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Appendix - Summary table showing the cost and effect of improving recycling services

1. HALTON BOROUGH COUNCIL

1.1 Introduction

Situated in the North West of England, Halton Borough Council borders Merseyside, Warrington and the Shire county of Cheshire. The Council was formed in 1974 and established itself as a unitary authority in April 1998.

The Borough covers an area of 79 sq km and encompasses the major towns of Runcorn and Widnes. It has a population of 118,900, within 52,909 properties (2005/06).

The Council's overall net budget for 2006/07 is £92 million. Specific waste collection related budgets include approximately £1.58 million for refuse collection and £58,000 (net) for kerbside paper recycling. Approximately £523,000 is allocated to green waste collections, of which £123,000 is for gate fees at the composting site.

1.2 Strategic Aims

The Council is currently focussing on the diversion of biodegradable material from household waste collections through the provision of separate garden waste and paper collections.

The key strategic aims of the Council, in relation to waste management, are as follows:

- Implementing a long term waste management solution that is cost effective;
- Achievement of Best Value;
- Providing a practicable and deliverable waste management system;
- Implementing future plans which complement the Council's key priorities and take into account the socio-economic make up of the Borough.

In addition the Council's 5 Strategic Priorities as contained within its Corporate Plan are:

- A Healthy Halton;
- Halton's Urban Renewal;
- Employment, Learning & Skills in Halton;
- Children & Young people in Halton;
- A Safer Halton.

1.3 Integration with the Merseyside Partnership and JMWMS

The Council is currently progressing with the formalisation of partnership arrangements with the Merseyside Waste Disposal Authority (MWDA) and its partner Merseyside authorities. A recommendation to develop the partnership was formally accepted by the MWDA board on 17th September 2006 and agreed by Halton's Members on 21st September 2006.

Once established, the partnership will enable the joint procurement of appropriate waste treatment and disposal services and facilities.

The Merseyside Waste Partnership currently consists of the following authorities:

- Knowsley Metropolitan Borough Council;
- Liverpool City Council;
- Merseyside Waste Disposal Authority;
- Sefton Council;
- St Helens Council;
- Wirral Metropolitan Borough Council.

The existing partner authorities developed a joint strategy in 2005, *the Joint Municipal Waste Management Strategy for Merseyside* (JMWS).

This document specifies overall, pooled recycling targets as follows:

- 2010 – 33%;
- 2015 – 38%;
- 2020 – 44%.

In addition to these recycling targets, the following aims are specified:

- All Districts to move to the separate collection of dry recyclables, biodegradable waste and residual waste, using kerbside sort or wheeled bin collection systems by 2010;
- All Districts to maximise green garden waste and paper collections;
- All Districts to collect recyclables as often as possible and move to fortnightly residual waste collection by 2010;
- All Districts to move to the kerbside collection of kitchen waste by 2010;
- MWDA to upgrade existing HWRCs to make them more user friendly and customer focused by 2010;
- Every District to optimise its Bring Bank locations across Merseyside to an optimum saturation rate of one per 1000 population.

Part of the development process for the new partnership between Halton and Merseyside has been the consideration of waste management strategies.

Halton produced a waste strategy document in 2004 entitled '*Waste Management Services – The Aspirations and Guidelines*'. The document broadly considered the existing situation and services at that time and potential options for the development of waste and recycling services.

Specifically, the preferred options identified within the document are for the development and consideration of the following:

- More intensive kerbside collections;
- Flexibility to procure an appropriate residual waste treatment facility which offers the best available and acceptable option to replace the existing set of contracts which expire in 2008;
- Harnessing potentially significant economies of scale by working with another authority to deliver shared recovery infrastructure.

These preferred options are considered to be consistent with the JMWMS and the proposed partnership arrangements.

To achieve the integration with Merseyside, Halton Borough Council officers have been working, with the support of external consultants, to accomplish the following objectives:

- An approved Action Plan for Halton Borough Council (March 2007);
- A Memorandum of Understanding (Completed and Agreed October 2006);
- A formal Inter Authority Agreement (Spring 2007);
- A joint Communications and Awareness Protocol with the MWDA. (Completed November 2006);
- Interim arrangements/succession strategy for Halton's current waste management contracts (January 2007);
- A public panel consultation on methods for achieving objectives of the Action Plan (January 2007);
- An updated Waste Management Strategy for Halton (October 2007).

To assist integration and joint working with the Merseyside Waste Partnership, the Council have identified a number of areas for clarification, discussion and potential co-operation within new partnership arrangements, these include:

- Pooling of targets (Approved by DEFRA, December 2006);
- Interim waste management and recycling contract arrangements;
- Financial arrangements;
- Density and provision of bring sites;
- Kerbside collection infrastructure.

