Strategic Overview & Scrutiny Panel

Town Hall, Colchester

17 March 2009 at 6:00pm

Strategic Overview and Scrutiny Panel deals with reviewing corporate strategies within the Council's Strategic Plan, the Council's budgetary guidelines for the forthcoming year, scrutinising the Forward Plan, the performance of Portfolio Holders and scrutiny of Cabinet decisions or Cabinet Member decisions (with delegated power) which have been called in.

Information for Members of the Public

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Terms of Reference

Strategic Overview and Scrutiny Panel

- To review corporate strategies

- To ensure the actions of the Cabinet accord with the policies and budget of the Council

- To monitor and scrutinise the financial performance of the Council, and make recommendations to the Cabinet particularly in relation to annual revenue and capital guidelines, bids and submissions

- To link the Council's spending proposals to the policy priorities and review progress towards achieving those priorities against the Strategic / Action Plans

- To scrutinise executive decisions made by Cabinet and the East Essex Area Waste Management Joint Committee and Cabinet Member decisions (with delegated authority taking a corporate / strategic decision) which have been made but not implemented, and referred to the Panel through call-in.

  The panel may a) confirm the decision, which may then be implemented immediately, b) confirm the decision back to the decision taker for further consideration setting out in writing the nature of its concerns, or c) refer the matter to full Council in the event that the panel considers the decision to be contrary to the Policy Framework of the Council or contrary to, or not wholly in accordance with the Budget.

- To monitor effectiveness and application of the call-in procedure, to report on the number and reasons for call-in and to make recommendations to the Council on any changes required to ensure an effective operation.

- To scrutinise the Cabinet's performance in relation to the Forward Plan.

- To scrutinise the performance of Portfolio Holders.

- At the request of the Cabinet, make decisions about the priority of referrals made in the event of the volume of reports to the Cabinet or creating difficulty for the running of Cabinet business or jeopardising the efficient running of Council business.

COLCHESTER BOROUGH COUNCIL
STRATEGIC OVERVIEW & SCRUTINY PANEL
17 March 2009 at 6:00pm

Members

Chairman	:	Councillor Arnold.
Deputy Chairman	:	Councillor Kimberley. Councillors Barlow, Cory, Hazell, Higgins, Hogg, Naish, Pyman, Taylor and Young.
Substitute Members	:	All members of the Council who are not Cabinet members or members of this Panel.

Agenda - Part A

(open to the public including the media)

Members of the public may wish to note that agenda items 1 to 5 are normally brief and agenda items 6 to 9 are standard items for which there may be no business to consider.

Pages

1. Welcome and Announcements

(a) The Chairman to welcome members of the public and Councillors and to remind all speakers of the requirement for microphones to be used at all times.

(b) At the Chairman's discretion, to announce information on:

- action in the event of an emergency;
- mobile phones switched to off or to silent;
- location of toilets;
- introduction of members of the meeting.

2. Substitutions

Members may arrange for a substitute councillor to attend a meeting on their behalf, subject to prior notice being given. The attendance of substitute councillors must be recorded.

3. Urgent Items

To announce any items not on the agenda which the Chairman has agreed to consider because they are urgent and to give reasons for the urgency.

4. Declarations of Interest

The Chairman to invite Councillors to declare individually any personal

interests they may have in the items on the agenda.

If the personal interest arises because of a Councillor's membership of or position of control or management on:

- any body to which the Councillor has been appointed or nominated by the Council; or
- another public body

then the interest need only be declared if the Councillor intends to speak on that item.

If a Councillor declares a personal interest they must also consider whether they have a prejudicial interest. If they have a prejudicial interest they must leave the room for that item.

If a Councillor wishes to make representations on an item on which they have a prejudicial interest they may do so if members of the public are allowed to make representations. In such circumstances a Councillor must leave the room immediately once they have finished speaking.

An interest is considered to be prejudicial if a member of the public with knowledge of the relevant facts would reasonably regard it as so significant that it is likely to prejudice the Councillor's judgement of the public interest.

Councillors should consult paragraph 7 of the Meetings General Procedure Rules for further guidance.

5. Minutes **1 - 8**

To confirm as a correct record the minutes of the meeting held on 10 February 2009.

6. Have Your Say!

(a) The Chairman to invite members of the public to indicate if they wish to speak or present a petition at this meeting – either on an item on the agenda or on a general matter not on this agenda. You should indicate your wish to speak at this point if your name has not been noted by Council staff.

(b) The Chairman to invite contributions from members of the public who wish to Have Your Say! on a general matter not on this agenda.

7. Items requested by members of the Panel and other Members

(a) To evaluate requests by members of the Panel for an item

relevant to the Panel's functions to be considered.

(b) To evaluate requests by other members of the Council for an item relevant to the Panel's functions to be considered.

8. Referred items under the Call in Procedure

To consider any Portfolio Holder decisions, taken under the Call in Procedure.
The panel may a) confirm the decision, which may then be implemented immediately, b) confirm the decision back to the decision taker for further consideration setting out in writing the nature of its concerns, or c) refer the matter to full Council in the event that the panel considers the decision to be contrary to the Policy Framework of the Council or contrary to, or not wholly in accordance with the Budget.

9. Decisions taken under special urgency provisions

To consider any Portfolio Holder decisions taken under the special urgency provisions.

10. Work Programme 2008-09

See report from the Scrutiny Officer.

11. Waste prevention and recycling options appraisal report **9 - 106**

See report from the Head of Street Services.

12. Review of the work of the Portfolio Holder for Performance and Partnerships **107 - 108**

See report from the Scrutiny Officer.

13. Review of the work of the Portfolio Holder for Planning and Regeneration **109 - 110**

See report from the Scrutiny Officer.

14. Responsibilities of the Portfolio Holder for Neighbourhoods **111 - 112**

See report from the Scrutiny Officer.

15. Responsibilities of the Leader of the Council and Portfolio **113 - 114**

Holder for Strategy

See report from the Scrutiny Officer.

16. Exclusion of the public

Occasionally the Panel will need to discuss issues in private. When the Panel does so, members of the public will be asked to leave the meeting.

In accordance with Section 100A(4) of the Local Government Act 1972 and in accordance with The Local Authorities (Executive Arrangements) (Access to Information) (England) Regulations 2000 (as amended) to exclude the public, including the press, from the meeting so that any items containing exempt information (for example confidential personal, financial or legal advice), in Part B of this agenda (printed on yellow paper) can be decided. (Exempt information is defined in Section 100I and Schedule 12A of the Local Government Act 1972).

STRATEGIC OVERVIEW & SCRUTINY PANEL
10 FEBRUARY 2009

Present :- Councillor Christopher Arnold (Chairman)
Councillors Nick Barlow, Mark Cory, Pauline Hazell, Peter Higgins, Mike Hogg, Margaret Kimberley, Kim Naish, Gaye Pyman, Nick Taylor and Julie Young

36. Minutes

The minute of the meeting held on 16 December 2008 was confirmed as a correct record subject to the following amendment;

The resolution to minute 29 Performance Related Pay for Cabinet Members to read "RESOLVED that the panel would not recommend the introduction of a scheme to provide for an apportionment of the Cabinet Member Special Responsibility Allowance to be linked to performance".

The minute of the meeting held on 6 January 2009 was confirmed as a correct record.

Councillor Julie Young (in respect of being a Member of Essex County Council) declared a personal interest in the following item pursuant to the provisions of Meetings General Procedure Rule 7(3)

Councillor Peter Higgins (in respect of his wife being a Member of Essex County Council) declared a personal interest in the following item pursuant to the provisions of Meetings General Procedure Rule 7(3)

37. Greenways Care Home

Councillor David Finch, Portfolio Holder for Adults, Health and Community Well Being, Essex County Council and Ms. Liz Chidgey, Deputy Director, Adults, Health and Community Well Being, Essex County Council attended the meeting for this item.

Councillor J Young addressed the panel to explain the reason for the Council motion, that was unanimously passed, subject to an agreed amendment. There were concerns that individuals at the Greenways Care Home were receiving poor treatment, a view shared at Essex County Council, and the motion asked for the current situation to be reviewed to ensure individuals were being adequately cared for, whether the daytime care services are to continue and what was the long term future for the site.

In response to Councillor J Young, Councillor Finch addressed the panel, thanking them for inviting him to attend the meeting. Councillor Finch said he considered all residential care homes in Essex to be very important and of equal importance. Councillor Finch explained that his portfolio was responsible for an annual budget of £500 million, and included 400 care homes looking after the well being of 10,000 residents. Essex County Council had its own Quality Assurance Team responsible for inspecting and assessing all Essex care homes (completing 150 inspections last year),

and a Protection of Vulnerable Adults Team (PVA).

In regards to Greenways, Councillor Finch said there had been a closure and sensible relocation of residents to other homes and he was pleased to advise the panel that to his knowledge, everyone that was moved is pleased with their new residence. Councillor Finch pointed out that ten Essex homes previously owned by Essex County Council, such as Greenways, had moved to private ownership, and generally the quality of care was higher at these homes than had previously been experienced, and he was pleased with the care provided at these homes.

Councillor Finch said his intention was a desire to see Greenways reopened, once it had been substantially refurbished, on the understanding that Greenways management had confirmed that they can run to strict standards of care expected. The county's Quality Assurance Team was there to ensure the high standards required are upheld. Councillor Finch confirmed that Essex County Council's responsibility for the contractual arrangements of care homes in Colchester was complicit with Colchester Borough Council's Planning approval.

Councillor Finch, aided by Ms. Chidgey, responded to questions from councillors.

In response to Councillor Smith, Ward Councillor for St John's, Councillor Finch said Councillor J Young was briefed about what was to happen at Greenways, as unfortunately, Councillor Young was mistakenly believed to be County Councillor for Parsons Heath and East Gates. Councillor Finch apologised for this error, saying this was rectified with an apology going to Councillor T Higgins. Councillor Finch said in situations like this it would be the County Councillor who would be advised, and it would be expected that the County Councillor would advise their ward councillors accordingly.

Councillor J Young confirmed that she had been advised of the situation, but believing this information to be sensitive and given to her in confidence, did not think at the time it was her responsibility to share this information.

Councillor Arnold said given ward councillors are advised by the Highways Agency on highways work, there was no consistency with this issue where it was considered appropriate to only advise the County Councillor. Councillor Arnold asked that Councillor Finch considers that in the future advice on local issues was given to all locally elected representatives.

Councillor Finch said the intention of the Greenways refurbishment was to bring the care home up to a much higher and proper standard, compliant with all regulations, and it was envisaged that the home would reopen in between 9 to 12 months time. Councillor Finch later confirmed to Councillor Kimberley that by refurbishment he meant the site was to be rebuilt, not to be redeveloped, and to Councillor T Higgins, that it was intended that Greenways would be a '70 bed' model.

In regards to Councllor Smith's comment that the management at Greenways have done much to obstruct the work of ward councillors, Councillor Finch said this was a matter for councillors and Greenways, and for the councillors to make the appropriate representations to the home. Councillor Finch was happy to endorse a good

neighbourly approach and confirmed that it was illegal to withhold mail from residents. Councillor Finch also confirmed that whilst Greenways owned the site of the Greenways Care Home, Essex County Council held a covenant on the property, and any breach in the provision and quality of the services provided would be a breach of contract.

In response to Councillor Kimberley, Councillor Finch said whilst he was mindful of the standard of care being provided by the staff and the physical state of the building, there was no facts to support recent press articles. It was confirmed that the new Greenways Care Home would be commissioned by Essex County Council, with the service delivery undertaken by Greenways.

In response to Councillor Hogg, Councillor Finch said the cost of the new build would be born by Greenways, not Essex County Council, and given the economic downturn and builders prepared to prune prices, the cost of the rebuild should not be an issue.

In response to Councillor J Young, Councillor Finch said once Greenways reopens, the level of dementia care would remain the same but with a better standard of dementia nursing. It was confirmed that the tribunal for the 'Serious Case Review' would be reaching a conclusion in late April, early May. Councillor Finch said that if evidence could be produced that suggested mail was not going to the recipients, Essex County Council would take this issue up with the Greenways management. Councillor Finch's advice to families who believed mail was not going to their relatives in care should talk to their local County Councillor who could write to the Portfolio Holder on the family's behalf, and who would in turn explore the concerns raised.

Councillor Arnold said he would like to see the Portfolio Holder consider enforcing local care homes to display in the care home's entrance, a list of contacts for resident's families to contact when the need arises.

Councillor Finch concluded the discussion by saying he would be happy to return to the panel to brief members on the progress of the Greenways Care Home at the end of 2009.

Councillor Arnold thanked Councillor Finch and Ms. Chidgey for attending the meeting.

RESOLVED that the panel;

i) Considered and noted the responses from County Councillor Finch, Portfolio Holder for Adults, Health and Community Well Being.

ii) Asked Councillor Finch to consider that in the future advice from Essex County Council on local issues was given to both County and ward Councillors.

iii) Asked Councillor Finch to consider enforcing local care homes to display in the care home's entrance, a list of specific contacts for resident's families to contact when the need arises.

iv) Welcomed an update from Councillor Finch on the progress of the Greenways Care Home at the end of 2009.

38. Decisions taken under special urgency provisions

RESOLVED that the panel noted the decision taken under special urgency provisions, decision 'Review of key issues relating to the visual arts facility capital project – COM-001-08'

39. Work Programme

Mr. Robert Judd, Scrutiny Officer, presented the Work Programme to the panel.

RESOLVED that the panel agreed;

i) To note the 2008-09 rolling Work Programme

ii) That the final report on the New Build Nuclear Power Station at Bradwell would be presented to the panel at the meeting of 7 April 2009.

iii) To an extra meeting of the panel on 28 April 2009, to discuss the partnership arrangements with Firstsite.

iv) That the responsibilities of a portfolio holder under review, would be published in the agenda of the meeting prior to review date.

v) That in future the portfolio holders under review would be asked, for expediency, and for the panel to retain control of the process, to keep their presentations within a timeframe of ten minutes.

40. Scrutiny Report

Mr. Robert Judd, Scrutiny Officer presented the Scrutiny Report to the panel, explaining that this was the panel's opportunity to comment on the report to go to Council, for Council to form an opinion of the effectiveness of the scrutiny function at Colchester.

Councillor J Young said the report was comprehensive and a good reflection of the work of both scrutiny panels in the period May 2007 to December 2008.

RESOLVED that the panel considered and noted the Scrutiny report.

Councillor Julie Young (in respect of her husband being the Portfolio Holder for Street and Waste Services) declared a personal interest in the following item pursuant to the provisions of Meetings General Procedure Rule 7(3)

41. Review of the work of the Portfolio Holder for Street and Waste Services

Councillor T Young, Portfolio Holder for Street and Waste Services attended the meeting for this item and addressed the panel.

Councillor Young explained the progress and successes in the work of the services that fall within the remit of his portfolio, such as, the improvements to waste collection, such as average amount of kilograms of waste per home down from last year, an increase in garden waste collected, up to 4,700 tonnes, and an overall improvement in the collection of recyclables by 11%, and all in waste collection vehicles with new livery.

Street Cleaners uniforms now advertised the slogan to 'Keep Colchester Clean', priority would now be given to provide additional waste litter bins to the town centre, and town centre food outlets are now being instructed on their responsibilities for disposing of litter and waste. In and around the borough, abandoned vehicles are now removed immediately, cleaning blitzes have now been resurrected for 'hot spot' areas, and the Lion Walk Toilets have now been refurbished and recently won a 'Loo of the year award'

Funding was now secure to refurbish the Dedham Toilets and for the resources needed to improve the collection of recycling waste from blocks of flats.

As a member of the Crime and Disorder Reduction Partnership, Councillor Young said the aims of the partnership's strategy are on track, and improvements have been made to the High Street Taxi Rank at night time, in an effort to avoid disorder.

Councillor Young confirmed that there are 50 new dog bins being provided for the borough, and improvements to the stray dog scheme are being considered, as well as improved training and instruction on food safety and hygiene to all food outlets.

In response to Councillor P Higgins, Councillor Young confirmed that ward councillors would be informed about the change programme for the collection of recyclable waste from blocks of flats, with £200,000 allocated to this in the 2009-10 Budget, that would allow for the provision of a special collection vehicle. There was a potential for this new scheme to increase the Council's overall recycling rate by 5%, and therefore meet the overall Government recycling target.

In response to Councillor Kimberley, Councillor Young said all the staff associated with the waste service have been pulling out all the stops to deliver the new waste programme, and he paid tribute to these staff who he said are doing an excellent job. Councillor Young confirmed that the new recycling option appraisal report would be presented to a scrutiny panel for review prior to the decision taken at Cabinet. Councillor Young also assured members that whilst the sale costs for recyclable materials had dropped due to the economic downturn, he was not concerned that this would have a too greater impact on the waste service revenues.

In response to Councillor Arnold, Councillor Young said that the collection of recyclable materials in plastic sacks had helped increase Colchester's recycling rates by 4-5 per cent, but this was only a short term solution. This had helped get the message to

residents that Colchester was committed to recycling, but a long term solution was still needed. Councillor Young said the three year plan within the Strategic Plan, to increase recycling rates from a current figure of 39.3% to 50% in three years time would be challenging, but he hoped the budget decisions to be made would allow the investment to be needed for Colchester's results to improve to a level only achieved by the best local authorities. Councillor Young believed a 70% recycling rate was an aspiration, but would not be achievable in the short term.

Councillor Young confirmed to Councillor Arnold that the money set aside in the Budget would be for the procurement of the new dog bins only, that the servicing of these bins would come from within existing resources, with enforcement on litter picking hopefully reducing the amount of litter to be cleared up, and thereby freeing resources.

Councillor Young confirmed to Councillor Naish that the Council had been successful in the enforcement on fly tipping, with a number of successful prosecutions, and agreed to share this information with members of the panel.

Councillor Young confirmed to Councillor Hogg that an agreed definitive list of where the new dog bins are to be sited would be provided to all ward councillors once available. Councillor Young said he was surprised as other councillors concerning an article in a ward letter confirming that that ward would be receiving two new dog bins, when as he stated previously, the definitive list would be made available to all councillors in approximately two weeks time. Councillor Young said he would take up the issue of the newsletter article with Cabinet members.

In response to Councillor Barlow, Councillor Young said people's perception of what is and what is not clean are different, but his perception of the Town Centre was that it was now cleaner than it had been for several years. Councillor Young also said he understood the issues still being raised by councillors in respect of the problems in the town centre during the period of the night time economy, and stating this was not a political issue but something that effected everyone, he hoped the task and finish group set up to review the night time economy would provide radical proposals that would make the town centre an attractive and safe place to visit for visitors and local people.

RESOLVED that the panel;

i) Noted the responses from the Portfolio Holder for Street and Waste Services and thanked him for attending the meeting.

ii) Requested the Portfolio Holder provide information on the number of successful littering and fly tipping notices and prosecutions made for 2007-08 and 2008-09.

42. Review of the work of the Portfolio Holder for Communications and Customers

Councillor Hunt, Portfolio Holder for Communications and Customers attended the meeting for this item and addressed the panel.

Councillor Hunt gave a presentation on the progress and successes in the work of the services that fall within the remit of his portfolio.

Councillor Hunt spoke about the 'Jewel in the Crown' of Customer Excellence, the Customer Services Centre, placing customers at the heart of what the we do, but who due to the economic downturn had seen an increase and change in the mix of enquiries at the Centre, for example, with Council Tax and Housing Rent benefits up by 76% and Planning enquiries down by 35%.

In regards to Communication, Councillor Hunt said the SOS Bus was to be used to take information on the 'Credit Crunch' out to the wards, especially those wards with greater need and suffering deprivation, and articles are to appear in the Courier giving advice and contacts for people in need.

