008/09 and be available to all suitable properties by the end of 2009/10.

It should be noted that, whilst fortnightly collections throughout the year have been modelled for the purposes of this report, it is likely that garden waste could be collected less frequently during winter months (e.g. four weekly), with a subsequent reduction in costs.

3.3.11 Introducing weekly black bin food waste collections and, where this is done, reduce residual bin collections to fortnightly

Food waste makes up a significant proportion of the residual waste bin content. As with garden waste it is easily recognisable. Kitchen waste would be collected using a 'lockable' container and a dedicated kitchen caddy to ensure that we were meeting the Animal By-Product Orders requirements and to make it acceptable to the public in terms of odour.

The processing of food waste is governed by the Animal By-Product Orders (1999 and 2001). There is currently no facility in Leeds where kitchen waste can be processed according to the relevant environmental regulations. The introduction of a food waste scheme would require the procurement of an Animal By-Product Order licensed disposal point, such as an in-vessel composting or anaerobic digestion facility. Any food waste collection scheme could not be introduced until this was procured.

Some authorities choose to collect mixed garden and kitchen waste in the same receptacle. This would require all of this waste to be treated through a licensed facility, and experience in other authorities suggests that this is not the most economic way of treating this waste. A case study from ECT, a not for profit waste management company, found that:

“While food waste makes up about 25% of the waste bin, when people put green waste with it, the food only makes up about 10% of the green/food waste bin. Then, the council will have to pay the cost of sending all the material to an [Animal By-Product approved] in-vessel plant when the majority could have been treated more cheaply via an open windrow”.

Evidence suggests that collecting garden and food waste separately leads to a better product at the end point, allows a greater range of food types to be collected and is easier for the public to use.

The introduction of weekly food waste collections, together with the other measures outlined above, creates capacity in the residual waste bin and removes the odour problems associated with putrescible waste. This would enable the frequency of residual waste bin collections to be reduced. Given the enhancement to the recycling services, a movement to the fortnightly collection will make a contribution to the overall cost as well as encouraging people to use their recycling facilities. It is anticipated that weekly food waste collections could start implementation in 20010/11 and be fully rolled out in 2011/12.

3.3.12 Enhanced education leading to better participation in recycling

A change in consumer behaviour will be required to ensure maximum participation in the schemes outlined above. As can be seen from the composition analysis above, materials currently targeted by recycling collection services still represent significant streams within the residual bins. An ongoing Education and Awareness campaign will be needed to increase the capture of targeted materials, to support the introduction of the proposed service developments and ensure the public’s continued participation. Financial analysis within this report includes provision for increased education.

3.3.13 Implementation of services

Indicative timescales for introducing the major service developments are shown in Table 1.

Table 1 – Indicative Roll-Out Timescales

Service Development	Commence Roll-Out	Complete Roll-Out
Increase the frequency of kerbside SORT collections	2008/9	2009/10
Extend garden waste collection service	2008/9	2009/10
Introduce kerbside glass recycling service	2010/11	2010/11*
Introduce food waste collection service	2010/11	2011/12

* Subject to outcome of options appraisal to determine most suitable collection method

3.3.14 The effects of the service developments have been modelled against predicted waste growth and the forecast performance is set out below in Table 2. However, it should be noted that proposed service developments theoretically offer the potential to recycle 70% of household waste assuming 100% public participation.

Table 2 - Forecast Performance

	Forecast Recycling %	Government Targets	Tonnage Recycled
2010	33.42	40	119,397
2015	49.35	45	188,227
2020	52.06	50	209,636

- 3.3.15 It is imperative in introducing these collection services that they meet the needs of the diverse range of communities and housing types that exist in Leeds. The modelling carried out acknowledges that not all households will be suitable for the full range of collections. The composition of the waste in different areas, public opinion and the limitations in some property types for the segregation and storage of waste will therefore be taken into account.
- 3.3.16 As regards new property developments, the Recycling and Waste team works closely with Planners in City Development and is systematically consulted on relevant planning applications in order to ensure that developers are making adequate provision for recycling within their proposals. Furthermore, the sustainable Development Unit have now developed, and are currently consulting on, a new 'Sustainable Design and Construction' supplementary planning document for all major developments which covers all issues of sustainability, including waste and recycling and suitable external and internal storage provision. The Recycling and Waste team will continue to work with City Development to ensure that the future recycling service proposals are reflected in planning policy and guidance.
- 3.3.17 These considerations together with the need to ensure services are introduced efficiently and effectively with good local information and communication has led officers to model a 4 year phased roll out of the service enhancements across the City. The modelling does not assume 100% roll out of all services across the City as the waste composition and area characteristics would make this ineffective. The Household Waste Recycling Act 2003, however, requires all local authorities to provide collections for at least two recycling streams from every household by 2010 unless the cost of doing so would be unreasonably high, or comparable alternative arrangements are available.
- 3.3.18 Provision must be made for the needs of particular groups that have a valid reason for producing more waste or waste of a type that requires special consideration. Some of these include large families, families with young children (i.e. those with nappies to dispose of), those with medical waste and those who experience physical difficulties using standard collection systems. These will be catered for either through the provision of additional capacity, special collections or assisted wheel outs. Consideration will also be given to the challenges presented by different property types, particularly flats, back to back properties, terrace housing and any other property types that have limits on the storage space for additional bins. Different collection methods will be used where possible so as not to unduly restrict access to the range of recycling services.