1.4 Approval Process and Timescales

The action plan will be submitted to Halton's Executive Board in March 2007 for consideration and approval.

1.5 Current and Future Performance

The Council's most recent waste BVPI performance data for 2004/05 and 2005/06 and estimates for future years are shown in Table 1.1.

Table 1.1
BVPI Performance Data¹

BVPI	Description	2004/05 Actual	2005/06 Actual	2006/07 Targets	2007/08 Targets
82a	% of household waste recycled (%)	13.65	13.58	14.58	15.58
82b	% of household waste composted (%)	9.15	9.64	10.64	11.64
82b (combined)	% of household waste recycled and composted (%)	22.8	23.2	25	28
84a	Number of kilograms of household waste collected per person (kgs)	549.7	549.5	555	561
86	Cost of waste collection per household (£)	26.29	26.95	29.00	31.00
91	% of population served by a kerbside collection of recyclables (%)	100	100	100	100

1.6 Current Waste Management Services

The Council's core waste collection services considered in this action plan are as follows:

- Household residual waste collection service;
- Kerbside paper recyclable collections;
- Kerbside compostable collections;
- RHWC (Recycling and Household Waste Centres);
- Bring Sites.

1.6.1 Household Residual Waste Collections

The majority of households (85%) are provided with a 240 litre black wheeled bin for the storage of residual waste; the remaining households have a sack collection. Collections are made from the boundary of the property on a weekly basis.

An in-house team provides the collection service using the following resources:

- Nine refuse collection rounds (eight full and one part domestic/part trade), using nine RCVs;
- One driver plus two operatives per vehicle for wheeled bin rounds;
- One driver plus five operatives per vehicle for the sack collection round.

¹ Halton Borough Council Performance Plan (2006/07)

The Council's refuse collection service achieves a high customer service rating and attained a CPA score of 4. As a result, the Council plans to continue using its in-house team and have no current plans to market test the service. However, in view of the potential changes to collection services that could be required, the delivery of the service will remain under review to ensure continued 'best value'.

The majority of collected residual waste is delivered to the Arpley Landfill site in Warrington. The rest is delivered to the Huyton waste transfer station on Merseyside, which is used as an alternative site when bank holiday arrangements result in weekend work. This is due to restricted opening hours at Arpley on weekends.

1.6.2 Kerbside Dry Recyclable (Paper) Collections

Halton's current kerbside collection service for paper recycling covers all 52,909 households within the Borough. 36,000 households have a blue 140 litre wheeled bin and 16,909 use a blue plastic sack. Collections are made every four weeks for wheeled bins and every two weeks for sacks, from the boundary of the properties.

The paper collection service was initially operated by a private contractor using sacks. Successful trials using blue bins were introduced in 2003, which resulted in a further expansion of the blue bin service to replace sack collections at all appropriate properties. Participation in the scheme is estimated to be around 45%.

An in-house team provide the collection service using the following resources:

- One RCV for the wheeled bins;
- One 3.5 tonne boxed tipper for collecting sacks;
- One driver plus two collectors per vehicle for sack collections;
- One driver plus two collectors per vehicle for wheeled bin collections.

Collected paper is delivered to a local, privately owned transfer station for storage, bulking and loading. It is then transported to Shotton, Deeside for reprocessing.

Approximately 9,000 terraced properties in the borough are not suitable for the provision of a second wheeled bin. Where practical, consideration will be given to the use of communal recycling bins or other local recycling facilities, to service these, and other properties, that cannot be provided with additional wheeled bins.

1.6.3 Kerbside Compostable (Green Waste) Collections

The kerbside collection of garden waste is currently provided to 30,000 households within the Borough. These households are provided with a green 240 litre wheeled bin, which is emptied fortnightly. It is estimated that the service has a participation rate of around 50%.

The garden waste collection service was first introduced in 2002/03 on a trial basis. Following the success of the scheme, it was rolled out using Local Public Service Agreement (LPSA) funding. This was carried out in stages and the service currently covers 75% of suitable properties.

The Council's in-house team provides the collection service using the following resources:

- Two RCV 'rotopress' vehicles;
- One driver plus two collectors per vehicle.

Garden waste is collected from households and delivered to the facility at Haddocks Wood in Runcorn, where it is composted using open windrows. This facility is also used to process the green waste that is collected at the Recycling and Household Waste Centres.

1.6.4 Bring Sites

There are 35 recycling bring sites in Halton. Some consist of containers for a single material such as glass or paper, whereas others accept a range of materials such as glass, cans, plastic bottles, paper, shoes, textiles and books.

Details of the Council's Bring Sites are provided in Table 1.2 below.