Councillor Hunt said the Courier, that went out to 91% of households was to continue into 2009-10 with a four monthly publication, at a cost of £11,000, though it was to return to its original A3 format, and the publication 'Common Ground' that keeps in touch with the parishes was also to continue into 2009-10 at a cost of £579 per issue, with forthcoming discussions to ensure the content provides what the parishes want.

In reference to the Council's culture of change, Councillor Hunt spoke about the 'Way We Work Programme', about the staff's relocation from Angel Court to Rowan House, where discussions and progress are running smoothly and on target. Improvements to ICT (Information Communication Technology) was progressing that would ultimately only require 30% of floor space currently needed for 'Server' rooms. It was confirmed that the 'shared desk' scheme was progressing well, with the Voice Over Internet Protocol (VOIP) aiding those in a flexible and transient working environment.

Councillor Hunt said a new look Council Website was to be introduced in the summer of 2009, with a state of the art customer enquiry service, for example, for the planning service.

In response to Councillor Barlow, Councillor Hunt said it was planned for all staff at Angel Court to be relocated to Rowan House by the Christmas 2009, and all staff issues concerning this move and the overall office changes are being discussed between staff and the Executive Management Team, and fed into the Monthly Accommodation Board meetings.

In regards to the Visual Arts Facility, Councillor Hunt, in response to Councillor Higgins, said as a Member of the Firstsite:Newsite Partnership Board, there are regular monthly meetings with involvement from all the partners, Arts Council East, East of England Development Agency, The Council and Essex County Council, to discuss progress and strategy, and regular meetings with Townsend and Turner, The Council, the architects and contractor about progress of on-site work. Councillor Hunt believed the outstanding work could be done more reasonably than the quoted figure of £7.5 million, and was confident the project would be completed by the deadline, though there are penalty clauses in place should the deadline not be met.

In response to Councillor Naish, it was confirmed that the SOS Bus information service

would be communicated to local residents via The Courier, press statements and local radio. In later response to Councillor Taylor, Councillor Hunt said the SOS Bus visits would be planned based on need, determined through statistical data, and a schedule of the timetable would be produced.

Councillor Hunt said he could see the attraction in Councillor J Young's suggestion of sharing publications with other organisations that would still get the message across but with shared costs had the potential to save money. Councillor Hunt said he would ask the Communications Team to investigate this suggestion.

Councillor Hunt concurred with the comment of Councillor Arnold that for interested partner organisations and bodies to of read about the cutting of the post concerning the work of the Braintree / Colchester partnership within the Cabinet budget papers was an example of poor communication to our partners. Councillor Hunt said he would take these comments away and consider ways of improving the communication of decisions to be made, where it has a direct impact on the partner organisations.

In response to Councillor Taylor, Councillor Hunt said he did not know why the IT Partnership Board, of which he was a member, had ceased to have meetings, though he was aware that Ms. Ann Wain, Executive Director was in the process of resurrecting these meetings. Councillor Hunt said there was a possibility that the new moves will result in two smaller 'Server' rooms, one in each of Angel Court and Rowan House. In reference to the Customer Services Centre, Councillor Hunt said the Council will continue to operate a front-line service within the town centre, whereas the backroom staff could relocate to Rowan House or another organisation.

RESOLVED that the panel:

i) Noted the responses from the Portfolio Holder for Communication and Customers and thanked him for attending the meeting.

ii) Asked the portfolio holder to consider the suggestion of sharing publications with other organisations that would still get the message across but with shared costs had the potential to save money.

iii) Asked the portfolio holder to consider ways of improving the communication of decisions to be made, where it has a direct impact on the partner organisations.

Strategic Overview and Scrutiny Panel

Item **11**

17 March 2009

Report of	**Head of Street Services**	**Author**	**Chris Dowsing Tel. 282752**
Title	**Waste prevention and recycling options appraisal report**		
Wards affected	All wards		

This report concerns the presentation of potential options for the future delivery of the waste and recycling collection service.

1. Action Required

1.1 The Strategic Overview and Scrutiny Panel is invited to consider the waste prevention and recycling options appraisal report and provide views and recommendations to be considered by the Cabinet.

2. Reasons for Action

2.1 There are various potential options for the future delivery of the waste and recycling collection service identified within the options appraisal. In order to enable decisions to be made on how these options could be taken forward the Panel is requested to provide views and recommendations on the options presented.

3. Alternative Options

3.1 The options appraisal was requested by the administration. The alternative would have been to not carry out an options appraisal.

4. Supporting Information

4.1 The Council's Waste to Resources Policy came to the Policy Review and Development Panel on the 5th November 2007. This policy set out the Council's desire to move to a vision where;

- **Less waste is produced by everyone**
- **There is an active reuse culture**
- **Home composting is 'the norm'**
- **Being able to recycle is easy for everyone**
- **More waste is recycled and composted than sent to landfill**
- **The collection service is high quality**
- **There is high customer satisfaction with the service**

4.2 Since then the Council's performance has improved on firstly reducing the amounts of waste generated per person which have decreased and increasing the amounts of waste being recycled and composted.

4.3 In order to understand what may be required to improve recycling rates further the Strategic Waste team was instructed to carry out an appraisal into the various potential options for service delivery that could be considered by the administration.

5. Proposals

5.1 The waste prevention and options appraisal report sets out various options that deliver differing levels of performance and cost in relation to the collection of waste for recycling and disposal. Decisions will need to be made as to the levels of performance to be aimed for as well as the levels of finance to be committed.

5.2 The options that have been modelled range from options that look only to increase the levels of participation within the existing schemes operated through to options that include different containers such as wheeled bins and food waste containers also differing frequencies of collection for residual and recycling streams and the introduction of food waste collections.

5.3 The option of outsourcing the delivery of the waste collection and recycling service was not considered as part of this options appraisal. The options of seeking to charge separately for waste collections or restrict the number of black sacks were also not considered.

6. Strategic Plan References

6.1 This decision relates to the strategic plan 2009 – 12 through the corporate objective to be cleaner and greener.

7. Consultation

7.1 At this stage this is purely an option appraisal for consideration and as such no consultation has taken place.

8. Publicity Considerations

8.1 The range of options identified by the report includes the potential for the use of different containers and differing frequency of collection for various waste streams. Each of the options set out in this report show differences in performance and costs related to the frequency of collections.

8.2 All of the options identified in the report could potentially be implemented however it must be recognised that they are all potential options and as such no decisions have been taken regarding the introduction of any of the options.

9. Financial Implications

9.1 The financial implications for each of the options identified in the report are set out in the report itself. Each option carries differing costs and benefits and these have been set out in the report.

10. Equality, Diversity and Human Rights Implications

10.1 There are no areas where this decision will impact on the promotion of equality and overcome discrimination in relation to gender, gender reassignment, disability, sexual orientation, religion or belief, age and race/ethnicity.

11. Community Safety Implications

11.1 There are no community safety implications.

12. Health and Safety Implications

12.1 There are no health and safety implications arising as a result of the decision.

13. Risk Management Implications

13.1 All of the options set out in the report rely on certain levels of public participation in order to achieve the levels of performance and costs set out for each option. This cannot be guaranteed and as such must therefore be categorised as a risk. Increased levels of participation on a permanent basis are crucial to achieving high levels of recycling. Work can be carried out to reduce this risk such as continued and increased education, information and support to householders on reducing, recycling and composting their waste.

13.2 The views and recommendations of the panel on any potential risks they feel exist with the design or potential implementation of any of the options is sought.

Background Papers

Provide a list of documents here that you have relied upon to formulate the report but you do not need to list any document already in the public domain. Please be aware that any document listed must be shown to anyone who asks to see it. You should take this into consideration before listing any confidential documents.

Waste Prevention & Recycling Options Appraisal Report

Colchester Borough Council
January 2009

This report has been prepared by:

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1. Introduction

It has long been recognised by Colchester Borough Council that dealing with the waste produced and therefore the resources used within the Borough of Colchester, is one of the major environmental challenges the authority faces.

In December 2007 a new waste to resources strategy was produced that set out a vision of how we could make the move to recognising waste as a resource rather than just something to be disposed of.

This waste to resources strategy followed the principles set out in the top three elements of the waste hierarchy, referred to as the three R's, reduce, reuse, and recycle.

The main drive of the strategy was to seek to move towards lower levels of waste being generated in the first place. From that point on, of the waste that is generated, as much as possible should be re-used, then from what remains, the Council should seek to recycle and compost as much as possible in an economically and environmentally efficient way.

Following on from the development of the Waste to Resources strategy the Portfolio Holder for Partnerships and Performance and the Portfolio Holder for Street and Waste Services requested that an options appraisal be undertaken to assess what options were available to the Council to minimise waste and increase the quantities of waste being recycled or composted.

This options appraisal sets out a number of potential options for the delivery of the kerbside collection services that would enable the Council to achieve higher levels of recycling and composting.

There is a relationship between the options appraisal (this) document and the Council's Waste to Resources Strategy. The latter is the output of a process which looked at the Waste Strategy for England published in May 2007 and the emerging Joint Municipal Waste Management Strategy for Essex. The Waste to Resources strategy considered the options and the policies, targets and objectives within both of the strategies and applied them to Colchester.

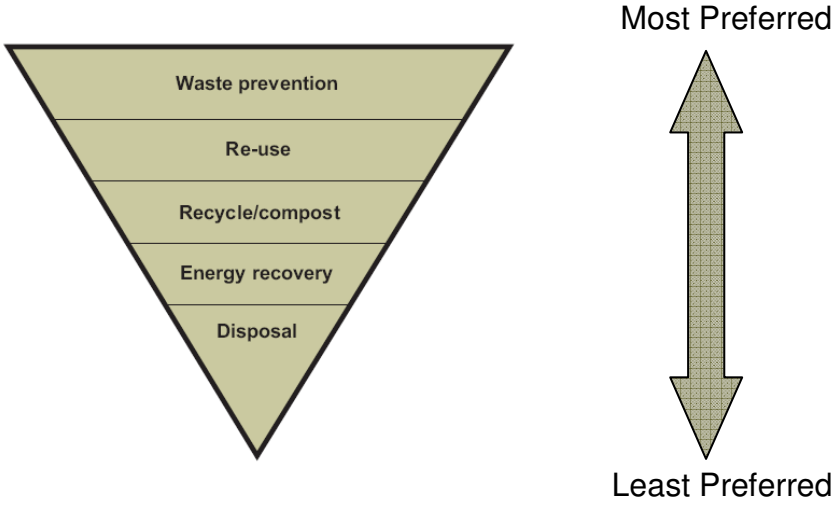
This Options Appraisal looks at the various methods particularly around waste minimisation and collection that the Council might employ in order to meet the vision set out within the Waste to Resources Strategy which is set out below.

- **Less waste is produced by everyone**
- **There is an active reuse culture**
- **Home composting is 'the norm'**
- **Being able to recycle is easy for everyone**
- **More waste is recycled and composted than sent to landfill**
- **The collection service is high quality**
- **There is high customer satisfaction with the service**

1.1 The Structure of this Report

This report considers the waste management options available to the Council in accordance with the preferences of the Waste Hierarchy. The Waste Hierarchy whilst it has long been a guiding principle in waste management, has only recently been set out as a priority order in waste management prevention and management legislation and policy in the EU Waste Framework Directive adopted by the European Parliament and Council on the 19 November 2008.

The Waste Hierarchy



The waste hierarchy identifies that the best way to manage waste is not to generate it in the first place (prevention), followed by reusing or recycling/composting and recovering energy from waste where practicable and finally disposal of waste being the least preferable option.

The Council's previously developed Waste to Resources Strategy aims to further develop the options higher up the hierarchy and reduce the amount left for disposal to a minimum.

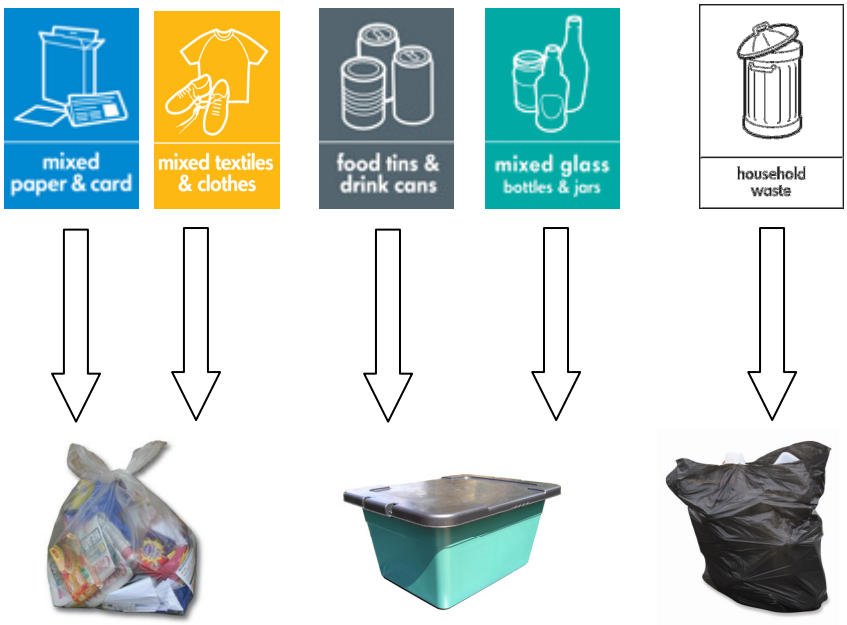
This report considers Waste Prevention & Reuse in the first instance and then Recycling and Composting options. Residual Waste Treatment options are being developed through the Joint Committees of the Essex Waste Partnership as set out in the Essex Joint Municipal Waste Management Strategy.

2. What do we currently do?

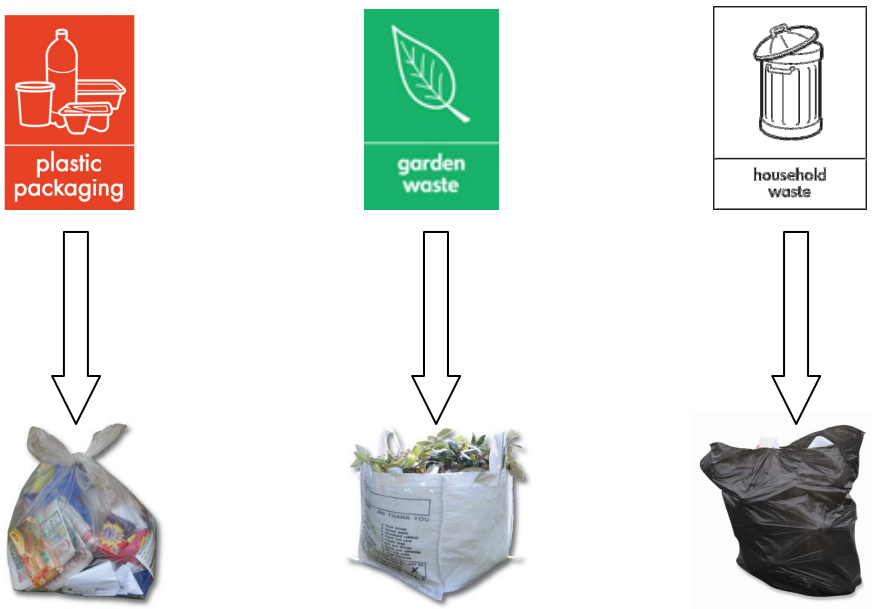
The Council currently operates a collection service for household waste that accepts a wide range of recyclable materials, a residual waste collection service, a bulky waste collection service and a large number of bring sites are also available within the Borough for residents to deposit recyclables.

The kerbside collection service operates where household waste is collected weekly in black bags and recyclables are collected on an alternate weekly basis. Graphical representations of the services provided are shown below.

BLUE WEEK: Paper and card in clear recycling sacks
Glass, cans and foil in recycling box
Household waste in unlimited black sacks
Textiles in a marked clear sack

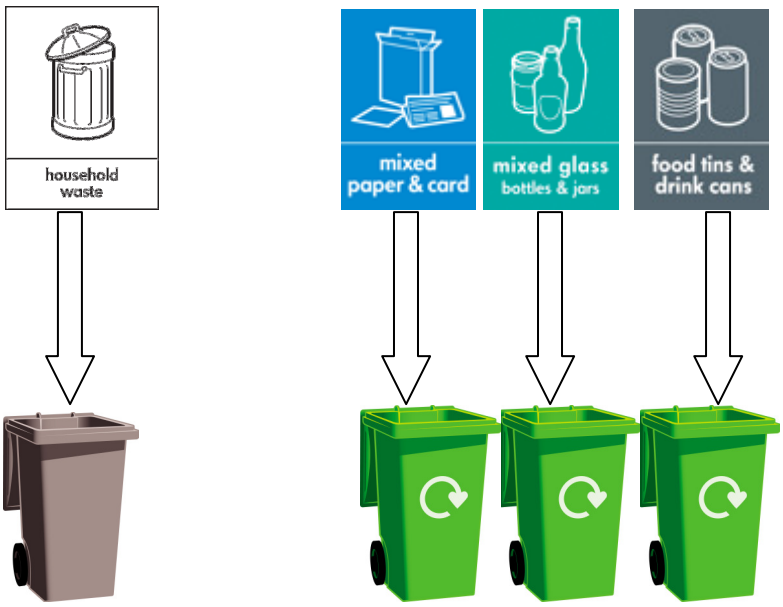


GREEN WEEK: Plastic packaging in clear recycling sacks
Garden waste in up to four garden waste bags
Household waste in unlimited black sacks



FLATS:

Flats of three storeys or more receive a different collection service: their refuse is collected from bin stores and/or communal bins; the vast majority also have communal recycling facilities with wheeled bins for paper/card, glass and cans.



What is our current performance?

In 2007/08, our combined recycling rate was 32.79%. This is a combined figure, made up of the percentage of waste that was recycled (known as dry recyclables i.e. paper, glass, cans etc) and the percentage of waste that was composted through the garden waste collection service.

The dry recycling rate was 20.40% and the composting rate was 12.39%.

Another key indicator is the amount of household waste collected per person. Our target for 2007/08 was 375kg of household waste collected per person which was passed by only collecting 362kg per person.

How much does it currently cost?

In 2007/08, the cost of collection for household waste was £49.45 per household.

What are our targets?

The Council has recently entered into the second local area agreement for Essex which contains targets relating to waste management within the 'Our

World' section of the agreement. Under the new national indicator set the main measures for waste have been reduced down to two indicators;

- NI 191 – Residual waste per head (kilograms)
- NI 192 – Household waste recycled and composted (percentage)

Colchester Borough Council's targets under the two indicators are set out in the table below:

Indicator	2008/09	2009/10	2010/11
NI 191	574kg	572kg	519kg
NI 192	34%	35%	40%

There are longer term targets set out in the waste strategy for England published by the Government in 2007 which aims for 40% reuse, recycling and composting by 2010 and 50% by 2020.

Waste Strategy for England 2007 Targets

	2005	2010	2015	2020
Household waste after re-use, recycling and composting (million tonnes-mt) (percentage reduction from 22.2 mt in 2000) *equivalent per person figures (percentage reduction from 450kg per head in 2000)*	18.6 mt (16%) *370 kg (18%)*	15.8 mt (29%) *310 kg (32%)*	14.3 mt (35%) *270 kg (40%)*	12.2 mt (45%) *225 kg (50%)*
Household re-use, recycling and composting	27%	40%	45%	50%
Municipal waste recovery[78]	38%	53%	67%	75%
Source: Defra				

How do we compare?

The Department for Environment Food and Rural Affairs (DEFRA) produces final estimates of municipal waste arisings for England and the regions and those for 2007/8 were published on 6th November 2008.