3.4 Residual Waste Treatment

- 3.4.1 Members of the Board will be aware that the Council's Expression of Interest for PFI Credits to DEFRA was successful, with DEFRA willing to reserve PFI Credits of a minimum of 50% of the initial capital investment value of the residual waste treatment project. DEFRA has requested that the City Council develop and submit an Outline Business Case setting out the City Council's proposals for the treatment of residual household waste involving diversion from landfill.
- 3.4.2 Officers believe that implementing the short to medium term strategy will enable the City Council to achieve its 50% recycling of municipal waste by 2020. However, even after the Council has achieved its 50% recycling target, it would still require treatment capacity of approximately 180,000 tonnes of residual waste per annum in order to ensure that its

targets for landfill diversion and recovery of value from household waste were met. A recent National Audit Office report on waste concluded that:

“An emphasis on increasing recycling alone is unlikely to enable the EU Directive on landfill to be met. The Department (DEFRA) therefore needs to focus its resources towards helping the 25 waste disposal authorities sending the largest amounts of municipal waste to landfill to develop alternative waste treatment facilities, such as Energy from Waste plants, alongside encouraging more households to recycle and compost and initiatives to minimise waste production”.

- 3.4.3 In preparing an Outline Business Case for PFI credits, which will set out a formal request for a specific level of credits that has been agreed with DEFRA, the Council is required to establish a reference project and technology against which the Government can evaluate costs. The Outline Business Case will therefore, by necessity, be based upon a reference project and technology (i.e. Energy from Waste), and on a reference site within the Council’s ownership. However, when procurement commences, bidders will be invited to submit a range of alternative solutions that meet the Council’s performance specification. The proposed approach to procurement will be that the Council adopts the principle of a neutral stance on both technology and sites. All bids received will be evaluated on the basis of environmental, technical and commercial considerations.
- 3.4.4 The Outline Business Case will be brought to the October 2007 meeting of the Executive Board for approval.

4. IMPLICATIONS FOR COUNCIL POLICY AND GOVERNANCE

- 4.1 As previously reported, the PFI elements of the scheme will be managed by the Public Private Partnerships Unit (PPPU) in accordance with the Council’s approved PPP/PFI governance protocol. The other elements of the project will be managed by the Director of Environment and Neighbourhoods. A Leaders’ Waste Strategy Monitoring working group was established earlier in the year, and has now met, with further meetings scheduled.

5. LEGAL AND RESOURCE IMPLICATIONS

- 5.1 The financial projections below have modelled the costs for both a “do nothing” option and a “service development” option. The “do nothing” option assumes that recycling capture rates continue at the current level and that there are no increases in the amount or types of waste targeted through recycling collections, that there are no changes in the roll out of services and that participation remains at current levels. The “service development” option includes, an enhanced SORT collection with bins emptied fortnightly, a fortnightly garden waste service, kerbside glass collections and the weekly collection of food waste together with the introduction of a fortnightly residual waste collection. Table 3 below summarises the costs.

Table 3 - Projected annual budgets if the City Council continues with the same pattern of service delivery (“do nothing” option) - LATS £50/LFT Rising

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
	£000	£000	£000	£000	£000	£000	£000
Management and Strategy:							
Landfill Disposal costs	4,398	4,641	4,878	5,121	5,369	5,636	5,907
Landfill Tax	6,304	8,575	10,889	13,263	15,680	18,186	20,727
Net Cost of Recycling Reuse	1,468	1,211	1,262	1,315	1,368	1,425	1,483
	273	297	310	323	336	350	365
Sale / Purchase of LATS	0	(2,261)	2,101	2,794	4,355	5,051	5,169
Total	12,443	12,463	19,440	22,816	27,108	30,648	33,651

- 5.2 Members will note the projected very steep escalation in costs from 2009/10 onwards. This is due to the continued increase in Landfill Tax which has continued to escalate over the last ten years, with the annual escalation now at £8 per tonne. Central Government is using Landfill Tax as a fiscal device to encourage diversion away from landfill, and it is anticipated that Landfill Tax will continue to escalate at the same rate beyond the increases that have previously been announced up to 2010/11.
- 5.3 In order to ensure compliance with EU landfill diversion targets, the Government introduced the Landfill Allowance Trading Scheme (LATS). The number of LATS permits issued to the City Council will decline each year, and in order to avoid penalties for disposing of waste through landfill without a permit (£150 per tonne), under the “Do nothing” option, the City Council will have to buy LATS from other local authorities at prices determined by market forces. Table 3 above illustrates that the City Council will be in this position by 2009/10, and it is anticipated that there will be a demand for LATS with a consequential impact on the price and adverse affect on the Council’s Revenue Budget. Tables 3 and 4 both assume LATS are purchased at £50.
- 5.4 The other significant cost is the actual disposal or “gate fees” paid to the operators of the landfill sites. It is anticipated that over time these costs will increase due the dual effects of reducing supply of landfill space and tighter Government regulations.
- 5.5 Members will also note that, in addition to the adverse impact on the City Council’s Revenue Budget, under this option the City Council will not achieve the Government’s statutory target to recycle 50% of its household waste by 2020 and the Council’s own corporate objectives relating to recycling and waste management.