**Table 1.2
Bring Sites**

Material types	No of Banks	Collection Company
Glass	33	Glass UK
Cans	8	Solidcast and Valient Recycling
Paper	18	In house service
Plastics	6	Solidcast and Valient Recycling
Books	2	British Heart Foundation
Shoes	5	European recycling company
Textiles	5	Oxfam

1.6.5 Recycling and Household Waste Centres (RHWCs)

Halton has two RHWCs; One is located in Runcorn, the other in Widnes. Both sites are currently managed by Mersey Waste Holdings, under contract until the end of January 2008. The sites currently achieve a recovery rate of approximately 60%.

1.7 Future Plans - Summary

1.7.1 Household Waste Collections

The Council currently use an in-house collection team for refuse and recycling services and have no current plans to market test the service. However, to ensure continued 'best value' in the delivery of the service, and to deliver potential economies of scale, a combined recycling and refuse collection service or a shared working exercise with other local authorities, could be considered in the future.

Future plans for the refuse service include proposals to increase both the range of recyclable materials collected at the kerbside, and the number of properties served by such collections, with all households receiving kerbside multi material collections by 2010.

The waste flow diagrams and costings associated with this report assume a trial multi material recyclable collection scheme in 2007/08 to approximately 6,000 households. As part of the trial, the properties receiving this enhanced recycling collection service will also receive a fortnightly collection of their residual waste.

If successful, this will be followed by the phased introduction of multi material collections, and alternate weekly collections of residual waste, to approximately 36,000 properties, in total, over the two year period 2008/9 - 2009/10.

The multi material recycling collection service will be extended to all remaining properties in 2010, however, those properties that cannot be serviced with a wheeled bin collection, or those with particular waste receptacle storage difficulties, will remain on a weekly collection of residual waste.

Through the roll out of services, the Council will communicate with members of the public through enhanced community engagement and publicity. The primary aim is to increase awareness of waste issues and improve participation in the Council's recycling services through a structured and locally delivered communications strategy and publicity program. This will include regular leafleting of households and continually updated information and support through other forms of media.

1.7.2 Kerbside Recycling

The Council plan to extend the kerbside dry recyclable collection to a multi-material recyclable collection service. The aim is to encourage participation in the scheme and to increase the tonnage collected. Plastic bottles, cans and cardboard will be added to the existing waste paper collection scheme.

Initially, a trial will be undertaken with approximately 6,000 properties receiving the multi-material collection service. The 140 litre wheeled bins will continue to be used to collect the multi recyclable materials and the frequency of collections will increase from four weekly to fortnightly. The increased collection of recyclable materials will facilitate the collection of residual waste on a fortnightly basis from these properties.

The areas for the trial to be conducted will be identified through consultation with elected members, and introduced in consultation with the elected members and residents in the chosen areas.

If successful, the scheme will be rolled out across the Borough to all suitable properties in 2008/09. This would see the collection of co-mingled recyclable materials (as well as the kerbside garden waste collections) provided to approximately a further 30,000 properties and would facilitate the provision of alternate weekly collections of residual at these properties.

The multi material recycling collection service will be extended to all remaining properties in 2010, however, those properties that cannot be serviced with a wheeled bin collection, or those with particular waste receptacle storage difficulties, will remain on a weekly collection of residual waste.

The recent increase in new developments consisting of apartments at various locations within Halton will require communal containers of sufficient capacity to enable the collection of dry recyclables. These will be provided and collections built in to the existing rounds as new developments are completed.

Once collected, the materials will subsequently be sent to a Material Recycling Facility (MRF) for separation, before re-processing. It is anticipated that a MRF facility, procured in partnership with MWDA, will be used for this.

At present there are no plans to collect glass through the kerbside scheme. This decision is due to uncertainty about the potential impacts on the quality and marketability of co-collected paper. Trials are currently being undertaken at MRF facilities to determine the suitability of including glass within such collections. If the trials show that the quality of paper and end

markets are unaffected, the Council would consider the inclusion of glass within their co-mingled scheme.

It is anticipated that the inclusion of glass within kerbside collections may provide a significant increase in recycling rates due to the material's relatively high weight/density ratio. Therefore, it is assumed that the waste flow model associated with this report shows a conservative estimate of the potential performance of the co-mingled recyclable collections.

1.7.3 Compostable Collections

The Council plans to extend its garden waste collection scheme to all suitable households within the Borough. It is estimated that there are approximately 10,000 properties that could be added to the scheme. The service will be rolled out to these properties in 2008/09 and each property will be issued with either a wheeled bin or a re-useable sack, according to the nature of the property.

The Council has considered introducing a collection for kitchen waste, however it currently has no plans to do so. This decision was taken following a financial analysis of the likely costs involved in piloting a scheme. Food waste collection is an option that the Council intends to re-consider in the future should their circumstances change.