These can be used to compare our performance with other authorities with regard to recycling rates, waste arisings and costs of service delivery amongst other things.

The tables below compare Colchester's performance against the top ten performing authorities for recycling and composting in the country in 2007/08.

Authority	Household recycling & composting rate %
East Lindsey District Council	58.40
South Hams District Council	57.07
North Kesteven District Council	55.94
Teignbridge District Council	55.58
Huntingdonshire District Council	55.14
Uttlesford District Council	54.50
South Cambridgeshire District Council	53.21
Staffordshire Moorlands District Council	52.87
Rushcliffe Borough Council	52.38
South Shropshire District Council	52.06
Colchester Borough Council	**32.79**

Authority	Cost of waste collection per household £
South Cambridgeshire District Council	47.31
Teignbridge District Council	48.97
Colchester Borough Council	**49.45**
North Kesteven District Council	52.29
Huntingdonshire District Council	52.95
Rushcliffe Borough Council	58.52
East Lindsey District Council	61.84
Uttlesford District Council	62.37
Staffordshire Moorlands District Council	62.87
South Hams District Council	65.83
South Shropshire District Council	91.52

Authority	Collected household waste per person, kg
Colchester Borough Council	**362**
Teignbridge District Council	402
South Hams District Council	403
Uttlesford District Council	404
East Lindsey District Council	419
Rushcliffe Borough Council	420
South Shropshire District Council	427
Huntingdonshire District Council	431
South Cambridgeshire District Council	439
Staffordshire Moorlands District Council	456
North Kesteven District Council	475

Authority	Household dry recycling %
Uttlesford District Council	34.69
South Hams District Council	30.01
North Kesteven District Council	29.15
Rushcliffe Borough Council	26.89
East Lindsey District Council	26.83
Huntingdonshire District Council	26.50
South Shropshire District Council	22.13
Teignbridge District Council	20.57
Colchester Borough Council	**20.40**
South Cambridgeshire District Council	18.70
Staffordshire Moorlands District Council	18.29

Authority	Household green recycling %
Teignbridge District Council	35.01
Staffordshire Moorlands District Council	34.58
South Cambridgeshire District Council	34.51
East Lindsey District Council	31.57
South Shropshire District Council	29.92
Huntingdonshire District Council	28.64
South Hams District Council	27.06
North Kesteven District Council	26.79
Rushcliffe Borough Council	25.48
Uttlesford District Council	19.81
Colchester Borough Council	**12.39**

The table below compares Colchester's performance on recycling and the costs of waste collection with the other waste collection authorities within Essex.

Essex Authorities	%	£
Uttlesford District Council	54.50	62.37
Braintree District Council	42.76	65.34
Epping Forest Borough Council	41.00	84.06
Brentwood Borough Council	40.53	53.04
Maldon District Council	34.89	47.07
Chelmsford Borough Council	34.83	67.72
Basildon District Council	32.06	54.42
Colchester Borough Council	**32.79**	**49.45**
Castle Point Borough Council	27.06	32.13
Tendring District Council	26.73	32.07
Harlow District Council	22.45	58.19
Rochford District Council	19.00	43.55

Further graphs have been provided as part of the appendices of this report that compare the Council's performance against the top ten performing authorities for recycling and composting in 2007/08, as well as with our Best Value family group of similar authorities as ourselves and with the other waste collection authorities within Essex.

3. Waste Prevention & Reuse Options

Overview

For the purposes of this options appraisal waste prevention is defined as **activities designed to reduce the quantity of waste that would otherwise arise for collection and the re-use of unwanted goods and items to prevent them entering the waste stream.**

Waste prevention sits at the top of the waste hierarchy and the primary aim of any waste strategy is to minimise the amounts of waste being produced. The more we can reduced waste through measures at the top of the waste hierarchy, the less waste will have to be managed through recycling, composting, energy recovery and disposal, and the more the environmental impacts and costs associated with these processes can be avoided.

The amount of waste we produce is increasing all the time. In most of the major European cities around 600 kg waste is produced per inhabitant per year. This waste is above all the symptom of unsustainable methods of production and consumption. It has been proven that each European citizen uses an average of 50 tonnes of resources per year.

Waste prevention can not only lead to reduced costs and resources in relation to waste collection, management and disposal. It can also lead to savings in the processes involved in product generation, for example raw material extraction, energy requirements associated with the manufacture, consumption, and transportation of goods.

There are environmental impacts associated with waste minimisation and reuse which are particularly relevant to the aims of the Council's Nottingham Declaration Strategy for climate change. Once waste is generated and requires management, the collection, reprocessing, transport, treatment and/or ultimate disposal all impact on the environment which result in emissions into the atmosphere.

Waste prevention can also have significant social benefits for local communities. Waste prevention initiatives may offer local employment opportunities and provide local valuable resources that would otherwise be disposed of or transported elsewhere for reprocessing.

Since 2004/05 Colchester has seen a decrease in the overall household waste arisings produced despite the growth in population within the Borough.

Overall waste arisings were 63,538 tonnes in 2004/05 but this has been reduced down to 61,498 tonnes in 2007/08.

Waste prevention activities on a per tonne basis saves the costs associated with the collection and disposal of the waste in the region of £100 per tonne.
Set out below are the waste minimisation initiatives that the Council is currently engaged in:

- Love Food Hate Waste campaign
- Bokashi kitchen composters
- junk mail initiatives
- home composting, and
- real nappies.
- The Council has also supported the application for National Lottery awards for all funding by Enform the environmental charity based in Colchester to develop give and take days.

Set out below is a summary of the councils activities in each of these areas.

Love Food Hate Waste Campaign

The Council has fully embraced this new national campaign launched and backed by the Waste and Resources Action Programme (WRAP). Within the Waste to Resources Strategy it was identified that a major element of the putrescible waste found in the black sack was food waste both raw and cooked. From the sampling of residual waste it was identified that 30.4% of material found in the black sack was cooked and uncooked food waste.

When we throw food away, we also waste all the carbon generated as it was produced, processed, transported and stored. This is particularly important given that the whole food supply chain accounts for around 20% of the UK's greenhouse gas emissions. We could make carbon savings equivalent to taking an estimated 1 in 5 cars off the road if we avoided throwing away all the food that we could have eaten.

Apart from damage to the environment, throwing away food that could have been eaten is also a considerable waste of money. Figures produced by the WRAP suggest that a typical household throws away between £250-£400 worth of food a year that could have been eaten. Not only have we paid for the food we also pay for its collection and disposal, through council tax.

As part of the campaign the Council held a competition to find Colchester's 'tastiest leftovers dish'. Five finalists were shortlisted for a cook-off event held at the award-winning Colchester Institute's Centre for Hospitality and Food Studies in November 2008. On the night, finalists had an hour to prepare and cook their dishes using genuine leftovers. Their culinary delights were offered up to judges in front of friends and family and were marked for presentation, taste and the imaginative use of leftovers.

A leftovers cookbook is currently being produced that will include the recipes of all the finalists and the winning entry and this will be used to further promote and publicise the need to manage food properly and prevent the wastage of food.

Bokashi Kitchen Waste Composter

Alongside the Love Food Hate Waste campaign the Council actively promotes the Bokashi Kitchen Waste Composter which can allow residents to compost all of their food waste at home. This includes prepared foods, cooked and uncooked meats and fish, dairy products, eggs, bread, tea bags, coffee grinds, fruit, vegetables and spent flowers.

The use of this system within the home has the added attraction of bringing a realisation to people of how much food they are wasting. It also provides a real alternative to the problem of food waste going into landfill and releasing methane into the atmosphere.

It also provides financial savings in the form of avoided collection and disposal cost as well as the carbon savings associated with the transport for collection and disposal.

Junk Mail

Junk mail is the name given to any unwanted mail such as advertising material and free newspapers. It is estimated that junk mail accounts for around 4% of household waste. With six trees needed to produce one tonne of junk mail that's 4,600 trees being cut down unnecessarily.

In carbon management terms, for every kg of paper prevented, 1kg of CO_2 is avoided. Reducing the amount of junk mail delivered will have a knock on effect on the amount being produced, reducing the need for raw materials to produce the junk mail and reducing printing waste and associated emissions from transport and disposal.

Providing a convenient service through which action can be taken against unwanted mail is beneficial for residents as they have to do very little in terms of action whilst receiving the benefits of less unwanted mail. Residents will also feel they are individually taking action and responsibility to manage their impacts on the environment.

The Council provides information to residents and businesses to advise them of how they can reduce the amount of junk mail they receive in 3 easy ways:

1. Addressed Mail

Registering with the mailing preference service (MPS). Your name will removed from up to 95% of Direct Mail Lists that are used by companies to

market their products or services. You can register online at www.mpsonline.org.uk or call 0845 703 4599.

2. Unaddressed Mail

Opt out of the Royal Mails delivery of unaddressed mail. Much of the junk mail that we receive is delivered by the Royal Mail regionally to every household. To Opt Out email optout@royalmail.com.

3. Local Mail

Stick the 'no junk mail sticker' near your letterbox. This will help reduce the amount of local mail such as fliers, leaflets and newspapers being delivered through your door. No junk mail stickers are available via email wastemanagement@essexcc.gov.uk or contact 0845 603 7625.

Home Composting

Home composting is the most widespread and well established activity promoted and/or supported by local authorities to reduce waste entering the waste stream. It helps improve the quality of the soil and conforms to the proximity principle and the principle of self sufficiency.

The Council has promoted the use of home composters for many years and it is the preferred method for dealing with raw fruit and vegetable scraps, tea bags and coffee grounds, crushed eggshells, grass clippings and hedge clippings and dead plants etc.

The home composters, of varying sizes are heavily subsidised and residents are able to purchase them via a dedicated website or via a dedicated telephone number. 6,155 home composters were sold to residents of the Borough between 2005 and 2008. A figure of 200 kilograms per annum is a widespread benchmark for the amount of was diverted per year into a home composter.

Real Nappies

Real nappies provide an alternative to disposable nappies for householders keen to reduce the waste they generate, and for local authorities looking to reduce the costs associated with collection and disposal and the environmental consequences of treating and disposing this element of the waste stream.

By their very nature, the most significant environmental issue with using disposable nappies is their disposal. Disposable nappies are responsible for 4% of household waste in the UK, where around 8 million disposable nappies are thrown away every year. The vast majority of nappy waste in this country is land filled. One of the top environmental concerns with landfill is the release of methane, a major green house gas, from the decomposition of paper, wood, food waste and green wastes. Other environmental impacts include

water pollution and odour problems. Landfill sites also require land, which is in increasingly short supply.

Studies estimate that ordinary disposable nappies take at least 200 years to decompose. This means that every disposable nappy previously sent to landfill is still sitting there. The plastic parts of the nappy may sit there indefinitely. The most effective environmental solution to the waste problem is to reduce the generation of waste. New parents can do their bit to reduce waste by choosing real nappies in preference to disposable nappies.

Studies have shown that nappy laundry services use 32% less energy than home washing and 41% less water.

The cost of real nappies is often a prohibiting factor for parents and therefore offering a financial incentive is the most common means of overcoming this barrier.

In partnership with Essex County Council, the Council promotes the use of real nappies via its website and also in its recycling guide, which was posted to every household in the Borough in March 2008. Council officers had information and leaflets about real nappies at a town-centre roadshow in both summers of 2007 and 2008.

Give and Take days

Give and take days are pre publicised events that enable residents to reuse their unwanted items within the community and access usable items unwanted by other residents at no cost. En-form, the Environmental charity based in Colchester applied for and received funding from National Lottery Awards for All with the support of the Council to hold 6 give or take days in the Borough over the next 12 months starting with the first event which was held in Wivenhoe in October 2008. As the table below shows, there were 2046 items donated. A few boxes of books, clothing and toys were taken by the local Charity Shop. Of the 2046 items given over 81% found a new home.

Item Count	In	Out	Waste	Left
Books & Mags	432	379	0	53
Toys	416	334	0	82
Textiles	202	183	0	19
Vids, Cds DVDs	293	221	0	72
Kitchenware	211	141	0	70
Bric a Brac	146	146	0	0
Garden	17	16	0	1
Small Furniture	16	13	0	3
Misc	181	107	5	69
Baby Items	18	18	0	0
Bikes	5	5	0	0
Games and Puzzles	71	71	0	0
Electrical Items	38	38	0	0
Total	**2046**	**1672**	**5**	**369**

In addition 25 pairs of glasses were donated for use in developing countries and 3 mobile phones for recycling.

In order to ensure that the Give and Take Days are run to the highest of standards and to ensure consistency between events the Council could offer support to interested third sector parties and prepare guidance material in how an event should be organised and run as well as a means of recording performance at events. There may also be support form the Council in relation to the appropriate disposal of unwanted goods arising from the Give and Take days.

There are clear environmental benefits resulting from the establishment of Give and Take days primarily resulting from the diversion of waste from collection and then treatment/disposal with the resultant positive climate change effects. The reuse of goods prevents these goods adding to carbon emissions from collection, re-processing, treatment or disposal as well as reducing the demand for raw materials to produce new goods.

There are also social benefits to be gained from enabling community groups to engage with the community and express their ideals whilst providing a service for those in the community. It also allows the Council to promote the idea of sustainable communities and is a valuable educational too to encourage behavioural change in residents in terms of moving up the waste management hierarchy.

The events could also benefit members of the community with little disposable income so that they are able to attain items new to them at little or no cost.

Actions the Council could take to enable this to take place could include;

- the development of guidance on the website on how to successfully deliver Give and Take days and establish an online monitoring form and develop an information pack for interested groups
- Hold a workshop with interested parties to learn about the Give and Take days, including how to run an event, what the benefits may be, and monitoring requirements
- Hold follow-up meetings with interested parties where appropriate to establish and maintain commitment to deliver Give and Take days, aim to deliver events at a set rate per year

Doing more.

Recycling has now become a mainstream activity with more people claiming to recycle than ever before. However national targets for recycling will require even more people to recycle and everyone to recycle more of their waste.

WRAP in the autumn of 2007 commissioned some research to explore people's barriers to recycling at home. The objective of the research was to generate a more rigorous, detailed and in-depth understanding of what prevents householders from recycling or recycling more than they could. The work involved three stages:

- developing a conceptual framework for investigating the various barriers to recycling, drawing on the evidence of recent published literature;

- undertaking qualitative depth interviews with 73 householders to explore barriers in detail; and

- carrying out a quantitative household survey with 1,512 householders drawn from a sample of nine local authorities in England, regionally representative and covering a cross section of three recycling collection regimes – weekly residual and weekly recycling; weekly residual and fortnightly recycling; and alternate weekly collection of recyclables and residual waste.

The research has led to some important fresh thinking about how different population groups might be engaged more effectively by recycling campaigns especially at a more local level. It has also clarified that four very different types of barrier exist:

- situational barriers including not having adequate containers, a lack of space for storage, unreliable collections, unable to get to bring sites;

- behaviour, for example not having the space or systems in place in the home to recycle, being too busy with other preoccupations, difficulties in establishing routines for sorting waste and remembering to put it out;

- lack of knowledge such as knowing what materials to put in which container, and understanding the basics of how the scheme works; and

- attitudes and perceptions such as not accepting there is an environmental or other benefit, being resistant to householder sorting or not getting a personal motivational reward from recycling.

Very different messages and operational actions are needed to respond to these wide ranging barriers. Some interventions will be operational (service improvement) others about information and practical advice about how to use the scheme, and others motivational; showing why participation is worthwhile.

In order to select the most appropriate intervention for a given audience, a clear analysis of the prevalent barriers is required.

In order to increase the levels of participation in the collection schemes it is recommended that Colchester undertakes some analysis into understanding the barriers that residents feel exist that prevents them from fully participating in recycling and the messages that would best be used to encourage them to take part.

A proposal has been developed that would create a ‘door stepping’ team that would conduct interviews and offer support and guidance face to face with residents on how to reduce waste and recycle more using the council’s service.

This proposal is currently being discussed with communications experts who have experience in this approach and have applied it successfully elsewhere as to how best this method of encouraging participation and giving information and support could best be delivered.

Appraisal of kerbside collections options for household waste

What could we do in the future?

As part of the ongoing work being undertaken by the Essex Waste Partnership in 2006/07 that was seeking to develop a joint municipal waste management strategy for Essex, it was decided that to aid decision making on possible future collection service options a modelling tool be used to assess options that provided for high recycling and took value for money into account.

Essex County Council (ECC) commissioned AEA Technology (AEA), an environmental consultancy, to undertake waste system design modelling on its behalf, as part of the Waste Strategy Project. Two models were used to assess the whole system costs (ie Waste Collection Authority [WCA] and Waste Disposal Authority [WDA] costs) of household waste collection, treatment and disposal options namely the Kerbside Analysis Toll (KAT) and Wasteflow. KAT was used to model the kerbside collection costs of household waste. The outputs from the KAT model were fed into AEA's proprietary Wasteflow model and the overall costs of the whole waste management system to the WDA and WCA were then calculated between 2006/07 and 2038/39.

KAT is a Microsoft © Excel™ workbook that provides a method of assessing the costs of different kerbside collection options for meeting household waste recycling targets. It was considered the most appropriate for this task by ECC and AEA, because it was prepared for Waste & Resources Action Programme (WRAP), a not-for-profit company funded by government. KAT is primarily intended as an aid to WCAs in the planning of new kerbside collection systems. It can be used to establish the relative costs of implementing different systems. By running different scenarios, it can help to assess and to compare collection options to identify the most financially viable. It is important to note that the costs projected by KAT are standard costs. These costs are not the same as the contracted price.

Participation rates

This section explains set out, participation and capture rates as used in the Options, which are described in the following section. The definitions for set out, participation and capture rates as used in KAT are as follows:

- Set out rate – the number of households that set out a material on a given collection day per household served; as a rule of thumb the set out rate is assumed to be about 10% less than the participation rate
- Participation rate – a participating household is defined as the number of served households putting out a container at least once per month
- Capture rate – the amount of each targeted material set out by the participating households compared to the amount of the targeted material generated by the participating households. It is derived from

the participation rates and the collected tonnage of each material by the district.

In the Baseline the participation and set out rates were tailored to each district's current performance. The chosen rates are averages for the whole of the UK and ECC considered them realistic achievable rates for all the districts. The rates were kept the same for each district to give a fair comparison. Given the proposed investment by WDA and WCAs in education and promotional material (up to £3.50 per household in the Options models), these rates were considered realistic by ECC for Essex authorities.

Description of ECC's options

The options listed here are individually represented in the flowcharts below. Please note that the kerbside sort recycling collection in Options 1 and 2 consists of householders mixing paper, glass, cans and plastics in two recycling boxes, which the crew take to the vehicle to sort.

- Do nothing: this option is not graphically represented as it is the same as the Baseline only without the introduction of a MBT plant for residual waste in 2013/14
- Baseline: Service as offered in 2006/07

Baseline	**Set out**	**Participation**	**Capture**
Weekly refuse	95%	-	-
Alternate weekly paper, plastics and textiles	55%	65%	50%
Fortnightly garden waste	55%	65%	287%*
Alternate weekly glass & cans	55%	65%	63%

- Option 1: Kerbside sorted recycling with separate garden and food waste collections
- Option 1 + Transfer Station: this option is not graphically represented as it is the same as Option 1 only with the introduction of a Transfer Station (TS) in 2013/14

Options 1 & 3	**Set out**	**Participation**	**Capture**
Fortnightly refuse	95%	-	-
Fortnightly recycling (kerbside, respectively comingled)	75%	85%	75%
Fortnightly garden waste	75%	85%	287%*
Weekly food waste	55%	65%	75%

Note: *Our garden waste capture rate was calculated to be unrepresentatively high (ie 287%) because the amount of garden waste in waste composition data used in KAT was unrepresentatively small. The fraction of garden waste, included in the waste composition snapshot based on local data from 2004 was unrepresentatively small (7.8%). Therefore the amount of garden waste calculated to be in the waste stream (ie potentially collectable) was only close to half as much as was actually collected in 2006/07. To calculate the garden waste capture rate this small amount of garden waste had to be multiplied by

the Baseline's participation rate of 65% of those households that received a garden waste collection (65,000 out of 71,078).