Table 4 - Projected annual budgets in the years leading to a long term technology solution (“service development” option) - LATS £50/LFT Rising

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
	£000	£000	£000	£000	£000	£000	£000
Management and Strategy:							
Service Developments	0	2,678	5,547	8,499	11,047	11,523	11,811
Education and Enforcement	0	770	790	809	830	850	872
Landfill Disposal costs	4,398	4,340	4,290	3,996	3,938	3,873	4,005
Landfill Tax	6,304	8,017	9,574	10,338	11,486	12,477	14,030
Net Cost of Recycling	1,468	1,459	1,745	2,746	3,381	3,763	3,954
Reuse	273	297	310	323	336	350	365
Sale / Purchase of LATS	0	(2,872)	621	377	1,295	1,464	1,445
Total	12,443	14,689	22,877	27,088	32,313	34,300	36,386

- 5.6 Members will observe that, whilst the projected overall costs in the years leading to the introduction of a technology solution for residual waste in 2014 are higher than the “do nothing” option, the emphasis is on improving and changing the delivery of the service with consequential lower exposure to Landfill Tax, landfill disposal costs and the purchase of LATS.
- 5.7 The emphasis over the six years leading to the technology solution will be on reconfiguring the collection and disposal service to increase recycling and reuse rates and to gradually reduce the levels of waste disposed of in landfill.

5.8 The service developments proposed over this period comprise the roll out across the City of increased SORT, kerbside glass, garden and food waste collections. The success of these developments may have an impact on the collection of the remaining residual waste. By 2012/13 these service developments are anticipated to result in an approximate additional 88,000 tonnes of waste being diverted from landfill.

Table 5 - Projected comparative costs of the developments in the service, compared to the projected savings in landfill disposal, Landfill Tax and LATS,

	Projected cost of Service Developments in 2012/13 £000	Projected Tonnes of Waste Diverted from Landfill	Projected saving in Landfill, Landfill Tax and LATS £000	Recycling Costs £000	Projected net revenue position from waste diverted £000
SORT / Kerbside Glass	3,578	39,590	(4,662)	727	(357)
Garden Waste	2,743	21,240	(2,841)	369	271
Food Waste	5,202	27,350	(3,659)	1,290	2,833
Total	11,523	88,180	(11,162)	2,386	2,747

Table 5 assumes Landfill Tax rises at £8 per tonne between 2010 and 2020 and that LATS are bought at £50 per tonne.

5.9 The objective of these service developments and other initiatives is to increase the proportion of recycled household waste to 50% by 2020. This will leave approximately 180,000 tonnes to be treated, thus reducing to a minimum the residual waste to be disposed of in landfill.

5.10 Table 6 below compares the year on year increases in budget required for a “do nothing” approach with the costs of implementing the recycling service developments and residual treatment technology. As above, both assume that Landfill Tax continues to rise beyond 2010/11 and that LATS are purchased at £50 and sold at £30 beyond the implementation of a residual waste treatment facility. More detailed financial information on the residual waste treatment facility will be presented to the October Executive Board.

Table 6 - Total Additional Costs of Options

Year	Do Nothing		Service Development/ Technology	
	Annual £(000)s	Cumulative £(000)s	Annual £(000)s	Cumulative £(000)s
2008/09	20	20	2,248	2,248
2009/10	6,977	6,997	8,186	10,434
2010/11	3,377	10,374	4,210	14,644
2011/12	4,292	14,666	5,227	19,871
2012/13	3,540	18,206	1,988	21,859
2013/14	3,002	21,208	2,179	24,038
2014/15	3,538	24,746	419	24,457
2015/16	3,339	28,085	1,081	25,538
2016/17	3,416	31,501	1,359	26,897
2017/18	3,478	34,979	1,366	28,263
2018/19	3,713	38,692	1,414	29,677
2019/20	3,411	42,103	1,437	31,114

5.11 Due to the significance of the recycling strategy and the potential impact of the residual waste treatment technology selection, it is proposed to review the recycling strategy on an annual basis. The annual review will also provide an opportunity to take into account the future profile of waste arisings and evolving techniques for processing waste.

6.0 RECOMMENDATIONS

Members of the Executive Board are requested to

- Approve increasing the recycling target included in the Waste Strategy to “greater than 50% by 2020”;
- Support the proposed recycling service developments, in particular the commitment to weekly collections of food waste;
- Note the projected financial implications of the strategy and agree that provision be included within the City Council’s future financial plans, commencing in the 2008/09 financial year, subject to regular review;
- Note that the Outline Business Case for a residual waste treatment facility is currently being developed and that approval for its submission to DEFRA will be sought from Members at their next meeting on 17th October.