1.7.4 Bring Sites

The Council are aiming to introduce up to 20 new sites across the Borough. Each site will consist of a bank for paper, glass and cans. The roll out of the new sites will be spread across three years, from 2007/08 to 2009/10. Attention will be focused on identifying gaps in the provision of bring facilities through liaison with local elected representatives, Area Forums and private housing organisations. The possibility of dedicated facilities for new developments will also be considered. The specific details of such sites and facilities will be contained within further project plans to be produced in conjunction with the Councils Waste Management Strategy.

1.7.5 Recycling and Household Waste Centres (RHWCs)

The contract for operating the RHWCs is due to terminate at the end of January 2008. After this time, an interim contract will be established until the management of the sites is included in joint contractual arrangements with MWDA.

There are no major changes intended for the sites before 2008 due to their high performance.

2. ACTION PLAN

2.1 Introduction

This section outlines the assumed developments in waste management services in Halton for each year of the JMWMS from 2006/07 until 2020/21.

The following key elements are considered for each year:

- Service levels (e.g. types of service, number of households served);
- JMWMS MSW recycling targets;
- Estimated performance levels (MSW and household recycling and composting rates);
- Procurement issues (e.g. procurement processes, potential co-operation with neighbouring authorities);
- Indicative Costs (from 2006/7 – 2010/11).

2.2 Service Levels and Performance

Table 2.1 on the pages below identifies the following key service issues and assumptions for each year:

- JMWMS MSW recycling targets and assumed interim targets, showing progression towards key target years;
- Estimated performance levels (MSW and household recycling and composting rates);
- Estimated participation rates;
- Key service level details for kerbside residual, dry recyclable and garden waste collections (e.g. major changes to services and number of households served). Assumptions are linked to the data calculated in separate waste flow diagrams and the levels of diversion required to achieve the JMWMS targets;
- Other relevant issues, for example the commencement of new contracts, changes to residual collections; including the introduction of alternate week collections.

Table 2.1 Action Plan Summary Table

Year	2006/07	2007/08	2008/09	2009/10	2010/11
Merseyside (JMWMS) Target	24.2%	26.4%	28.6%	30.8%	33%
Estimated MSW Recycling Performance	26.98%	27.67%	30.36%	31.92%	33.71%
Estimated Household Recycling Performance (BVPI 82 a & b)	23.87%	24.65%	27.66%	29.40%	31.41%
Kerbside Dry Recyclable Collections	No change to materials collected in 2005/06 Additional 3000 properties converted to blue bins Participation rate 45% for paper collection.	Multi-material collection trialled with approximately 6,000 households. Participation rate of 50%. Participation rate 45% for paper only collection.	Multi-material collection rolled out to half of remaining properties. Participation rate 50%. Participation rate 45% for paper only collection.	Multi-material collection rolled out to remaining properties. Participation rate 50%. BVPI 91 a & b achieved.	Participation rate 53% for all materials
Kerbside Garden Waste Collections	An additional 5,000 properties added to the scheme, taking total to 30,000. Participation rate 55%	No change to collection service. Participation rate 55%	Remaining 10,000 suitable properties added to scheme. Takes scheme to 100% coverage of suitable properties Participation rate 55%	Participation rate 55%	Participation rate 60%
Bring Sites	-	8 bring sites added. Paper, glass and can bank at each site.	6 bring sites added. Paper, glass and can bank at each site.	6 bring sites added. Paper, glass and can bank at each site.	-
Other (incl. changes to residual collections and procurement issues)	-	Pilot multi material recyclables and alternate weekly refuse collections. Jan 2008 all waste management contracts due for renewal.	Alternate weekly collections phased in to half of remaining suitable properties.	Alternate weekly collections phased in to remaining suitable properties.	-

Table 2.1 Action Plan Summary Table (continued)

Year	2011/12	2012/13	2013/14	2014/15	2015/16
Merseyside (JMWMS) Target	34%	35%	36%	37%	38%
Estimated MSW Recycling Performance	34.00%	35.40%	36.80%	37.46%	38.34%
Estimated Household Recycling Performance (BVPI 82 a &b)	31.74%	33.30%	34.87%	35.61%	36.60%
Kerbside Dry Recyclable Collections	Participation rate 55% for all materials	Participation rate 60% for all materials	Participation rate 65% for all materials	Participation rate 65% for all materials	Participation rate 70% for all materials
Kerbside Garden Waste Collections	Participation rate 60%	Participation rate 65%	Participation rate 70%	Participation rate 75%	Participation rate 75%
Bring Sites	-	-	-	-	-
Other (incl. changes to residual collections and procurement issues)	-	-	-	-	-

Table 2.1 Action Plan Summary Table (continued)