- Option 2: Kerbside sorted recycling with mixed garden and food waste collection
- Option 2 + TS: this option is not graphically represented as it is the same as Option 2 only with the introduction of a TS in 2013/14

Options 2 & 4	**Set out**	**Participation**	**Capture**
Fortnightly refuse	95%	-	-
Fortnightly recycling (kerbside, respectively comingled)	75%	85%	75%
Fortnightly mixed food and garden waste	75%	G = 75% F = 40%	G = 287%* F = 75%

- Option 3: Comingled recycling with separate garden and food waste collections
- Option 3 + TS: this option is not graphically represented as it is the same as Option 4 only with the introduction of a TS in 2013/14
- Option 4: Comingled recycling with mixed garden and food waste collection
- Option 4 + TS: this option is not graphically represented as it is the same as Option 4 only with the introduction of a TS in 2013/14

Set out in the Tables on the next five pages are the pictorial description of each of the options along with the associated levels of recycling performance and the collection costs of the option on a per tonne basis.

The tables also show the frequency of collections for each of the materials in the option. It was also decided to include the end treatment or disposal route for each for the materials to aid understanding.

Scheme: Baseline 2006/07
Performance: 31%
Price per tonne collected: £53

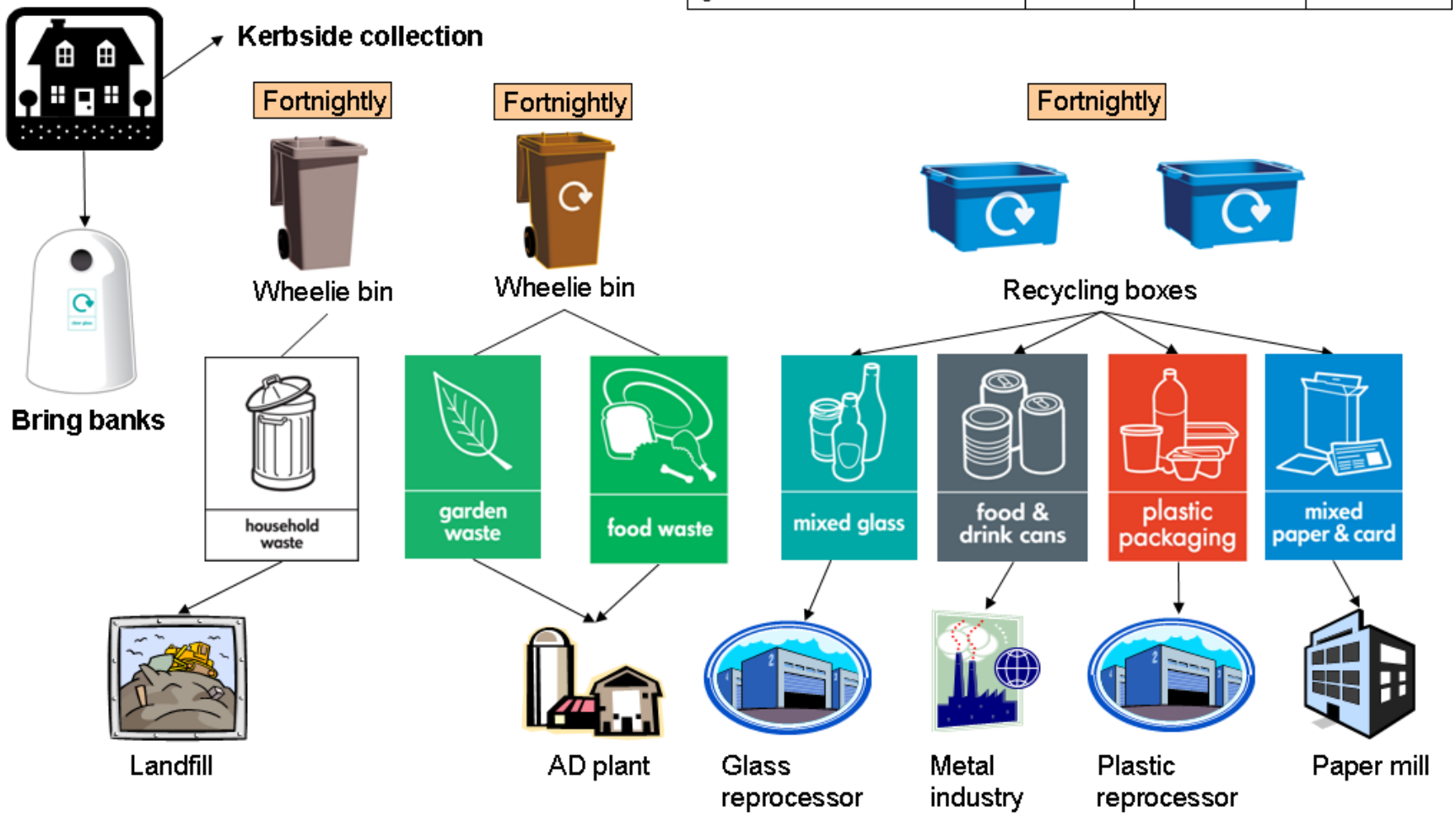
Kerbside collections	Set out	Participation	Capture
Weekly refuse	95%	-	-
Fortnightly paper, plastic & textiles	55%	65%	50%
Fortnightly garden waste	55%	65%	287%*
Fortnightly glass & cans	55%	65%	63%

Scheme: Option 1
Performance: 54%
Price per tonne collected: £59

Kerbside collections	Set out	Participation	Capture
Fortnightly refuse	95%	-	-
Fortnightly kerbside recycling	75%	85%	75%
Fortnightly garden waste	75%	85%	287%*
Weekly food waste	55%	65%	75%

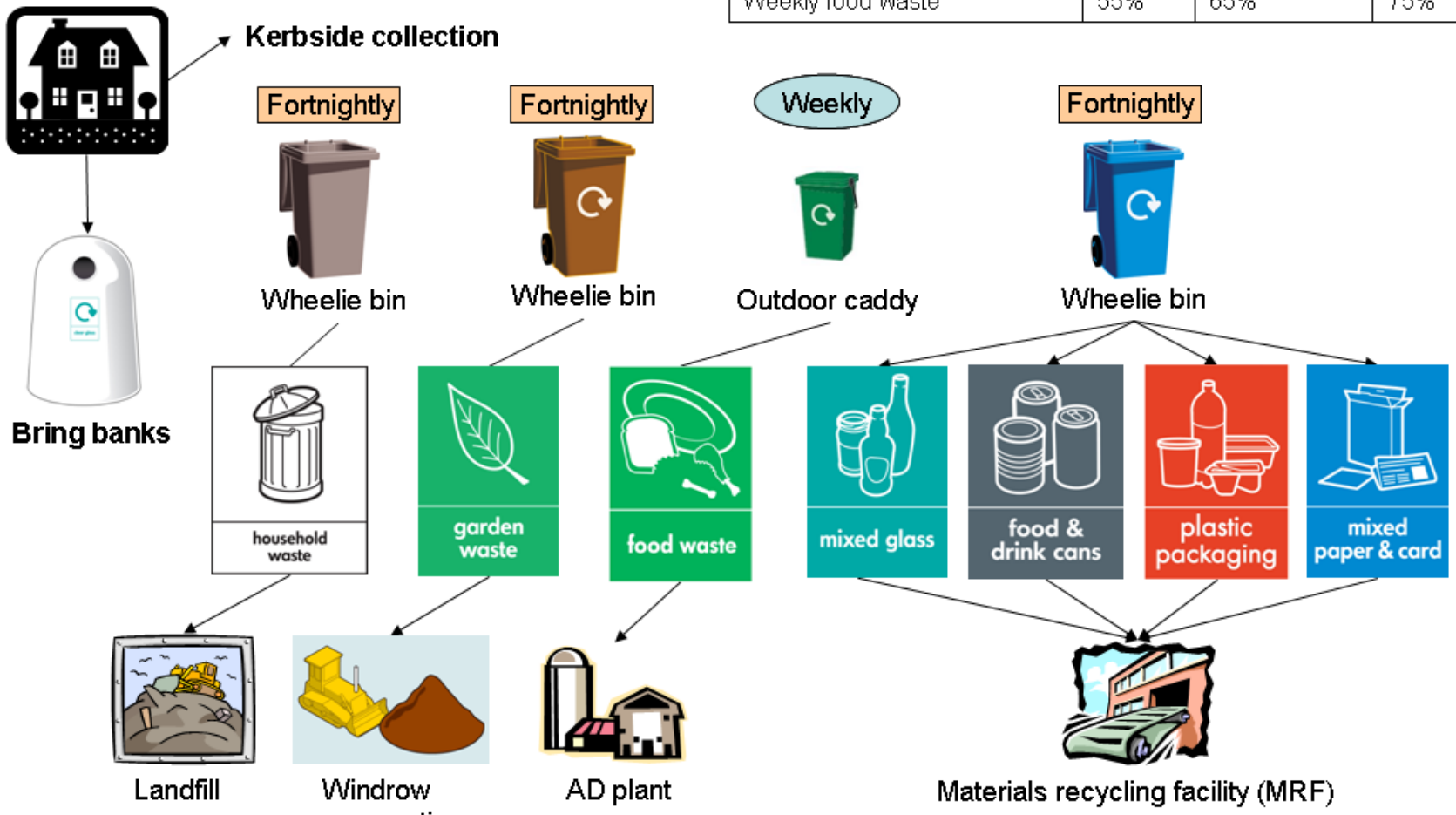
Scheme: Option 2
Performance: 48%
Price per tonne collected: £54

Kerbside collections	Set out	Participation	Capture
Fortnightly refuse	95%	-	-
Fortnightly kerbside recycling	75%	85%	75%
Fortnightly mixed food and garden waste	75%	G = 75% F = 40%	G = 287%* F = 75%



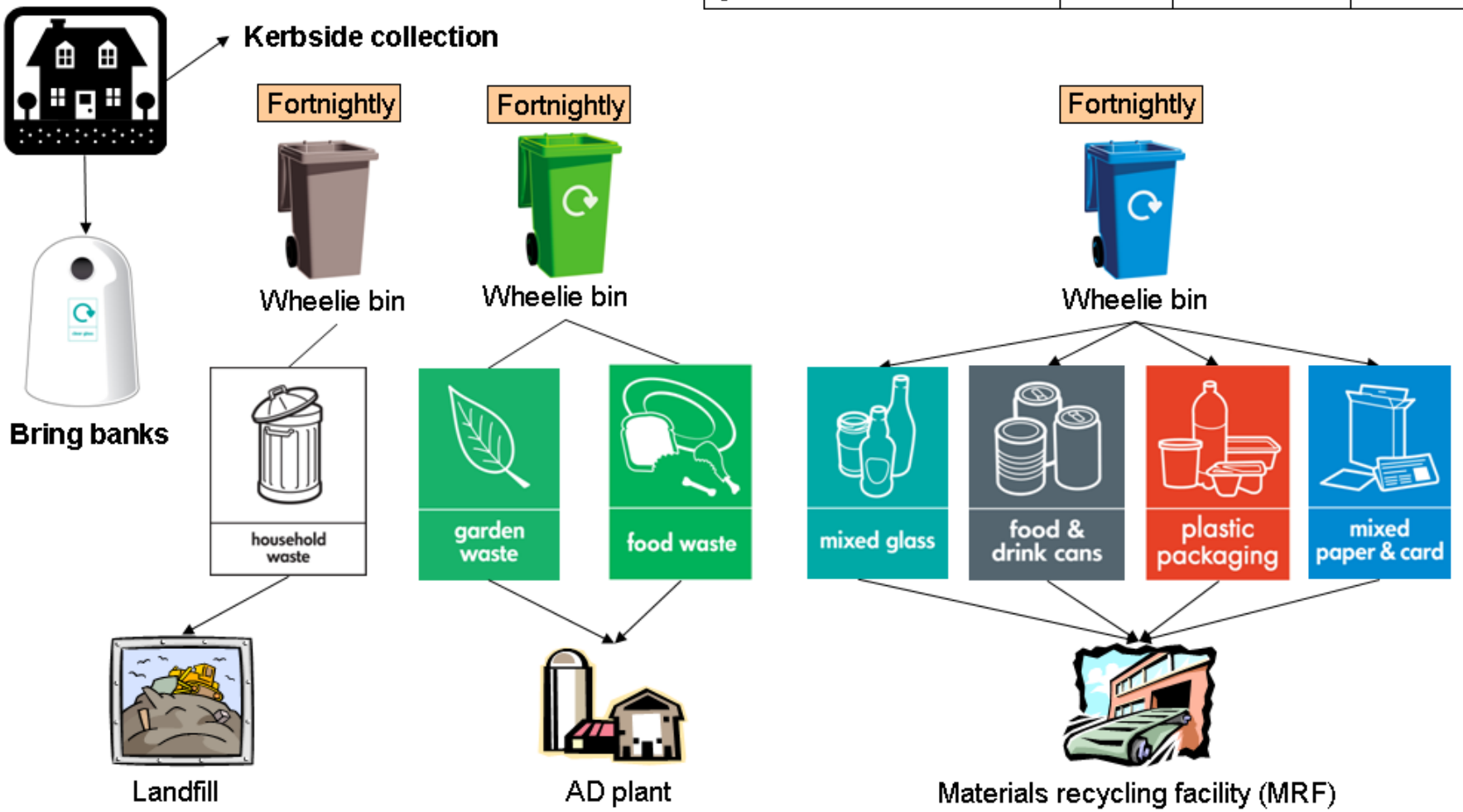
Scheme: Option 3
Performance: 51%
Price per tonne collected: £76

Kerbside collections	Set out	Participation	Capture
Fortnightly refuse	95%	-	-
Fortnightly comingled recycling	75%	85%	75%
Fortnightly garden waste	75%	85%	287%*
Weekly food waste	55%	65%	75%



Scheme: Option 4
Performance: 45%
Price per tonne collected: £71

Kerbside collections	Set out	Participation	Capture
Fortnightly refuse	95%	-	-
Fortnightly comingled recycling	75%	85%	75%
Fortnightly mixed food and garden waste	75%	G = 75% F = 40%	G = 287%* F = 75%



Modelling assumptions as employed by ECC

This section represents only a brief summary of all the assumptions used in the modelling undertaken for ECC. The full set of detailed assumptions, as distributed to CBC by ECC can be found in Appendix 1 "General assumptions for all Essex districts".

WRAP suggested four waste management systems that they believed would provide the most significant increase in recycling and landfill diversion performance whilst taking value for money into account, these then became the options modelled in this project. ECC recognised that there are a number of potential variations to the choices made. However, the limited time and resources available for the project did not permit the modelling of multiple options.

The future collection systems modelled in the Options have been based on alternate weekly collection (AWC) of refuse and recycling as there is strong evidence nationally that this is a cost effective way of increasing participation in recycling and overall recycling rates.

The chosen baseline year was 2005/06 (although 2006/07 base data was used for CBC since this had been available). In the modelling, the 2005/06 base prices have all been inflated three years to 2008/09. Different types of costs have been inflated at appropriate rates.

For each collection system in KAT, only one vehicle type can be selected. Therefore in our Baseline model, where several different types of collection vehicles are in operation, an average payload is calculated and a corresponding vehicle selected for the purposes of the modelling only. As several of our vehicles are not represented in KAT and our service consists of three different types of collections schemes, a best approximation in terms of vehicles and collections scheme had to modelled.

Differences in assumptions between the Baseline and ECC's Options

Here are some of the differences in assumptions between our Baseline and the Options modelled by ECC, which explain to a large degree the vast difference between their relative performances and costs.

Assumption	**Baseline**	**ECC's Options**
Set-out rate for recycling	55%	75%
Participation rate for recycling	65%	85%
Capture rate for recycling	50% or 64%, resp.	75%
Reason: ECC believes that their higher set-out, participation and capture rates are realistically achievable rates for all districts based on the proposed investment in education and promotion and allow for a fair comparison.		
Crew working hours	6.5 hrs	7.5 hrs
Reason: Our crews work on a 'task and finish' basis, whereas ECC decided to		

use the higher KAT default figure for all new Options across all districts.		
Average income per tonne of recyclables in 2008/09 collected at the kerbside	£16/t	£74/t
Reason: The higher per price tonne in ECC's Options was used (instead of our average income from the Baseline) in the modelling for all other districts to make the results comparable.		
Reject rates for all dry recycling collected at kerbside	0.5% was deducted	For kerbside sort Options 1 & 2: 0% was deducted
Reason: According to ECC, the 0.5% reflects the amount of contamination reported by districts in their BVPI audited data at their local Material Recycling Facilities (MRFs). However, to reflect current practice districts are penalised 0% for their recycling sent directly to third party reprocessors.		

Results for each option – costs & performance

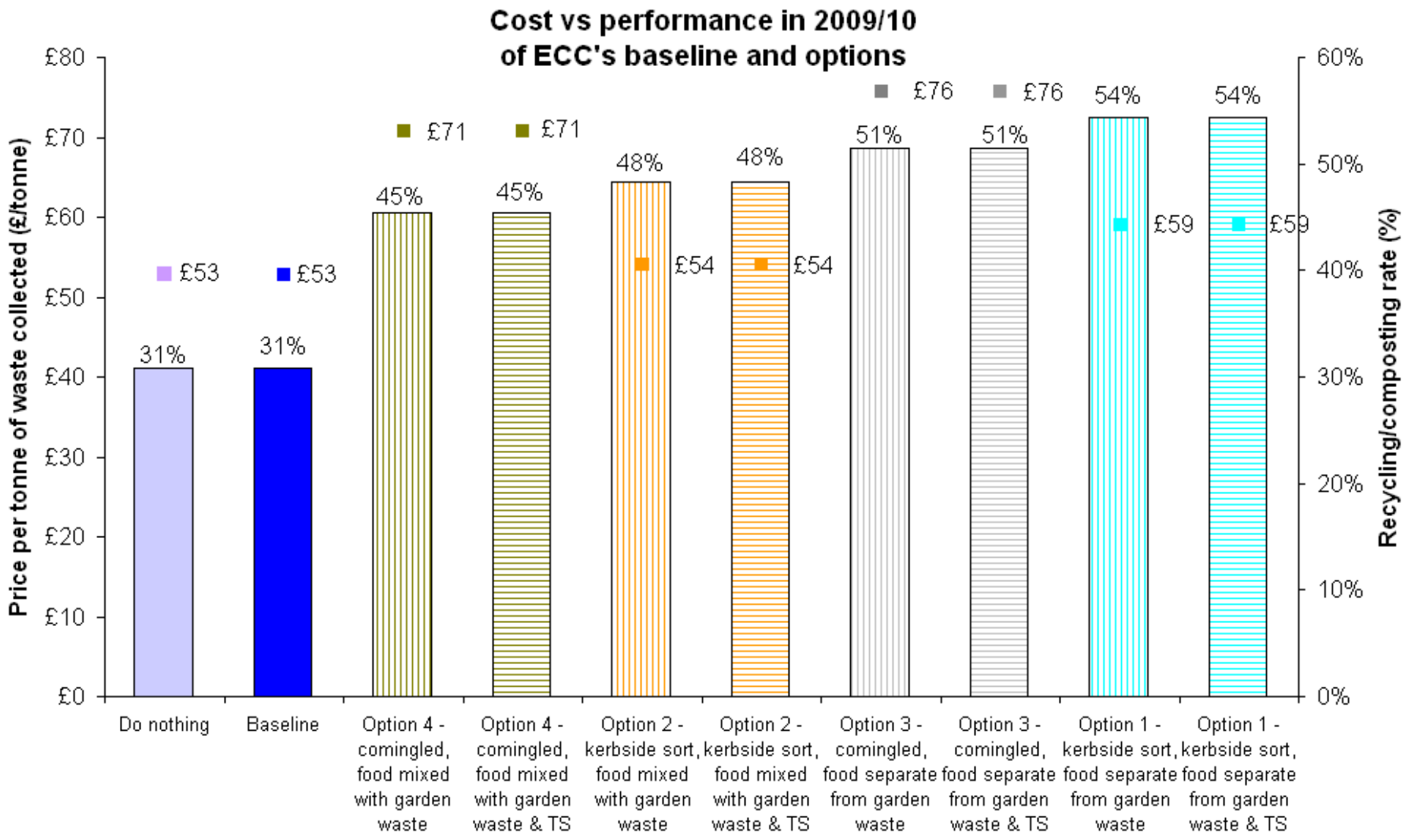
Separate food and garden waste collection systems have the highest recycling rate. The kerbside sorted dry recyclables collection system provides a higher recycling rate than co-mingled dry recyclables collection because rejected contamination by the MRF represents a smaller fraction.