Year	2016/17	2017/18	2018/19	2019/20	2020/21
Merseyside (JMWMS) Target	39.2%	40.4%	41.6%	42.8%	44%
Estimated MSW Recycling Performance	39.33%	40.85%	41.95%	42.81%	44.48%
Estimated Household Recycling Performance (BVPI 82 a & b)	37.70%	39.40%	40.63%	41.60%	43.47%
Kerbside Dry Recyclable Collections	Participation rate 75% for all materials	Participation rate 76% for all materials	Participation rate 78% for all materials	Participation rate 79% for all materials	Participation rate 80% for all materials
Kerbside Garden Waste Collections	Participation rate 75%	Participation rate 80%	Participation rate 80%	Participation rate 80%	Participation rate 85%
Bring Sites	-	-	-	-	-
Other (incl. changes to residual collections and procurement issues)	-	-	-	-	-

2.3 Key Procurement Issues

Key procurement issues identified for Halton are as follows:

- Procurement process for new containers (wheeled bins for garden waste roll out in 2008/9);
- Revised vehicle procurement/maintenance timetables in accordance with revised service delivery plans. New vehicles, in addition to the new fleet referred to in Para 2.4.1, may be required from 2009/10 if multi-materials are added to the kerbside dry recyclables collection as referred to in Para 1.7.2;
- Procurement process for potential new contracts, due for renewal in 2008:
 - Landfill - from the end of January 2008, for a period to be confirmed;
 - Paper re-processor - from the end of January to the commencement of the MWDA recycling contract;
 - Garden waste re-processor - from the end of January 2008, for a period to be confirmed;
 - RHWC's management - from the end of January to the commencement of the MWDA recycling contract.

Potential joint procurement opportunities with neighbouring Merseyside authorities may be appropriate in a number of areas.

Table 2.2 summarises potential areas for joint procurement for the Merseyside authorities and Halton, showing the years when new service contracts, vehicles and containers are expected to be introduced.

In addition to the issues highlighted in the table it is recommended that joint arrangements for the sale of recyclable and compostable materials are investigated.

Halton have also highlighted the following joint procurement and working opportunities:

- Containers. The Council would consider a joint Merseyside procurement initiative as appropriate;
- Joint vehicle procurement. The Council would consider revised specifications and joint procurement of RCVs with Merseyside authorities;
- Joint working arrangements: Cross boundary working and joint collection arrangements with neighbouring authorities would be considered if appropriate.

Table 2.2 Joint Procurement Potential

Authority	Potential Introduction of New Collection Contract/Contractor	Potential Introduction of Significant Numbers of New Collection Vehicles (in-house or private contractor provision)	Potential Introduction of Significant Numbers of New Containers (in-house or private contractor provision)
Knowsley	-	2007/08-2008/09. Potential new RCVs for co-mingled kitchen and garden collection. Potential new kerbside sort vehicles to accommodate plastics.	2007/08-2008/09. Kitchen waste containers (caddies, liners).
Liverpool	October/November 2008. Potential combined Refuse and Recycling Contract.	2008/09-2010/11. Potential new kerbside sort vehicles to accommodate plastics and kitchen waste. (Note vehicle requirements will be subject to a future service procurement process)	2009/10. Kitchen waste containers (caddies, liners and kerbside collection containers). (Note container requirements will be subject to a future service procurement process)
Sefton	December 2010. Recycling Contract.	2006/07-2007/8. Potential new RCVs (with bin lift equipment) for alternate week residual and garden waste collections. Potential alteration to kerbside sort vehicles to accommodate kitchen waste and potentially plastics.	2006/07 and 2007/08. Wheeled bins and kitchen waste containers (caddies, liners and kerbside collection containers).
St. Helens	2007 Kerbside Recycling Contract (potential two year extension)	2008/09. Potential new kerbside sort vehicles to accommodate plastics and kitchen waste.	2007/08-2008/09. Kitchen waste containers (caddies, liners and kerbside collection containers).
Wirral	2006. New combined Refuse and Recycling Contract. Subject to outcome of service procurement process.	2006/07-2007/08. Potential new RCVs (with bin lift equipment) for residual, recyclable, kitchen and garden waste collections. (Note vehicle requirements subject to outcome of service procurement process)	2006/07-2007/08. Wheeled bins for separate garden waste, co-mingled kitchen and garden and co-mingled dry recyclables collections. (Note container requirements subject to outcome of service procurement process)
Halton	2008 All waste management contracts end in 2008.	2007-8- 2009/10. Potential additional RCVs for expansion of garden waste collections and introduction of co-mingled multi-material dry recyclables collection.	2008/9. 10,000 wheeled bins required for expansion of garden waste collection service.

2.4 Indicative Costs and Income

Estimates of costs and income for Halton Borough Council for the period 2006/07-2010/11 are considered in the sections below.