There is noticeable difference between options 1 against 2, and 3 against 4. This is due to the lower participation of the AWC of mixed organics, as a result of householders being more likely to put food waste into the residual bin on the week when there is no organics collection. Food waste only collections on the other hand occur weekly and so households have no need to place food waste into the residual waste stream every other week.

As such option 1, which uses a kerbside sort dry recyclables collection and a separate food waste and garden collection, has the highest recycling rate of all the options.

Between 2008/09 and 2013/14, collecting and processing kerbside sorted dry recyclables costs less than collecting co-mingled dry recyclables. Although the pure collection costs and haulage are higher with kerbside sorting, this is outweighed by the lack of MRF costs and the higher income received for source separated materials. The remaining difference comes from the greater funding contribution from ECC (through the statutory recycling credits funding) due to the higher recycling rate resulting from kerbside sorting dry recyclables.

The performance and cost of the Baseline and each Option in 2009/10 is shown in the graph below.


Cost vs performance in 2009/10
of ECC's baseline and options
Price per tonne of waste collected (£/tonne)
Recycling/composting rate (%)
£0
£10
£20
£30
£40
£50
£60
£70
£80
0%
10%
20%
30%
40%
50%
60%
£53
£53
£71
£71
£54
£54
£76
£76
£59
£59
31%
31%
45%
45%
48%
48%
51%
51%
54%
54%
Do nothing
Baseline
Option 4 - comingled, food mixed with garden waste
Option 4 - comingled, food mixed with garden waste & TS
Option 2 - kerbside sort, food mixed with garden waste
Option 2 - kerbside sort, food mixed with garden waste & TS
Option 3 - comingled, food separate from garden waste
Option 3 - comingled, food separate from garden waste & TS
Option 1 - kerbside sort, food separate from garden waste
Option 1 - kerbside sort, food separate from garden waste & TS

CBC modelled seven options on 2006/07 baseline

The table below lists the options drawn up by CBC officers, which includes a variety of options some with no collection service change and some with changes in both recycling and refuse collection. The different recycling scenarios include a variety of combinations of mixing recyclables and collection containers. All of these options were drawn up with the aim of increasing the recycling and/or composting rate and in compliance with CBC's waste and recycling policy.

Seven options (shown emboldened in the table below) were then selected from the larger list by the Portfolio Holders. The reason for choosing these seven options included the absence of comingling recyclables, wheelie bins and garden waste mixed with food waste (referred to as mixed organics).

The final options were based on the original baseline as modelled by ECC to make the options comparable to ECC's options. Advice and clarification on the options' assumptions was sought from WRAP and Dr Julia Hummel, developer of KAT, of Eco Alternatives Ltd.

Option	Brief description
A	**Service offered in 2008/09 ie updated baseline**
A1	**Baseline with increased participation of 75%**
A2	**Baseline with increased participation of 85%**
B	**Baseline with weekly food waste collection**
C	ECC's Option 3 based on our 2008/09 baseline
D	ECC's Option 4 based on our 2008/09 baseline
E	**Baseline with weekly recycling and food waste, and fortnightly refuse collection**
F	**Baseline with weekly recycling and food waste collection**
G	Baseline with weekly recycling, and AWC of mixed organics and refuse collection
H	Baseline with weekly comingled sack for paper, plastics, cans and textiles
I	Baseline with weekly food waste and comingled sack collection for paper, plastics, cans and textiles
J	Baseline with weekly food waste, weekly comingled sack for paper, plastics, cans and textiles, and AWC of garden waste and refuse collection
K	**Baseline with weekly recycling collection**
L	Baseline with alternate weekly clear sack for paper and comingled sack for plastics, cans, glass and textiles collection
M	Baseline with weekly food waste, and alternate weekly clear sack for paper and comingled sack for plastics, cans, glass and textiles collection
N	Baseline with weekly food waste, alternate weekly clear sack for paper and comingled sack for plastics, cans, glass and textiles, and AWC of garden waste and refuse collection
O	**Baseline with weekly food waste, and fortnightly refuse collection**

Description of the original CBC options

Option A1 – Current service with increased participation of 75%; to increase recycling with no service change

Option A1	Set out	Participation	Capture
Weekly refuse	95%	-	-
Fortnightly paper, plastic & textiles	65%	75%	50%
Fortnightly garden waste	55%	65%	287%*
Fortnightly glass & cans	65%	75%	63%

Note: *Our garden waste capture rate was calculated to be 287% because the amount of garden waste in waste composition data used in KAT was unrepresentatively small.

Option A2 – Current service with increased participation of 85%; to increase recycling with no service change

Option A2	Set out	Participation	Capture
Weekly refuse	95%	-	-
Fortnightly paper, plastic & textiles	75%	85%	50%
Fortnightly garden waste	55%	65%	287%*
Fortnightly glass & cans	75%	85%	63%

Option B – Current service plus weekly food waste collection; to divert food waste with minimum service change

Option B	Set out	Participation	Capture
Weekly refuse	95%	-	-
Fortnightly paper, plastic & textiles	55%	65%	50%
Fortnightly garden waste	55%	65%	287%*
Fortnightly glass & cans	55%	65%	63%
Weekly food waste	30%	30%	75%

Option E – Current service but weekly recycling & food waste, and fortnightly residual (black sacks) collections; to increase recycling and to encourage participation in food waste collection by reducing residual collection

Option E	Set out	Participation	Capture
Fortnightly refuse	95%	-	-
Weekly paper, plastic & textiles	75%	85%	75%
Fortnightly garden waste	55%	65%	287%*
Weekly glass & cans	75%	85%	75%
Weekly food waste	55%	65%	75%

Option F – Current service but weekly recycling & food waste collections; to increase recycling and food waste diversion with more frequent recycling collections, same as option E but with weekly residual collection

Option F	Set out	Participation	Capture
Weekly refuse	95%	-	-
Weekly paper, plastic & textiles	65%	75%	75%
Fortnightly garden waste	55%	65%	287%*
Weekly glass & cans	65%	75%	75%
Weekly food waste	40%	40%	75%

Option K – Current service but weekly recycling collection; to increase recycling with minimum service change

Option K	Set out	Participation	Capture
Weekly refuse	95%	-	-
Weekly paper, plastic & textiles	65%	75%	75%
Fortnightly garden waste	55%	65%	287%*
Weekly glass & cans	65%	75%	75%

Option O – Current service but weekly food waste, and fortnightly residual (black sacks) collections; to increase recycling and to encourage participation in food waste collection by reducing residual collection, same as option E but with fortnightly recycling collection

Option O	Set out	Participation	Capture
Fortnightly refuse	95%	-	-
Fortnightly paper, plastic & textiles	70%	80%	75%
Fortnightly garden waste	55%	65%	287%*
Fortnightly glass & cans	70%	80%	75%
Weekly food waste	55%	65%	75%

Set out in the Tables on the next five pages are the pictorial description of each of the options along with the associated levels of recycling performance and the collection costs of the option on a per tonne basis.

It also shows the frequency of collections for each of the materials in the option. It was also decided to include the end treatment or disposal route for each for the materials to aid understanding.

Scheme: Option A1
Performance: 33%
Price per tonne collected: £55

Kerbside collections	Set out	Participation	Capture
Weekly refuse	95%	-	-
Fortnightly paper, plastic & textiles	65%	75%	50%
Fortnightly garden waste	55%	65%	287%*
Fortnightly glass & cans	65%	75%	63%

Scheme: Option A2
Performance: 36%
Price per tonne collected: £56

Kerbside collections	Set out	Participation	Capture
Weekly refuse	95%	-	-
Fortnightly paper, plastic & textiles	75%	85%	50%
Fortnightly garden waste	55%	65%	287%*
Fortnightly glass & cans	75%	85%	63%

Scheme: Option B
Performance: 35%
Price per tonne collected: £74

Kerbside collections	Set out	Participation	Capture
Weekly refuse	95%	-	-
Fortnightly paper, plastic & textiles	55%	65%	50%
Fortnightly garden waste	55%	65%	287%*
Fortnightly glass & cans	55%	65%	63%
Weekly food waste	30%	30%	75%

Scheme: Option E
Performance: 52%
Price per tonne collected: £84

Kerbside collections	Set out	Participation	Capture
Fortnightly refuse	95%	-	-
Weekly paper, plastic & textiles	75%	85%	75%
Fortnightly garden waste	55%	65%	287%*
Weekly glass & cans	75%	85%	75%
Weekly food waste	55%	65%	75%

Scheme: Option F
Performance: 46%
Price per tonne collected: £93

Kerbside collections	Set out	Participation	Capture
Weekly refuse	95%	-	-
Weekly paper, plastic & textiles	65%	75%	75%
Fortnightly garden waste	55%	65%	287%*
Weekly glass & cans	65%	75%	75%
Weekly food waste	40%	40%	75%

Scheme: Option K
Performance: 41%
Price per tonne collected: £74

Kerbside collections	Set out	Participation	Capture
Weekly refuse	95%	-	-
Weekly paper, plastic & textiles	65%	75%	75%
Fortnightly garden waste	55%	65%	287%*
Weekly glass & cans	65%	75%	75%

Scheme: Option O
Performance: 50%
Price per tonne collected: £59

Kerbside collections	Set out	Participation	Capture
Fortnightly refuse	100%	-	-
Fortnightly paper, plastic & textiles	70%	80%	75%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	70%	80%	75%
Weekly food waste	55%	65%	75%

Results for original CBC options – costs & performance

Even though Option E could give the best performance (52%), it is also the second most expensive (£84/tonne). The second best performing option, Option O (50%), is much more economical in comparison (£59/t); this is due to a lower frequency of both dry recycling and refuse, ie fortnightly instead of weekly. It is assumed this change only leads to relatively small reduction in dry recycling participation, which explains the small difference in performance.

Option F, in comparison to Option E, shows that a weekly refuse collection could be more expensive (£93/t) and lower performing (46%) due to removing the pressure on householders to recycle as much as possible. The difference of £9/t between these two options is due to Option E's lower cost of refuse collection being not entirely offset by its higher collection costs for dry recycling and food waste.

The introduction of fortnightly refuse collection to our current system, with a weekly food waste collection (Option O: 50%), could lead to a greater improvement in performance than increasing the recycling collection frequency to weekly, again with a weekly food waste collection (Option F: 46%).

The next best performing option is Option K (41%) as it has been assumed that increasing the frequency of dry recycling collections to weekly would raise participation and capture rates to 75%.

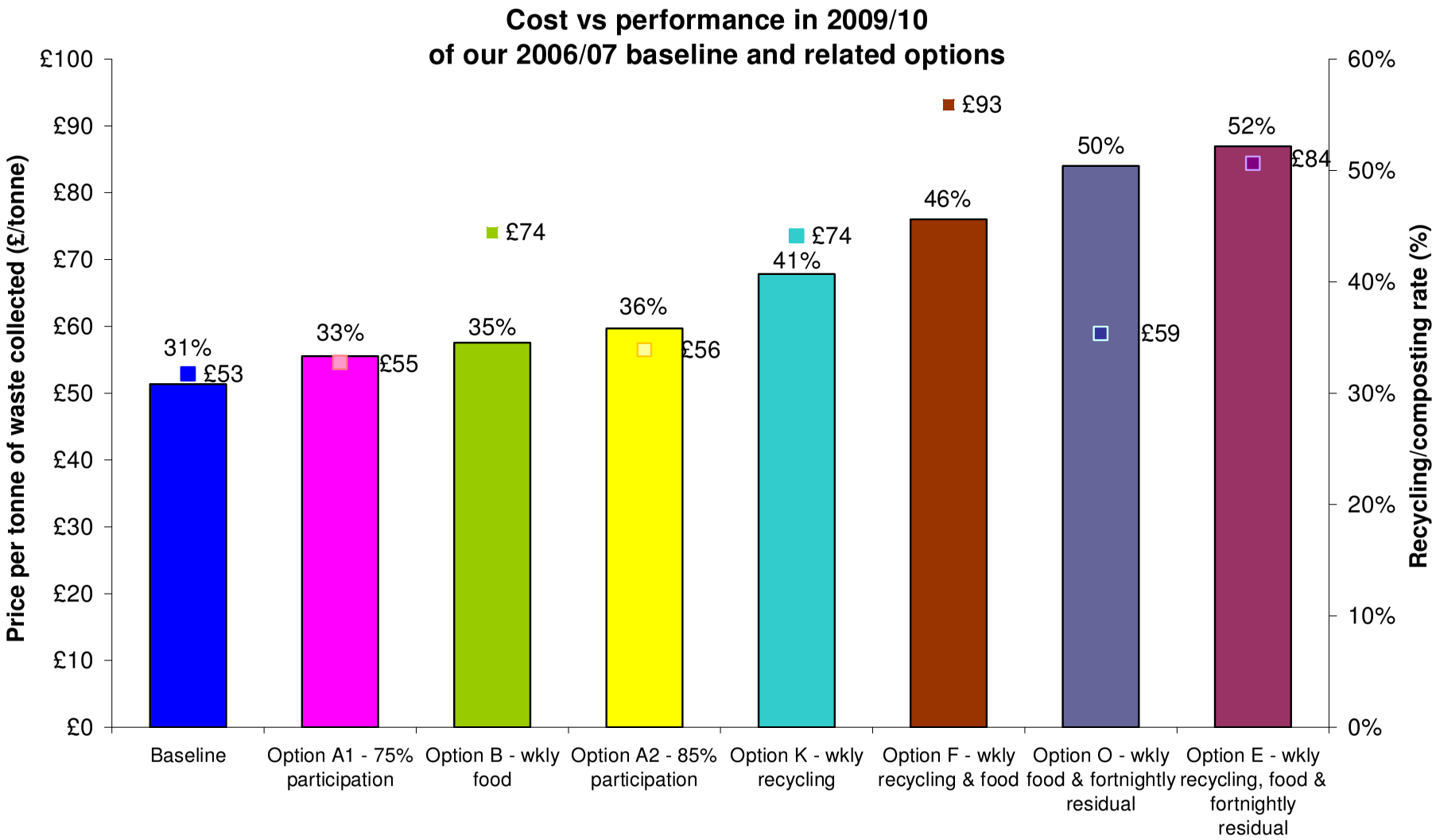
Option A2's lower cost (£56/t and 36%) compared to a similarly performing option (Option B: £74/t and 35%) is due to the absence of a food waste collection.

The cost of introducing a weekly food waste collection (Option B: £74/t) is equal to the cost of introducing a weekly dry recycling collection (Option K: £74/t). However, Option B (35%) results in a lower performance as Option K (41%) as there is no direct incentive for residents to use the food waste collection because weekly refuse collection remains in place, whereas a dry recycling collection with an increased frequency provides greater convenience and hence higher participation.

It is important to note that the introduction of a weekly food waste collection (Option B: £74/t and 35%) could be more expensive as well as lower performing than the introduction of a weekly food waste with a fortnightly refuse collection (Option O: £59/t and 50%).

Despite Option A1 (33%) resulting in an only slightly lower performance than Option B (35%), Option A1's heavy investment in education and promotion (£55/t) would be more economical than Option B's weekly food waste collection (£74/t).

The performance and cost of the Baseline and each Option in 2009/10 is shown in the graph below.


Cost vs performance in 2009/10
of our 2006/07 baseline and related options
Price per tonne of waste collected (£/tonne)
Recycling/composting rate (%)
£0
£10
£20
£30
£40
£50
£60
£70
£80
£90
£100
0%
10%
20%
30%
40%
50%
60%
31%
£53
33%
£55
35%
£74
36%
£56
41%
£74
46%
£93
50%
£59
52%
£84
Baseline
Option A1 - 75% participation
Option B - wkly food
Option A2 - 85% participation
Option K - wkly recycling
Option F - wkly recycling & food
Option O - wkly food & fortnightly residual
Option E - wkly recycling, food & fortnightly residual

Comparison of ECC's five options against CBC's seven options

Despite the fact that our original baseline is based on the service offered in 2006/07 and therefore now out-of-date, the results in terms of performance and costs of the ECC's and CBC's options based on that service are accurate for comparative purposes, as shown in the graph below.

Option 1 (54%) has a slightly higher performance than Option E (52%) due to the participation in the garden waste collection assumed to be high across all districts, whereas in Option E the participation rate had been assumed to stay the same as in the baseline. The great cost difference between the two Options (£59/t vs £84/t) is partially due to the great difference in average income per tonne of recyclables collected at the kerbside.

Option E (52%) has a slightly higher performance than Option 3 (51%) because Option E's slightly lower garden waste tonnage is not entirely offset by lower comingled recyclables tonnage due the higher reject rate for comingling than kerbside sorting.

The performance of Option O (50%) is slightly higher than that of Option 2 (48%) because of the following assumptions:

- the participation in a weekly food waste is higher than in a fortnightly mixed organics collection, where residents may choose to dispose of their food waste with the residual waste in the alternate weeks,
- the 10% reject rate at IVC plants is also applied to the garden waste in Option 2 as it is mixed with the food waste, and
- the two factors above are not outweighed by the slightly higher participation Option 2's dry recycling.