Costs and income are outlined in the following areas:

- Residual collection costs;
- Dry recyclable collection costs;
- Compostable collection costs;
- Bulking and transport costs;
- LATS costs.

2.4.1 Indicative Direct Service Costs - Table 2.5

Table 2.5 provides a summary of indicative collection, bulking and transfer, costs for the period 2006/07-2010/11.

2.4.1.1 Collection Cost Assumptions

Detailed breakdowns of the assumptions used to compile the collection costs have been provided separately within spreadsheet files.

Indicative costs are provided in this document to enable potential changes in costs, over a five year period, to be considered.

These costs do not reflect additional costs incurred through future partnership arrangements with MWDA.

Costs will also be subject to procurement processes and should, therefore, not be regarded as 'actual' costs.

Key collection cost assumptions in this report are as follows:

- Labour costs include allowances for spare labour but not for supervision, management or internal support costs;
- An annual inflation rate of 2.5% has been applied to staff salaries, containers and vehicle costs;
- Containers:
 - Wheeled bins for refuse are depreciated over a period of ten years;
 - Wheeled bins for dry recyclables are replaced at a total of 1,000 per year;
 - Wheeled bins for garden waste are replaced at a total of 1,000 per year;
 - Re-useable sacks for paper recycling are replaced annually up until 2008/9. Post 2008/9 sacks will be used for the multi-material co-mingled collection and replaced fortnightly;
- The purchase of a new fleet is planned within the next year. Figures for potential costs/savings were unavailable, therefore vehicle costs are based on current hire prices and inflated annually;

- Bulking and transport costs have been included. They are based on quotes provided by CZ waste for bulking and haulage of materials;
- Additional corporate costs and profit are not included.

2.4.1.2 Bulking and transport cost assumptions

Details of the assumptions used to calculate these costs have been provided in a separate spreadsheet. The figures are based on bulking/storage charges provided by CZ waste; £5.50 per tonne for both paper and co-mingled dry recyclables. Transport costs for co-mingled dry recyclables from CZ waste have been quoted as £160 per transfer to the Bidston MRF, with each vehicle carrying approximately 12 tonnes of co-mingled dry recyclables. An annual inflation rate of 2.5% has been applied to the costs.

2.4.1.3 Support costs for the roll out of new schemes

Costs to cover items such as publicity and support staff, which will be required for the roll out of the new schemes, are not included in the annual costs shown.

Table 2.5 Indicative Direct Service Costs (2006/07-2010/11)¹

Year	2006/07	2007/08	2008/09	2009/10	2010/11
<i>Residual Collection Cost</i>	<i>£1,691,019</i>	<i>£1,733,294</i>	<i>£1,776,627</i>	<i>£1,821,042</i>	<i>£1,857,395</i>
<i>Dry Recyclable Collection Cost</i>	<i>£249,744</i>	<i>£255,987</i>	<i>£262,387</i>	<i>£426,714</i>	<i>£608,595</i>
<i>Garden Waste Collection Cost</i>	<i>£299,160</i>	<i>£306,639</i>	<i>£463,368</i>	<i>£474,952</i>	<i>£486,826</i>
Collection Cost Sub Total	£2,239,923	£2,295,920	£2,502,382	£2,722,708	£2,952,816
Bulking and Transport Costs	£17,299	£27,747	£47,783	£88,174	£115,764
Total Collection and Transport /Bulking costs	£2,257,222	£2,323,667	£2,550,165	£2,810,882	£3,068,580

¹ Refer to sections 2.4.1 for breakdown of assumptions and details of items included and excluded
www.gordonmackie.net

2.4.2 Indicative Growth Costs - Table 2.6

Table 2.6 summarises the growth in expenditure that will be required to fund the improvements to the waste management service.

2.4.2.1 Potential Income

The Council currently receives income for source segregated paper. This income is subject to the contractual arrangements for the collections and it is assumed that paper collections of this type will be phased out and potentially replaced with the introduction of co-mingled recyclable collections.

Table 2.4 shows the estimated potential income from the sale of paper based on current rates of £33 per tonne. Table 2.6 shows the difference in paper income between each year as a growth item.

**Table 2.4 Halton Borough Council
Potential Paper Income**

Year	Estimated Tonnes per Annum	Income per Tonne	Total Income per Annum
2006/07	3145.31	£33	£103,795
2007/08	2821.98	£33	£93,125
2008/09	2137.65	£33	£70,542
2009/10	719.67	£33	£23,749
2010/11	0	£33	£0

2.4.2.2 Growth required for improved recycling services

The figures shown in Table 2.6 summarise the additional expenditure that will be required each year to provide the service improvements. The calculations take into account the assumed collection and bulking and transport costs. Inflation has been removed in an attempt to show the 'real' annual increase in expenditure required to roll out the different schemes.