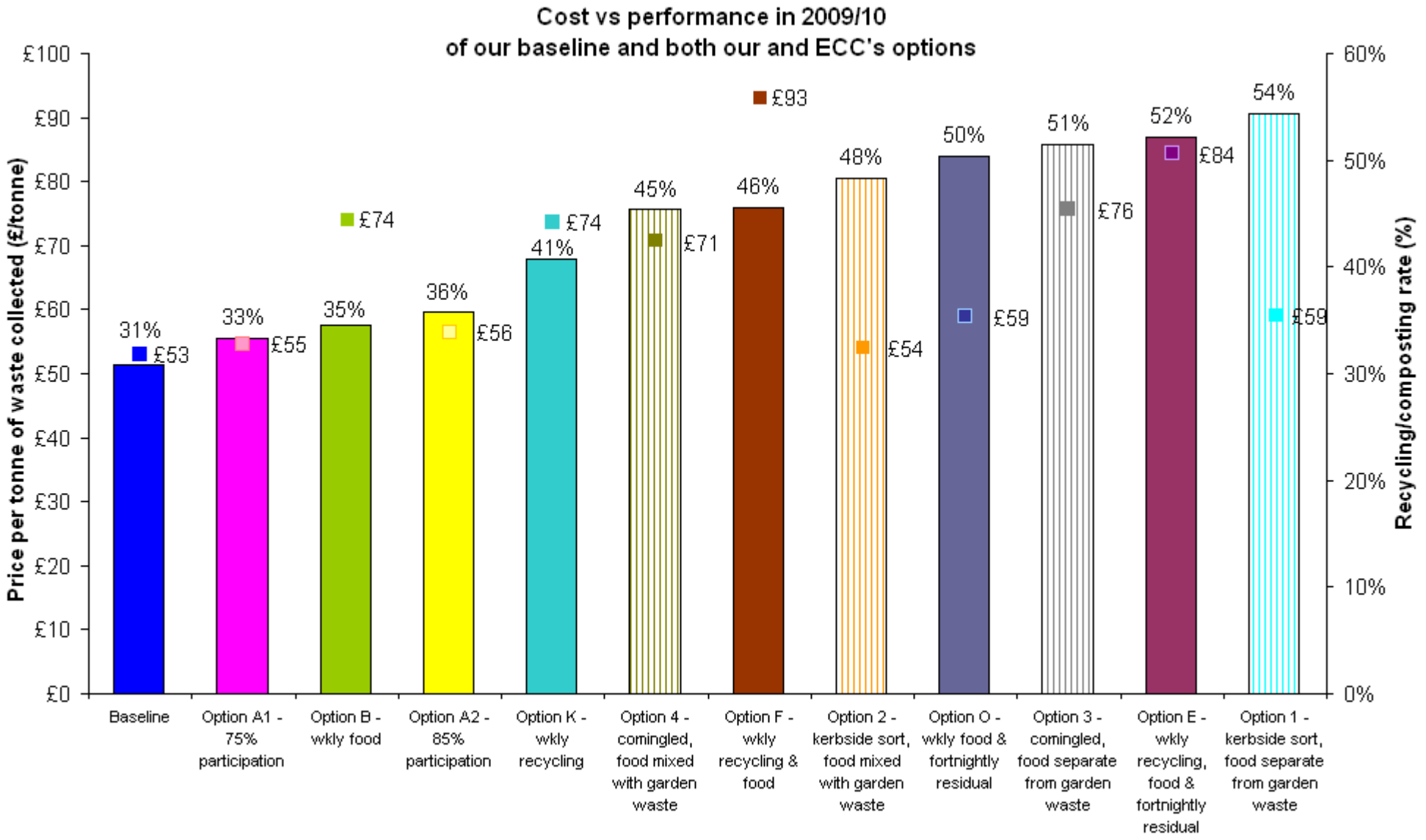
The cost of Option O (£59/t) is higher than that of Option 2 (£54/t) is partially due to the great difference in average income per tonne of recyclables collected at the kerbside.

Option O despite costing the same as Option 1 (£59/t), which are the two most similar options between CBC and ECC, its performance is lower (50% vs 54%) is due to the following assumptions:

- Option 1's participation in the garden waste collection assumed to be high across all districts, whereas in Option O the participation rate had been assumed to stay the same as in the baseline, and
- Option O's dry recycling participation rates being slightly lower due to an unlimited black sack collection presenting less pressure on households to recycle than a refuse collection limited to one wheelie bin.

Option F has a slightly higher performance (46%) than Option 4 (45%) despite a lower dry recycling participation due to Option F's weekly refuse collection. This is due to Option 4's higher reject rate of comingled recycling. The cost of Option F are, however, considerably higher (£93/t vs £71/t) due the weekly recycling and refuse collection.

Note: The ECC's TS options and its Do Nothing Option have not been included to keep the options on this graph to a practical number.


Cost vs performance in 2009/10
of our baseline and both our and ECC's options
Price per tonne of waste collected (£/tonne)
Recycling/composting rate (%)
£0
£10
£20
£30
£40
£50
£60
£70
£80
£90
£100
0%
10%
20%
30%
40%
50%
60%
31%
£53
33%
£55
35%
£74
36%
£56
41%
£74
45%
£71
46%
£93
48%
£54
50%
£59
51%
£76
52%
£84
54%
£59
Baseline
Option A1 - 75% participation
Option B - wkly food
Option A2 - 85% participation
Option K - wkly recycling
Option 4 - comingled, food mixed with garden waste
Option F - wkly recycling & food
Option 2 - kerbside sort, food mixed with garden waste
Option O - wkly food & fortnightly residual
Option 3 - comingled, food separate from garden waste
Option E - wkly recycling, food & fortnightly residual
Option 1 - kerbside sort, food separate from garden waste

CBC remodelled seven options with updated 2008/09 baseline

A more up-to-date baseline has been established recently by CBC officers, because the original baseline modelled by ECC is based on two-year-old data and a partially different recycling service. Therefore our seven options have also been remodelled from this updated baseline, which aims to represent the service offered in 2008/09 and a projected performance for this financial year.

Difference between original and updated baseline/options

Assumption	Baseline in 2006/07 and CBC options	Baseline in 2008/09 and relevant options
Household numbers	2006/07 figures	2008/09 figures
Plastics collected	Types 1 and 2 only	Types 1 to 6
Limit of garden waste sacks collected	3 sacks	4 sacks
Container for paper, plastics and textiles	Carrier bags provided by householders	Clear recycling sacks provided by CBC
Kitchen caddy liners for food waste provided by CBC (rolls of 25 bags)	2 rolls for each household each year	1 roll for each household and 3 further rolls for each participating household
Waste composition data	2004 analysis study	2007 analysis study
Annual refuse and recycling tonnage	2006/07 audited figures	2008/09 projected figures
Refuse set out rate	95%	100%
Capture rates for some waste streams as calculated by KAT	Paper and plastics: 50% Garden waste: 287%*	Paper and plastics: 57% Garden waste: 117%*
Vehicle for glass and cans collection	Toploader with 5.5t payload	Stillage with 2t payload
Vehicle for food waste collection	Caged tipper with 4.8t payload	Caged tipper with 2.5t payload
Unit cost per vehicle	Best estimate of prices for 2006/07	Best estimate of prices for 2008/09
Financing cost	6.22%	4.25%
Timings related to driving to and from depot, start of round and landfill, and unloading	Best estimate of timings for 2006/07	Best estimate of timings for 2008/09
Average salaries of drivers and loaders	Figures relevant to 2006/07	Figures relevant to 2006/07
Reject rates for all dry recycling collected at kerbside	Baseline only: 0.5% deducted	Baseline and options: 0% deducted
Reject rates at windrow composting sites	1% of garden waste collected from 2008/09	0% of garden waste collected
Reject rates at AD plant	10% of food waste collected from 2008/09	1% of food waste collected
Gate fee at AD plant	To be paid by CBC	To be paid by ECC

Contractors profit margin: 15% of total kerbside collection costs	Included to make results comparable to those from other districts	Excluded as our kerbside collection is not contracted out

Note: *Our garden waste capture rate was calculated to be over 100% because the amount of garden waste in both waste composition data set used in KAT was unrepresentatively small.

Description of the updated options and their assumptions

Baseline – Service offered in 2008/09, ie weekly refuse collection in black bags and alternate weekly recycling collection: blue week with paper/card and textiles in separate clear sacks, and glass, cans and foil in recycling box; green week with mixed plastics in clear sacks, and garden waste in up to four garden waste bags

Baseline 2008/09	**Set out**	**Participation**	**Capture**
Weekly refuse	100%	-	-
Fortnightly paper, plastic & textiles	55%	65%	57%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	55%	65%	63%

Note: *Our garden waste capture rate was calculated to be 130% because the amount of garden waste in waste composition data used in KAT was unrepresentatively small.

Option A1 – Current service with increased participation of 75%; to increase recycling with no service change

Option A1	**Set out**	**Participation**	**Capture**
Weekly refuse	100%	-	-
Fortnightly paper, plastic & textiles	65%	75%	57%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	65%	75%	63%

Option A2 – Current service with increased participation of 85%; to increase recycling with no service change

Option A2	**Set out**	**Participation**	**Capture**
Weekly refuse	100%	-	-
Fortnightly paper, plastic & textiles	75%	85%	57%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	75%	85%	63%

Option B – Current service plus weekly food waste collection; to divert food waste with minimum service change

Option B	**Set out**	**Participation**	**Capture**
Weekly refuse	100%	-	-
Fortnightly paper, plastic & textiles	55%	65%	57%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	55%	65%	63%
Weekly food waste	30%	30%	75%

Option E – Current service but weekly recycling & food waste, and fortnightly residual (black sacks) collections; to increase recycling and to encourage participation in food waste collection by reducing residual collection

Option E	**Set out**	**Participation**	**Capture**
Fortnightly refuse	100%	-	-
Weekly paper, plastic & textiles	75%	85%	75%
Fortnightly garden waste	55%	65%	130%*
Weekly glass & cans	75%	85%	75%
Weekly food waste	55%	65%	75%

Option F – Current service but weekly recycling & food waste collections; to increase recycling and food waste diversion with more frequent recycling collections, same as option E but with weekly residual collection

Option F	**Set out**	**Participation**	**Capture**
Weekly refuse	100%	-	-
Weekly paper, plastic & textiles	65%	75%	75%
Fortnightly garden waste	55%	65%	130%*
Weekly glass & cans	65%	75%	75%
Weekly food waste	40%	40%	75%

Option K – Current service but weekly recycling collection; to increase recycling with minimum service change

Option K	**Set out**	**Participation**	**Capture**
Weekly refuse	100%	-	-
Weekly paper, plastic & textiles	65%	75%	75%
Fortnightly garden waste	55%	65%	130%*
Weekly glass & cans	65%	75%	75%

Option O – Current service but weekly food waste, and fortnightly residual (black sacks) collections; to increase recycling and to encourage participation in food waste collection by reducing residual collection, same as option E but with fortnightly recycling collection

Option O	**Set out**	**Participation**	**Capture**
Fortnightly refuse	100%	-	-
Fortnightly paper, plastic & textiles	70%	80%	75%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	70%	80%	75%
Weekly food waste	55%	65%	75%

Scheme: Baseline 2008/09
Performance: 34%
Price per tonne collected: £32

Kerbside collections	Set out	Participation	Capture
Weekly refuse	100%	-	-
Fortnightly paper, plastic & textiles	55%	65%	57%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	55%	65%	63%

Scheme: Option A1 - updated
Performance: 36%
Price per tonne collected: £37

Kerbside collections	Set out	Participation	Capture
Weekly refuse	100%	-	-
Fortnightly paper, plastic & textiles	65%	75%	57%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	65%	75%	63%

Scheme: Option A2 - updated
Performance: 39%
Price per tonne collected: £39

Kerbside collections	Set out	Participation	Capture
Weekly refuse	100%	-	-
Fortnightly paper, plastic & textiles	75%	85%	57%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	75%	85%	63%

Scheme: Option B - updated
Performance: 37%
Price per tonne collected: £47

Kerbside collections	Set out	Participation	Capture
Weekly refuse	100%	-	-
Fortnightly paper, plastic & textiles	55%	65%	57%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	55%	65%	63%
Weekly food waste	30%	30%	75%

Scheme: Option E - updated
Performance: 53%
Price per tonne collected: £55

Kerbside collections	Set out	Participation	Capture
Fortnightly refuse	100%	-	-
Weekly paper, plastic & textiles	75%	85%	75%
Fortnightly garden waste	55%	65%	130%*
Weekly glass & cans	75%	85%	75%
Weekly food waste	55%	65%	75%

Scheme: Option F - updated
Performance: 47%
Price per tonne collected: £61

Kerbside collections	Set out	Participation	Capture
Weekly refuse	100%	-	-
Weekly paper, plastic & textiles	65%	75%	75%
Fortnightly garden waste	55%	65%	130%*
Weekly glass & cans	65%	75%	75%
Weekly food waste	40%	40%	75%

Scheme: Option K – updated
Performance: 43%
Price per tonne collected: £48

Kerbside collections	Set out	Participation	Capture
Weekly refuse	100%	-	-
Weekly paper, plastic & textiles	65%	75%	75%
Fortnightly garden waste	55%	65%	130%*
Weekly glass & cans	65%	75%	75%

Scheme: Option O - updated
Performance: 49%
Price per tonne collected: £44

Kerbside collections	Set out	Participation	Capture
Fortnightly refuse	100%	-	-
Fortnightly paper, plastic & textiles	70%	80%	75%
Fortnightly garden waste	55%	65%	130%*
Fortnightly glass & cans	70%	80%	75%
Weekly food waste	55%	65%	75%

Results for each updated option – costs & performance

Even though Option E could give the best performance (53%), it is also the second most expensive (£55/tonne). The second best performing option, Option O (49%), is more economical in comparison (£44/t); this is due to a lower frequency of both dry recycling and refuse, ie fortnightly instead of weekly. It is assumed this change only leads to relatively small reduction in dry recycling participation, which explains the very small difference in performance.

Option F, in comparison to Option E, shows that a weekly refuse collection could be more expensive (£61/t) and lower performing (47%) due to removing the pressure on householders to recycle as much as possible. The difference of £6t between these two options is due to Option E's lower cost of refuse collection being not entirely offset by its higher collection costs for dry recycling and food waste.

The introduction of fortnightly refuse collection to our current system, with a weekly food waste collection (Option O: 49%), could lead to a slight improvement in performance than increasing the recycling collection frequency to weekly, again with a weekly food waste collection (Option F: 47%).

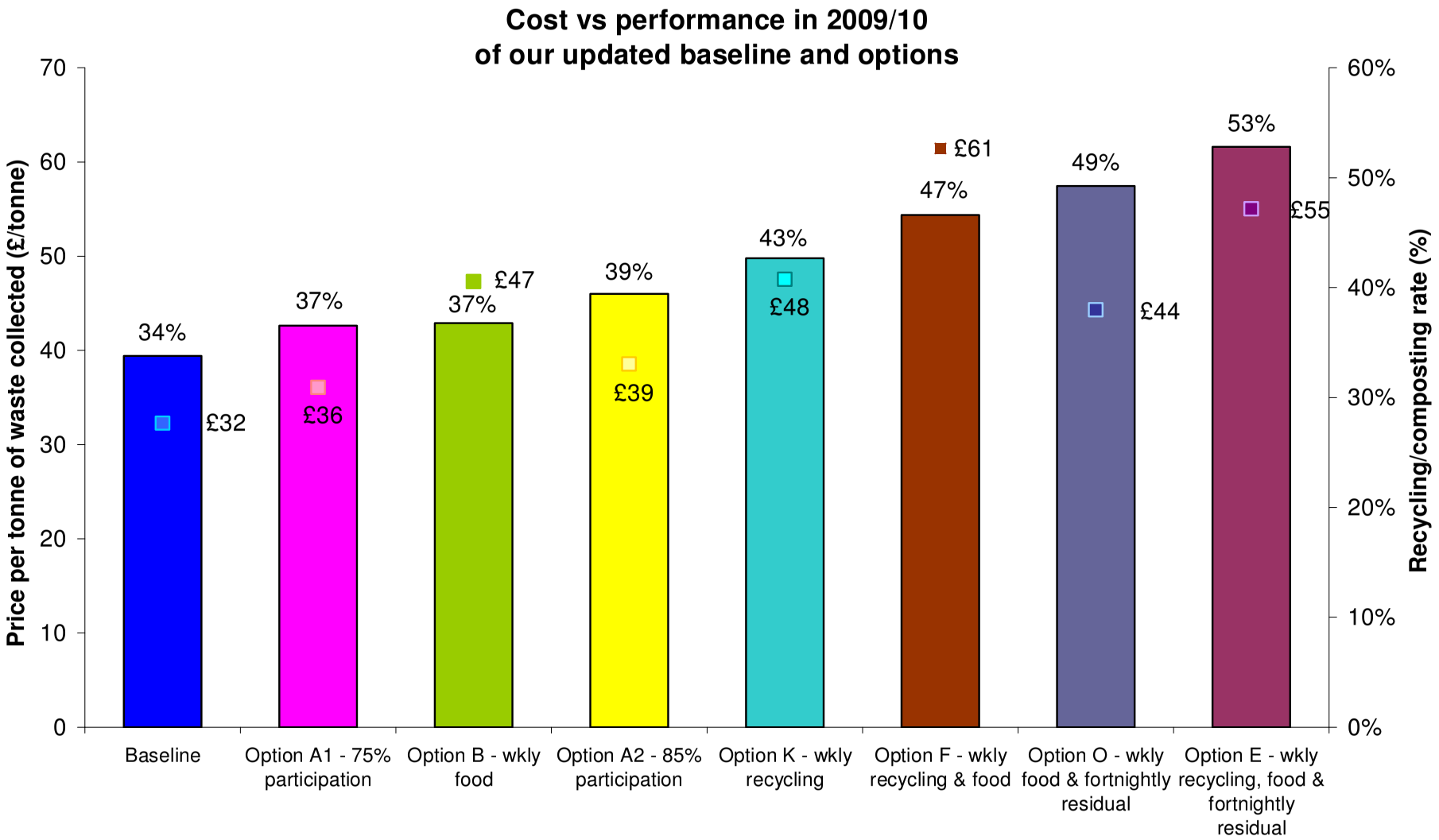
The next best performing option is Option K (43%) as it has been assumed that increasing the frequency of dry recycling collections to weekly would raise participation and capture rates to 75%. Option A2's lower cost (£39/t and 39%) compared to other similarly performing options is due to the absence of a food waste collection (Option B: £47/t and 37%) and a weekly dry recycling collection (Option K: £48/t and 43%).

The cost of introducing a weekly food waste collection (Option B: £47/t) is similar to a weekly dry recycling collection (Option K: £48/t). However, Option B (37%) results in a lower performance as Option K (43%) as there is no direct incentive for residents to use the food waste collection because weekly refuse collection remains in place, whereas a dry recycling collection with an increased frequency provides greater convenience and hence higher participation.

It is important to note that the introduction of a weekly food waste collection (Option B: £47/t and 37%) could be more expensive and lower performing than the introduction of a weekly food waste and fortnightly refuse collection (Option O: £44/t and 49%).

Despite Option A1 (37%) resulting in the same performance as Option B (37%), Option A1's heavy investment in education and promotion (£36/t) would be more economical than Option B's weekly food waste collection (£47/t).

The performance and cost of the updated Baseline and each updated Option in 2009/10 is shown in the graph below.


Cost vs performance in 2009/10
of our updated baseline and options
Price per tonne of waste collected (£/tonne)
Recycling/composting rate (%)
0
10
20
30
40
50
60
70
0%
10%
20%
30%
40%
50%
60%
34%
£32
37%
£36
37%
£47
39%
£39
43%
£48
47%
£61
49%
£44
53%
£55
Baseline
Option A1 - 75% participation
Option B - wkly food
Option A2 - 85% participation
Option K - wkly recycling
Option F - wkly recycling & food
Option O - wkly food & fortnightly residual
Option E - wkly recycling, food & fortnightly residual

Treatment and disposal

In ECC's modelling new collection schemes were assumed to commence in 2008/09. The waste material and payments flows detailed below relate to both Baselines and all Options as applicable.

Between 2008/09 and 2013/14 Colchester's material flows are as follows (see first map below):

- The kerbside sorted or co-mingled dry recyclables are assumed to be bulked at our local depot before travelling on to either reprocessors or Materials recovery facilities (MRFs).
- Any separately collected food waste from Colchester is assumed to be sent to Envar's In-Vessel Composting (IVC) plant in St. Ives in Cambridgeshire, and mixed garden and food waste will be sent to County Mulch's IVC plant near Bury St. Edmunds in Suffolk.
- Garden waste will continue being transported to Birch or Tolleshunt Major and residual waste to Bellhouse landfill at Stanway.