Table 2.6 Indicative Growth Costs (2006/07-2010/11)²

Year	2006/07	2007/08	2008/09	2009/10	2010/11
Growth to allow for loss of paper income	-	£10,670	£22,583	£46,793	£23,749
Growth required for improved Recycling Service	-	£9,771	£161,427	£185,908	£182,027
Total Annual Growth Costs²	-	£20,441	£184,010	£232,701	£205,776
Cumulative Growth Costs	-	£20,441	£204,451	£437,152	£642,928

² Growth costs over and above previous year's budget. See section 2.4.2 for details of assumptions and items included/excluded

2.4.3 Annual costs of service improvements and effect on performance

The tables in Appendix 1 provide additional detail of the year on year increases in collection/bulking/transport costs for delivering the changes to each service as laid out in the action plan. The table shows the estimated effect that each service change may have on household and MSW recycling performance.

The costs shown are for the additional expenditure required over and above the previous year's costs. These direct costs show the additional costs for labour, vehicles and containers which will be incurred each year to provide the new services. The transport costs show the additional expenditure required each year for bulking and transferring of additional recyclable materials. The figures demonstrate that additional funding continues to be required in 2010/11, even though the roll out of the recycling services is completed in mid 2009/10. This is due to 2010/11 being the first full year in which all services are fully rolled out.

The performance figures show the estimated impact of the roll out of the schemes on household and MSW recycling rates. By comparing the predicted recycling performance with the JMWMS targets it can be seen that by 2008/9 the strategy targets would not be achieved without improvements to the collection services for garden waste and by 2009/10 the strategy targets would not be achieved without improvements to the dry recyclables collection.

2.4.4 Potential LATS Costs

In addition to the collection and growth costs considered above, Halton Borough Council will be subject to potential LATS costs. These costs relate to the amount of landfill 'allowances' allocated to the Borough and the amount of biodegradable municipal waste sent to landfill.

The successful application of recycling and composting collection systems for biodegradable wastes, including paper and compostable materials, will assist the avoidance of additional LATS costs to the Council.

Indicative LATS performance has been considered in outline. It should be noted that future tonnages of biodegradable materials landfilled are dependant upon the types of collection, recycling and composting services provided by the Council and, crucially, the level of participation of Halton's households.

Table 2.7 shows the tonnage of biodegradable materials that the Council are permitted to landfill between 2005/06 and 2010/11, the predicted performance (subject to the delivery of the development plans outlined in Table 2.1) and the predicted surplus or deficit of allowances for each year.

Year	LATS Allowance	Estimated Biodegradable Waste Landfilled	Allowance Difference	Allowance Balance	Cost / Surplus @ £40 per tonne	Cost / Surplus @ £20 per tonne	Potential Penalty @ £150 per tonne
2005/06	41,732	37,160 ⁽¹⁾	4572	4572	182,880	91,440	
2006/07	39,403	36,496	2907	7479	299,160	149,580	
2007/08	36,298	36677	-379	7100	284,000	142,000	
2008/09	32,417	35358	-2941	4159 ⁽²⁾	166,360	83,180	
2009/10	27,759	35113	-7354	-7354	-294,160	-147,080	-1,103,100
2010/11	24,669	34397	-9728	-9728	-389,120	-194,560	-1,459,200

Notes:

(1): Tonnage figure for 2005/06 shows final, reconciled data.

(2): Surplus from 2008/09 cannot be carried forward into 2009/10

It should be noted that, with the exception of the quoted 2005/06 data, the estimated tonnages of biodegradable waste landfilled are indicative figures and do not reflect final agreed and reconciled figures.

2.4.5 MWDA Costs

The Merseyside Waste Disposal Authority will provide further information about other potential costs associated with future partnership and contractual arrangements between Halton Borough Council and The Merseyside Waste Partnership.

Appendix 1

Summary table showing the additional cost of improving and extending recycling services and the effect on recycling performance as a result of doing so.

The introduction of increased recycling and green waste collection services will have a net effect upon disposal costs, and will reduce the Council's exposure to LATS penalties. This is covered in other reports.