From 2013/14 onwards Colchester's material flows are modelled as follows (see second map below):

- Kerbside sorted dry recyclables are assumed to continue being bulked at our local depot before travelling on to reprocessors.
- MRF located at Rivenhall starts sorting comingled recyclables.
- Anaerobic digestion (AD) plant located at Rivenhall starts accepting separately collected food waste, and mixed garden and food waste.
- Garden waste will continue being transported to Birch or Appletons.
- Mechanical biological treatment (MBT) plant located at Rivenhall starts treating residual waste. The process residues from the proposed MBT plants near Braintree and Basildon are both sent to Bellhouse landfill at Stanway.
- Transfer Stations (TSs) become operational and can be used for the bulking of all waste collection streams where appropriate, ie for residual waste, kerbside sorted recyclables, co-mingled recyclables, food waste only collections, and mixed food waste and garden collections. One of the TSs was assumed to be in Colchester and was modelled to investigate whether its use could reduce both CBC's and whole system costs (ie cost to the Essex tax payer). This TS was assumed to be sized to handle only Colchester's waste.

The solid recovered fuel (SRF) plant will start burning the residues from the MBT process in 2014/15.

Payment flows from 2008/09:

- The WDA pay for gate fees arising at landfill sites (including landfill tax and LATS trading) and Civic Amenity site costs
- The WCA pays for gate fees arising at MRFs, reprocessors and windrow composting facilities.

- The WCAs are assumed to pay the gate fee at windrow composting sites and in return receive a full recycling credit per tonne of composting.

Payment distribution from 2013/14:

- The WDA pay for gate fees arising at:
  - MBT facilities
  - SRF facility (from 2014/15)
- The Tipping Away payment is still paid from the WDA to the WCA even after the TSs become operational, for the same distance as for the Options without the TS.

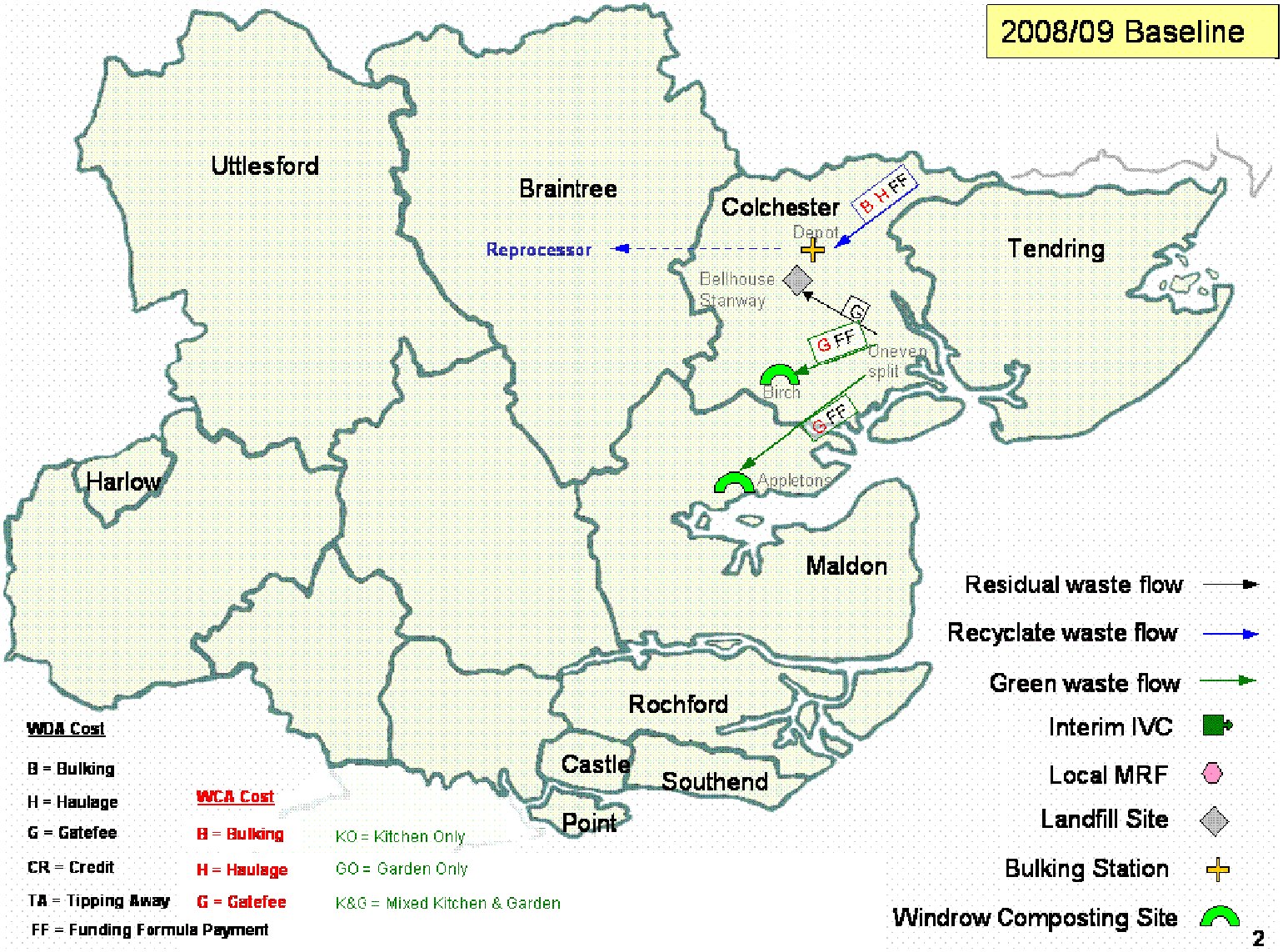
Please note that since the assumptions for the system design modelling were agreed, ECC has agreed also to pay for the gate fees arising at TS (including bulking and onward haulage) and AD plants for those WCAs that sign the IAA.

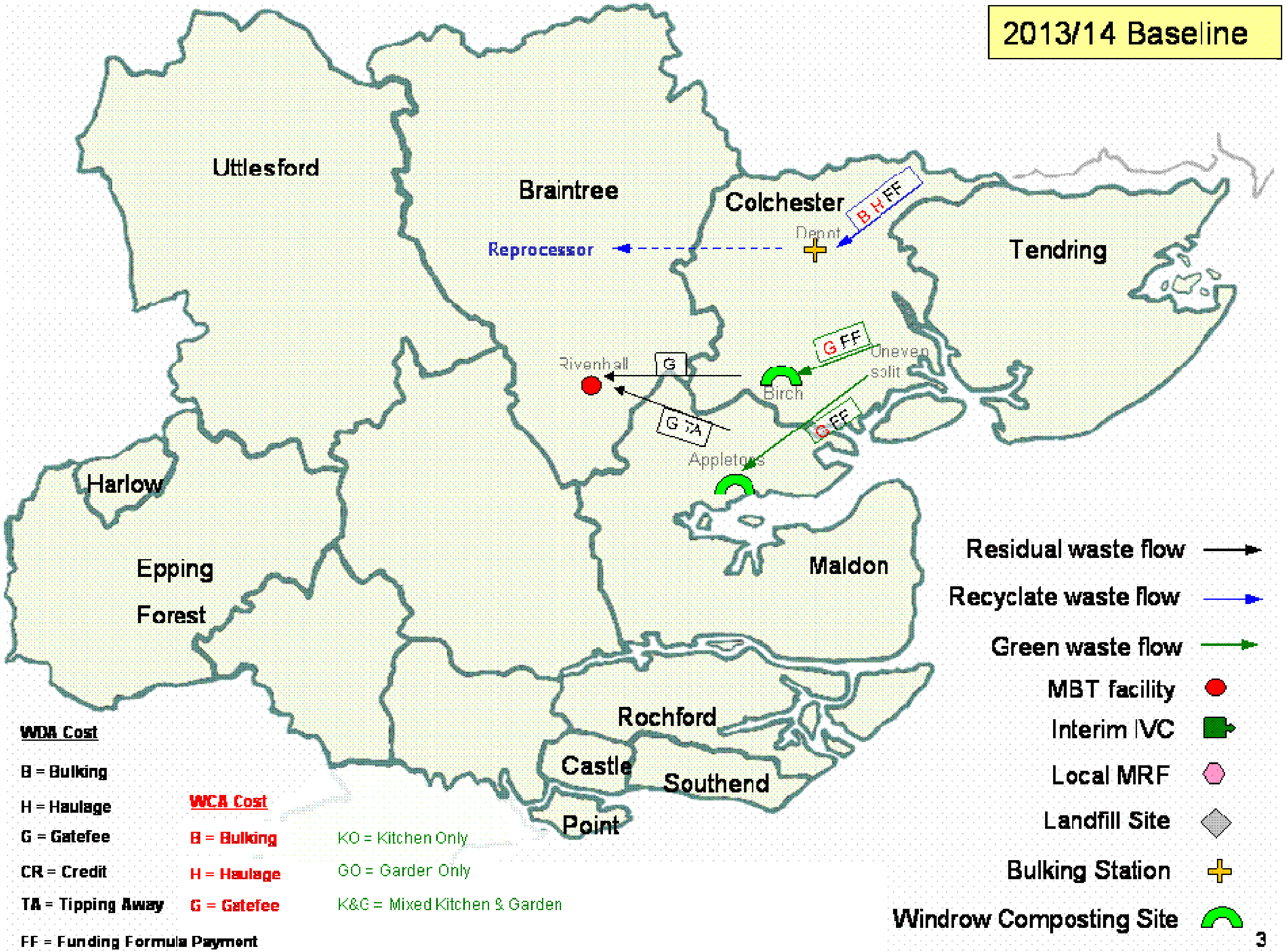
Cost implications from material flow changes over time

The original Baseline assumed that our service offered did not change over the period from 2006/07 to 2038/39. However, due to the assumption that the planned MBT facility becomes operational in 2013/14, there is a refuse delivery point change in that year from Stanway landfill to the Rivenhall MBT plant, which leads to an increased cost of the Baseline.

This change in the residual waste delivery point, however, does not impact each Option in the same way. The over-riding reason for the costs in Option 1, and Options B, E, F and O increasing in that year is because of the “food waste only” waste transfers from the interim IVC to the AD plant and there is an associated gate fee increase. Please note that our updated options do not include gate fees for the AD plant as ECC decided after their modelling had been completed that this cost would be borne by them and not the districts.

The costs in Option 4 decrease in 2013 because of two reasons, the main reason being the lower gate fee at the in-county MRF for the comingled dry recyclables. However, there is also a slight reduction in the overall cost of the mixed food waste and garden organics collection. This saving in organics is a result from moving to delivering the waste directly to the AD plant, (which saves on bulking and haulage costs with no associated increase in collection costs), which outweighs the slight increase in processing costs when moving from the Interim IVC to the AD plant. The costs in Option 2 and 3 do not appear to change in 2013 due the reasons given above combining to cancel out any affects.


2008/09 Baseline
Uttlesford
Braintree
Colchester
Tendring
Harlow
Maldon
Rochford
Castle Point
Southend
Reprocessor
Depot
B H FF
Bellhouse Stanway
G
G FF
Uneven split
Birch
G FF
Appletons
WDA Cost
B = Bulking
H = Haulage
G = Gatefee
CR = Credit
TA = Tipping Away
FF = Funding Formula Payment
WCA Cost
B = Bulking
H = Haulage
G = Gatefee
KO = Kitchen Only
GO = Garden Only
K&G = Mixed Kitchen & Garden
Residual waste flow
Recyclate waste flow
Green waste flow
Interim IVC
Local MRF
Landfill Site
Bulking Station
Windrow Composting Site
2



2013/14 Baseline
Uttlesford
Braintree
Colchester
Tendring
Harlow
Epping
Forest
Maldon
Rochford
Castle
Southend
Point
Reprocessor
Depot
B H FF
G FF
Uneven
split
Rivenhall
G
G TA
Birch
G FF
Appletons
Residual waste flow
Recyclate waste flow
Green waste flow
MBT facility
Interim IVC
Local MRF
Landfill Site
Bulking Station
Windrow Composting Site
3
WDA Cost
B = Bulking
H = Haulage
G = Gatefee
CR = Credit
TA = Tipping Away
FF = Funding Formula Payment
WCA Cost
B = Bulking
H = Haulage
G = Gatefee
KO = Kitchen Only
GO = Garder Only
K&G = Mixed Kitchen & Garden

Conclusions

2009/10 results of ECC options

Option	Brief description
Baseline	Service as offered in 2006/07
1	Kerbside sorted recycling with separate garden and food waste
2	Kerbside sorted recycling with mixed garden and food waste
3	Comingled recycling with separate garden and food waste
4	Comingled recycling with mixed garden and food waste
1+TS	Option 1 using a Transfer Station
2+TS	Option 2 using a Transfer Station
3+TS	Option 3 using a Transfer Station
4+TS	Option 4 using a Transfer Station

Rank	Total cost of option per tonne of waste collected (£/tonne)	Performance: recycling and composting (%)
1	£53/t - Baseline & Do nothing	54% - Option 1 & Option 1+TS
2	£54/t - Option 2 & Option 2+TS	51% - Option 3 & Option 3+TS
3	£59/t - Option 1 & Option 1+TS	48% - Option 2 & Option 2+TS
4	£71/t - Option 4 & Option 4+TS	45% - Option 4 & Option 4+TS
5	£76/t - Option 3 & Option 3+TS	31% - Baseline & Do nothing

2009/10 results of original CBC options

Option	Brief description
Baseline	Service as offered in 2006/07
A1	Baseline with increased participation of 75% in dry recycling
A2	Baseline with increased participation of 85% in dry recycling
B	Baseline with weekly food waste collection
E	Baseline with weekly recycling and food waste, and fortnightly refuse collection
F	Baseline with weekly recycling and food waste collection
K	Baseline with weekly recycling collection
O	Baseline with weekly food waste, and fortnightly refuse collection

Rank	Total cost of option per tonne of waste collected (£/tonne)	Performance: recycling and composting (%)
1	£53/t – Baseline	52% - Option E
2	£55/t – Option A1	50% - Option O
3	£56/t – Option A2	46% - Option F
4	£59/t – Option O	41% - Option K
5	£74/t – Option B & Option K	36% - Option A2
6		35% - Option B
7	£84/t – Option E	33% - Option A1
8	£93/t – Option F	31% - Baseline

2009/10 results of ECC options & original CBC options

Rank	Total cost of option per tonne of waste collected (£/tonne)	Performance: recycling and composting (%)
1	£53/t – Baseline	54% - Option 1
2	£54/t – Option 2	52% - Option E
3	£55/t – Option A1	51% - Option 3
4	£56/t – Option A2	50% - Option O
5	£59/t – Option O & Option 1	48% - Option 2
6		46% - Option F
7	£71/t – Option 4	45% - Option 4
8	£74/t – Option B & Option K	41% - Option K
9		36% - Option A2
10	£76/t – Option 3	35% - Option B
11	£84/t – Option E	33% - Option A1
12	£93/t – Option F	31% - Baseline

2009/10 results of updated CBC options

Rank	Total cost of option per tonne of waste collected (£/tonne)	Performance: recycling and composting (%)
1	£32/t – Baseline	53% - Option E
2	£36/t – Option A1	49% - Option O
3	£39/t – Option A2	47% - Option F
4	£44/t – Option O	43% - Option K
5	£47/t – Option B	39% - Option A2
6	£48/t – Option K	37% - Option A1 & Option B
7	£55/t – Option E	
8	£61/t – Option F	34% - Baseline

Total cost in 2009/10 for each of ECC's options (£000s)

Annual costs	Do nothing	Baseline	Option 1	Option 2	Option 3	Option 4
Total net cost	£3,436K	£3,436K	£3,926K	£3,556K	£5,032K	£4,662K

Total cost in 2009/10 for each of CBC's original options (£000s)

Annual costs	Option A1	Option A2	Option B	Option E	Option F	Option K	Option O	Annual costs
Containers	£285K	£285K	£412K	£412K	£412K	£285K	£411K	Containers
Vehicles	£869K	£894K	£937K	£1,281K	£1,343K	£1,276K	£850K	Vehicles
Operating costs & overheads	£3,133K	£3,223K	£3,960K	£4,778K	£5,162K	£4,331K	£3,494K	Operating costs & overheads
Bulking & haulage	£98K	£111K	£153K	£303K	£228K	£137K	£293K	Bulking & haulage
Recycling sales	-£188K	-£212K	-£163K	-£296K	-£261K	-£261K	-£278K	Recycling sales
Recycling credits	-£1,098K	-£1,180K	-£1,138K	-£1,719K	-£1,503K	-£1,341K	-£1,662K	Recycling credits
Windrow gate fee	£168K	£168K	£168K	£168K	£168K	£168K	£168K	Windrow gate fee
Bring sites	£34K	£34K	£34K	£34K	£34K	£34K	£34K	Bring sites
Extra education	£239K	£339K	£139K	£139K	£139K	£139K	£139K	Extra education
Total net cost	**£3,541K**	**£3,662K**	**£4,802K**	**£5,472K**	**£6,043K**	**£4,768K**	**£3,821K**	**Total net cost**

Cost and revenue breakdown in 2009/10 for each of CBC's updated options (£000s)

Annual costs	Baseline	Option A1	Option A2	Option B	Option E	Option F	Option K	Option O	Annual costs
Containers	£370K	£370K	£370K	£681K	£802K	£715K	£370K	£802K	**Containers**
Vehicles	£488K	£520K	£552K	£555K	£712K	£779K	£711K	£598K	**Vehicles**
Operating costs & overheads	£2,220K	£2,364K	£2,507K	£2,778K	£3,538K	£3,795K	£3,235K	£2,982K	**Operating costs & overheads**
Bulking & haulage	£101K	£116K	£132K	£151K	£276K	£214K	£148K	£266K	**Bulking & haulage**
Recycling sales	-£192K	-£221K	-£251K	-£192K	-£318K	-£281K	-£281K	-£300K	**Recycling sales**
Recycling credits	-£1,122K	-£1,219K	-£1,316K	-£1,220K	-£1,752K	-£1,547K	-£1,416K	-£1,691K	**Recycling credits**
Windrow gate fee	£175K	£175K	£175K	£175K	£175K	£175K	£175K	£175K	**Windrow gate fee**
Bring sites	£28K	£28K	£28K	£28K	£28K	£28K	£28K	£28K	**Bring sites**
Extra education	£38K	£235K	£335K	£135K	£135K	£135K	£135K	£135K	**Extra education**
Total net cost	**£2,107K**	**£2,368K**	**£2,533K**	**£3,091K**	**£3,595K**	**£4,013K**	**£3,106K**	**£2,995K**	**Total net cost**

Appendices

Appendix 1 General assumptions for all Essex districts
Appendix 2 Details about KAT
Appendix 3 Performance and cost graphs comparing CBC to other authorities

Appendix 1

General Assumptions for all Essex districts

This document must be read in conjunction with the appropriate maps for each district. It is important to note that ALL the assumptions listed below were agreed for the purposes of the system design modelling project only, and do not at this time represent any form of commitment to any particular future waste management structure or cost apportionment.