2007/8										
Scheme	ADDITIONAL COST			EFFECT ON HOUSEHOLD RECYCLING/COMPOSTING PERFORMANCE			EFFECT ON MSW RECYCLING/COMPOSTING PERFORMANCE			
	Direct cost for improved service	Bulking/transport cost	Total (additional costs over and above previous year's budget)	Household recycling rate with scheme	Household recycling rate without scheme	Contribution of improved service to recycling rate	MSW recycling rate with scheme	MSW recycling rate without scheme	Contribution of improved service to recycling rate	JMWMS target
Pilot multi-material dry recyclables	£0	£9,771	£9,771	24.65%	24.32%	0.33%	27.67%	27.38%	0.29%	26.40%

2008/9										
Scheme	ADDITIONAL COST			EFFECT ON HOUSEHOLD RECYCLING/COMPOSTING PERFORMANCE			EFFECT ON MSW RECYCLING/COMPOSTING PERFORMANCE			
	Direct cost for improved service	Bulking/transport cost	Total (additional costs over and above previous year's budget)	Household recycling rate with scheme	Household recycling rate without scheme	Contribution of improved service to recycling rate	MSW recycling rate with scheme	MSW recycling rate without scheme	Contribution of improved service to recycling rate	JMWMS target
Co-mingled multi-material dry recyclables collection rolled out to 23,500 additional properties (Total = 29409).	£0	£19,547	£19,547	27.66%	26.68%	0.98%	30.36%	29.49%	0.87%	28.60%
Garden waste collection rolled out to 10,000 additional properties (Total = 40,000)	£141,880	£0.00	£141,880	27.66%	25.62%	2.04%	30.36%	<u>28.54%</u>	1.82%	28.60%

2009/10										
Scheme	ADDITIONAL COST			EFFECT ON HOUSEHOLD RECYCLING/COMPOSTING PERFORMANCE			EFFECT ON MSW RECYCLING/COMPOSTING PERFORMANCE			
	Direct cost for improved service	Bulking/transport cost	Total (additional costs over and above previous year's budget)	Household recycling rate with scheme	Household recycling rate without scheme	Contribution of improved service to recycling rate	MSW recycling rate with scheme	MSW recycling rate without scheme	Contribution of improved service to recycling rate	JMWMS target
Multi-material dry recyclables collection rolled out to 23,500 additional properties (Total = 52,909)	£146,503	£39,405	£185,908	29.40%	27.11%	2.29%	31.92%	<u>29.87%</u>	2.05%	30.80%
Garden waste collection service at 40,000 properties	£0	£0	£0	29.40%	27.36%	2.04%	31.92%	<u>30.10%</u>	1.82%	30.80%

2010-11										
Scheme	ADDITIONAL COST			EFFECT ON HOUSEHOLD RECYCLING/COMPOSTING PERFORMANCE			EFFECT ON MSW RECYCLING/COMPOSTING PERFORMANCE			
	Direct cost for improved service	Bulking/transport cost	Total (additional costs over and above previous year's budget)	Household recycling rate with scheme	Household recycling rate without scheme	Contribution of improved service to recycling rate	MSW recycling rate with scheme	MSW recycling rate without scheme	Contribution of improved service to recycling rate	JMWMS target
Multi-material dry recyclables collection (Increase due to full year effect of new services)	£155,110	£26,917	£182,027	31.41%	28.29%	3.12%	33.71%	<u>30.93%</u>	2.78%	33.00%
Garden waste collection service at 40,000 properties	£0	£0	£0	31.41%	29.18%	2.23%	33.71%	<u>31.72%</u>	1.99%	33.00%

Assumptions

Costs show the additional cost of providing the improved recycling service, over and above the previous year's budget.

Direct Cost:

2007-8

Dry recyclables - No additional direct costs due to the same vehicle/crew being used to collect refuse and co-mingled recyclables on an alternate weekly basis.

2008-9

Dry recyclables - No additional direct costs due to the same vehicle/crew being used to collect refuse and co-mingled recyclables on an alternate weekly basis.

Garden waste collection expanded to additional 10,000 properties. This requires: (A) Additional vehicle; (B) Additional Crew. See Halton Costings 271106 spreadsheet for detailed breakdown of costs.

2009-10

Dry recyclables - The direct cost is due to the additional vehicles plus crew that are needed to enable the borough wide roll out of the scheme from the last six months of the year onwards. This is because a proportion of the properties (approximately 17,000) remain on a weekly refuse collection and so two additional RCVs are required to provide a recycling collection to these properties.

There is also an additional cost of replacing the re-useable sacks with sacks for properties on a bag collection for recycling.

See Halton Costings 271106 spreadsheet for detailed breakdown of costs.

2010-11

Dry recyclables -the completed expansion results in additional RCVs plus crews being required. The cost of delivering the service is also increased by the replacement of reusable bags with disposable sacks. See Halton Costings 271106 spreadsheet for detailed breakdown of costs.

Bulking/Transport Cost:

Bulking costs have been calculated at a rate of £5.50 per tonne for paper and co-mingled dry recyclables (Quote from CZ waste)

Transport costs have been provided by CZ waste for co-mingled multi-materials at £160 per trip to Bidston for a load of approximately 12 tonnes

Transport costs for garden waste have not been included because the annual cost of vehicles includes fuel and there are no additional bulking costs.

Refer to transport cost spreadsheet for detailed calculations