Main principle assumptions used for the System Design modelling project

1. For the purposes of this modelling only, there will be two Mechanical Biological Treatment (MBT) plants which will be assumed to be located at Courtauld Road in Basildon and at Rivenhall in Braintree[1]; two Material Recycling Facilities (MRFs) (co-located with the MBT plants), two AD plants (co-located with the MBT plants) and an energy facility also at Rivenhall. Where an Option assumes the use of a Partnership Transfer Station (TS), the location of these are assumed to be at the same locations as used in the PFI 2007 OBC Reference Project (see appropriate 2013/14 Maps for each district for approximate locations).
2. The waste collection systems currently operational in 2005/6[2] were used as the base year in all the modelling i.e. all costs and tonnages are projected from this year.
3. The 'Do Nothing' system represents no change by the WCA or WDA with respect to the collection or disposal systems for waste employed in 2005/6 and this scenario is modelled to continue up until 2038/39 with no changes in the delivery points for the waste streams collected. This is also true for the chosen delivery point for the residual waste to landfill as this has not been changed over time as the landfill void space reduces. As with all of the Options modelled, the same waste growth profile is applied.
4. The Baseline system uses 2005/6 base year infrastructure information and assumes that the collection systems currently in place continue throughout the life of the project. However, when the MBT plants are assumed to become operational, the kerbside collected residual waste is modelled to be delivered by all the kerbside collection vehicles directly to the plants. This Baseline model also assumes that any waste currently being sent to the WDA contracted interim IVC facilities in 2005/6 will continue under this arrangement throughout the life of the contract. An illustration of this can be seen in Maps 1, 2 and 3 of the appropriate set of maps for each district.
5. The assumed long term MBT plants in Braintree and Basildon have been modelled in all Options (except the Do Nothing) as well as the Baseline because these facilities will be required to meet the County's landfill diversion requirements.
6. Actual 2005/6 household numbers in each district were entered into the Baseline wasteflow model. A projected 2021/22 household figure was obtained

[1] Rivenhall was selected as the theoretical location for the modelling purposes in order to calculate the potential costs to an Authority not likely to need transfer stations. Any of the other Waste Local Plan sites in the north of the county could have equally have been selected.

[2] The baseline year for Colchester has been modelled as 2006/7 due to special circumstances.

from the Regional Spatial Strategy 14 report (RSS 14) for each district which was also entered into wasteflow. The household numbers in any year in between 2005/6 and 2021/22 were interpolated between the two "known" years. Household numbers after 2021/22 were projected to increase at the rate reported between 1999 and 2004.

7. In order to simulate the costs of changing the delivery points of the different kerbside collected waste streams in 2008/9 and 2013/14, it has been necessary to model these new delivery points using the 2005/6 household and tonnage data in KAT. Therefore, in order to take account of the increase in costs which would be expected in the future, due to waste growth, the cost per household figures from the KAT model have been multiplied by the waste growth percentage over the life of the contract. In each year, this new inflated cost/hh figure is then multiplied by the projected number of households to generate the total collection cost in the appropriate year. For each WCA, an additional 15% of total kerbside collection costs has been included to reflect the contractors profit margin since this had not been included in the base numbers.

8. The target systems for maximising the BMW diversion in the Options are modelled to be implemented in 2008/9. The waste treatment facilities at Rivenhall and Courtauld Road (including the MBT plants, MRFs and AD plants as well as the Partnership Transfer Stations) are modelled to become operational at the start of 2013/14 financial year after a 2 year construction period. The SRF Energy facility at Rivenhall is modelled to become operational at the beginning of 2014/15 financial year after a 3 year construction period. In the interim period, between 2008/9 and the end of 2012/13, kerbside collected residual and garden waste will continue to be managed under the current arrangements, and where garden waste is not currently collected it will be assumed to be delivered to the nearest WDA contracted composting site. Also in this interim period, any recycling which requires sorting, in Options 1 and 2, will be sent to the nearest local MRF.

9. Where practical, the future collection systems modelled in the Options have been based on AWC of refuse as there is strong evidence nationally that this is a cost effective way of increasing participation in recycling and overall recycling rates. There are 6 core collection Options models (plus 4 scenarios for transfer stations) with the following collection arrangements:

	Do Nothing	
Residual	2005/6 Service Provision – no change	
Recyclables		
Organics		
	Baseline (Only Phase 2[3] WCA's were BVPI compliant)	
Residual	2005/6 system changing in 2013/14 to deliver to appropriate MBT facility	
Recyclables	2005/6 system	
Organics	2005/6 system	
	Option 1	**Option 2**
Residual	AWC	
Recyclables	kerbside sorted	kerbside sorted
Organics	Separate (KO + GO)	Mixed (K&G)
	Option 3	**Option 4**
Residual	AWC	

[3] The Phase 2 WCA's were Basildon District Council, Rochford District Council and Tendring District Council.

Recyclables	co-mingled	co-mingled
Organics	Separate (KO + GO)	Mixed (K&G)

Where K&G = Kitchen & Garden, KO = Kitchen Only, GO = Garden Only

10. Options 1-4 will assess the viability of MRFs (against cost and performance). In order to assess whether the business case exists for MRFs, a kerbside sorted and co-mingled system should be assessed based on the same service level provision in terms of the range of materials. To ensure that the kerbside sort and co-mingled dry recyclable collection systems can be compared fairly, the same range of materials have been assumed be collected under each system from all households receiving the collection service. The range of materials simulated to be collected in all the Options are listed below along with which materials are assumed to be loaded into the same container on the kerbside sorted vehicle:

	Kerbside sort
o Paper & Magazines	Stream 1
o Other paper	Stream 1
o Non-corrugated Card	Stream 1
o Corrugated Card	Stream 2
o Glass mixed	Stream 3
o Foil containers	Stream 4
o Aluminium cans	Stream 4
o Steel cans	Stream 4
o Plastic bottles	Stream 5
o Other plastic dense	Stream 5

If the district collects a greater range of materials in 2005/06 then this increased range shall be modelled

11. In the interim period the waste requiring treatment at an IVC plant will be sent to the most appropriate facility out of the following existing interim contracted facilities:

    - New Earth Solutions near Maidstone in Kent
    - Adas near Huntingdon in Cambridgeshire
    - County Mulch near Bury St Edmunds in Suffolk

A piece of work has been conducted to arrive at the overall least expensive cost arrangement for the delivery of organic waste from each WCA, which has taken into account the bulking, haulage and gate fee costs at the aforementioned facilities. The output of this work has resulted in a configuration detailed in the following table below.

Interim IVC logistics Summary of wich districts deliver to which IVC site		New Earth Solution IVC	ADAS Envar Contract A	County Mulch Composting	ADAS Envar Contract B
District	Depot	KO = Kitchen Only K&G = mixed Kitchen and Garden			
Braintree	Braintree CM77 8DL		K&G & KO		
Brentwood	Boreham CM3 3AY (Biffa)		K&G & KO		
Epping Forest	Ahern RM20 3EE		KO		K&G
Harlow	Roydon CM19 5DP		K&G & KO		
Uttlesford	Braintree CM77 8DL		K&G & KO		
Chelmsford	Boreham CM3 3AY (Biffa)		K&G & KO		
Colchester	Colchester skip Hire CO6 3AH		KO	K&G	
Tendring	EWD CO7 0SQ			K&G & KO	
Maldon	Boreham CM3 3AY (Biffa)		K&G & KO		
Basildon	Barleylands CM11 2UF		KO	K&G	
Castle Point	Ahern SS14 3DF		KO		K&G
Rochford	Ahern SS14 3DF	K&G	KO		
Southend on Sea	Southend SS2 5QX	K&G	KO		

12. In general in this document, all of the costs are discussed in the Base year price, ie 2005/6. However, in the modelling, these base prices have all been inflated 2 years to 2008. Different types of costs have been inflated at appropriate rates and a summary of these can be seen in the table below. In certain cases actual inflationary increases supplied by ECC have been applied.

Type of cost	Inflation index applied	Inflation rate applied in 2006/7	Inflation rate applied in 2007/8	Inflation rate applied in 2008/9
Tipping Away Payment	Actual increase supplied by ECC	7.5%	3.5%	3.0%
Haulage	Assumed same a Tipping Away increase	7.5%	3.5%	3.0%
Recycling credit	Actual increase supplied by ECC	11.1%	3.0%	3.0%
Bulking, Bring sites, kerbside collection costs, landfill gate fee, third party MRFs & Education costs	RPI X (excluding mortgage payments)	2.9%	3.2%	2.7%
Recyclate prices	Average taken from Letsrecycle.com	3.3%	3.2%	2.9%

13. No uplift in WCA recycling rates has been assumed in any of the scenarios modelled between 2005/6 and 2008/9, even though there have been increases in reality. This is because the objective was to assess the cost increase in implementing the high recycling collection system arrangements detailed in the Options, from a static Baseline.

14. The main assumptions for the payment responsibilities between the WDA and the WCAs in the models are set as follows:

PRE 2008/9

- If a district is requested to deliver their residual waste to a landfill which is beyond five miles of their boundary, they will be eligible for a 'Tipping Away' payment[4] from the WDA, however, it is the WCAs responsibility to deliver (including any bulking and hauling) this waste to its destination. The five mile calculation starts where the main route used for the journey crosses the district boundary. There were certain exceptions to this arrangement which have been reflected in the modelling up to 2008/9.
- Recycling credits are paid from the WDA to each WCA for every tonne of dry recycling achieved.
- Composting credits are paid from the WDA to the WCA for every tonne of green garden waste recycled. The size of this payment depends upon whether each WCA used the ECC owned windrow composting site or whether they used a third party contracted site (see Assumption 15 for further details).
- The WDA pay for gate fees arising at the landfill sites and ECC contracted windrow composting facilities, as well as CA site costs, landfill tax, any LATS trading.
- The WCA pays for gate fees arising at the any recycling facilities (incl MRFs) and reprocessors, the IVC facilities.

POST 2008/9

- Tipping away payments continue on the residual waste stream only. Post 2013/14, the Tipping Away payment is still paid from the WDA to the WCA even after the Transfer Stations become operational, for the same distance as for the Options without the TS's.
- "Recycling credits" continue and are renamed to "Statutory Funding". It is anticipated that an additional amount of funding will be available from ECC which will essentially give the avoided disposal cost back to the district for extra recycling above the LAA2 recycling targets. The formula for calculating this additional "bonus" funding is still being developed and therefore it is not included in this modelling work.
- The WCA are assumed to pay the gate fee at the windrow composting sites and in return receive a full recycling credit per tonne of composting. Therefore, for the purposes of this exercise only and to enable comparisons to be made between the options and the baselines, the historic 'composting credit', which the WDA are not legally obliged to make, ceases in all Options post 2008/9 including the Do Nothing and Baseline models. In the past, a full recycling credit was paid to WCAs who chose to send their waste to non WDA contracted composting sites where they were also liable for the gate fee. If the WCA delivered their composting waste to a WDA contracted site, they receive a reduced 'composting credit' from the WDA.
- The WDA pay for gate fees arising at the landfill sites, the MBT facilities and the SRF Energy facility, as well as CA site costs, landfill tax, LATS trading.

[4] The tipping away payments in 2005/6 were calculated on a basis of £0.67 per tonne mile which was modelled to remain static throughout the contract.

- The WCA pays for gate fees arising at the any recycling facilities (incl MRFs) and reprocessors, the windrow composting facilities, the Interim IVC facilities, the long term AD plants and the Partnership Transfer Stations.

15. The tonnage of commercial waste has been assumed to remain constant over the contract life, based on the growth profile of this waste stream over the last few years. This waste will be modelled to go to landfill from 2005/6 until the end of 2012/13 and then it will be delivered to the appropriate MBT plant from 2013/14 onwards. Commercial waste collected by the WCA is assumed to be cost neutral – i.e. the company producing the waste is charged for the collection, haulage and disposal costs and therefore is cost neutral to the Essex taxpayer. For the WCA, no outgoing expenditure or income has been assumed for this waste stream[5]. The disposal cost element, which is reimbursed to the WDA from the commercial waste producer, has been based on the landfill gate fee plus landfill tax per tonne prior to 2013/14 and includes appropriate levels of MBT and SRF Energy plant gate fees after this year.

16. No continuous improvement at the RCHW sites has been assumed. The current RCHW sites recycling performance is therefore modelled to decrease when a garden waste collection option becomes operational. This is because 33% of the new garden waste collected is assumed to be diverted from the RCHW sites (see assumption 65 for further details). It is anticipated that the RCHW's sites will improve on their recycling rates over time, but it has been necessary to keep them static in order to isolate the WCA effects in this modelling.

Assumptions for the KAT input data

17. Whilst the duration of the 'kitchen only' waste collection is assumed to be for the full year (i.e. 52 weeks), a 35 week duration has been assumed for the 'mixed kitchen & garden' waste and 'garden only' waste collections, in order to take account of the seasonality of garden waste arisings. This is a standard method used nationally in other KAT modelling exercises. In order to reflect this seasonality it is necessary to reapportion the same tonnage of waste over a reduced frequency of collection so that the resource needs for the busier periods of the year can be identified. If the frequency was not reduced, the model would predict incorrectly that fewer vehicles would be required, which would leave the district struggling to cope with the volume of garden waste produced during the summer months. Although the collection frequency is reduced, this nonetheless results in identical capital costs for the collection vehicles as they are still required all year, but slightly reduces the fuel costs during the quieter winter period. Salaries, overheads and other running costs are unaffected.

18. The contamination level in all the versions of recycling and composting systems simulated in all of the KAT models (including baseline) is 0%. This is to recognise that contaminated waste is collected by the vehicles without knowing whether it is "contaminated" or not. Contamination levels reported at the treatment facilities are taken into account in the Massflow sheet of the associated Wasteflow model.

[5] It should be noted that any impact on residual waste fleet arrangements has not been calculated as this waste has been assumed to be collected on separate vehicles.

19. When modelling new collection arrangements for a district, average road speeds have been calculated using an average of the real travelling times in 2005/6 between delivery points for each district. This method has been used because using MS Autoroute or AA route planner does not give a robust estimate of journey time because actual road speeds can not be entered into the programs for specific vehicle type i.e. for refuse trucks in this instance, and also they do not fully take account of hold ups at traffic lights or traffic queues during peak hours etc.

20. For each collection system in KAT, only one vehicle type can be selected. Therefore, in the Baseline models for each district where several different sizes of collection vehicles are currently in operation, an average payload is calculated and a corresponding vehicle selected for the purposes of the modelling only.

21. When modelling the Options, **fortnightly refuse** collections have the following infrastructure arrangements[6]:

    - Vehicle: The same vehicle is utilised in the options modelling as occurs in the baseline model. It is assumed that the district has chosen this vehicle for a specific reason and as such would continue to do so.
    - Collection container: 240 litre wheeled bin (10yr lifespan) – £20/bin[7].

22. When modelling the Options, **weekly refuse** collections (where appropriate) have the following infrastructure arrangements[5]:

    - Vehicle: RCV (use current size) – with compaction – depreciation 5yrs
    - Collection container: black plastic sacks (1 week lifespan) or same as the current method of refuse collection if different.

23. When modelling the Options, **weekly separate kitchen** collections have the following infrastructure arrangements[5]:

    - Vehicle: Modified Caged tipper – 3 tonne payload – no compaction – depreciation 5yrs
    - Collection container: 25 litre Lockable bucket (7yr lifespan) & kitchen caddy + liners – Total cost for both bucket & caddy £5.30. The cost of the kitchen caddy liners is taken into account in the Wasteflow model, please see assumption 45 below.

24. When modelling the Options, **fortnightly mixed kitchen & garden** collections have the following infrastructure arrangements[5]:

    - Vehicle: The same vehicle will be used for mixed Kitchen & Garden as is for refuse collection in the baseline. The Mixed K&G vehicle will require all the same characteristics as the refuse vehicle i.e. large capacity, bin lifting and compaction. In accordance with the other assumptions made in this work (fortnightly refuse collection) the vehicle used by the District in 2005/06 is assumed to be the most suitable for the specific requirements of that District.

[6] Although there is flexibility to choose the most appropriate average vehicle size for a particular district, for the purposes of the modelling only, all vehicles are assumed to be bought as new and therefore the capital costs of the chosen vehicle are included in the KAT model and are depreciated over either 5 or 7 years which ever is appropriate for the type of vehicle used.

[7] These default container costs are also used in the Baseline models in order to reduce any bias between the baseline and the Options.

- Collection container: 240 litre wheeled bin (10yr lifespan) & kitchen caddy + liners – Cost for bin is £20[6] and kitchen caddy is £1.30. The cost of the kitchen caddy liners is taken into account in the Wasteflow model, please see assumption 45 below.

25. When modelling the Options, **fortnightly kerbside sorted recyclables** collections have the following infrastructure arrangements[5]:
    - Vehicle: Stillage 15m3 – 7.5 tonne payload – no compaction – depreciation 5yrs
    - Collection container: 2 x 50 litre Box (7yr lifespan) & Plastic Bag (optional) – £2.50[6] for each 50 L box, therefore £5.00 in total.
26. When modelling the Options, **fortnightly co-mingled recyclables** collections have the following infrastructure arrangements[5]:
    - Vehicle: If the District already has a co-mingled collection system then the vehicle that was used in 2005/06 is modelled in the options. However if not then use a RCV 24m3 – 11 tonne payload – with compaction – depreciation 5yrs
    - Collection container: 240 litre wheeled bin (10yr lifespan) – £20/bin[6]
27. For the kerbside sort option, 'partial sorting' rather than 'fully sorted' has been selected in KAT. The reason for this is that the large number of waste streams collected makes full sorting highly impractical and unlikely with a kerbside sort vehicle.
28. When inputting the kerbside sort option the number of collection containers provided to households on the scheme is assumed to be two. This is in direct response to the large range of materials collected and the fact this service is modelled as a fortnightly collection. There is the potential that the districts may provide more boxes, however, there are financial, behavioural and physical barriers to this.
29. When inputting the kerbside sort collection durations in the options, it is necessary to increase the collection time by 20% to take into account the increased effort by the loader because of the 2 containers. The collection time is not increased by 100% as not all households will utilise the second container and loaders will often, where practical, consolidate 2 containers into 1 for transporting to the vehicle.
30. The capital expenditure cost for the collection vehicles in the Baseline and Options models are based on the default values provided in the KAT model. The reason for this is that whilst Districts could provide specific figures for some vehicles, this was not true for all vehicles. Therefore to ensure no bias financially, the same foundation for the costs of the vehicle was input by using the KAT default values alone. The table below details the KAT default values used for each vehicle modelled.

Vehicle	Capital Cost without Lift	Bin lift Cost	Total Capital Cost	Standing Cost
Caged Tipper 7m^3	£29,000	£5,000	£34,000	£2,554
Stillage 15m^3	£42,000	n/a	£42,000	£3,687
Kerbsider 15m^3	£55,000	n/a	£55,000	£2,624
Putrescible 14m^3	£90,000	£20,000	£110,000	£2,696
RCV 16m^3	£90,000	£20,000	£110,000	£4,521
RCV18m^3	£95,000	£20,000	£115,000	£5,179
RCV 20m^3	£95,000	£20,000	£115,000	£5,544
RCV 22m^3	£100,000	£20,000	£120,000	£5,934
RCV 24m^3	£100,000	£20,000	£120,000	£6,798
65%/35% 21m^3 split	£110,000	£20,000	£130,000	£5,870

31. KAT defaults were used for the annual vehicle standing costs and the annual vehicle running costs in the Baseline and Options models. The KAT default standing costs are detailed in the table above whilst the default running costs are calculated from other district specific information input into the model e.g. miles driven/week/vehicle. The reason for this was that the specific methodology for the calculations within KAT was not known; also many districts did not know exactly what was contained within their figures. Therefore to ensure that no financial bias occurred between models the KAT default was used for all the vehicles.

32. Within the model the default values shall be used for the collection and loading timings of the different collection systems. This is to ensure that all districts are provided with a level playing field with regard to efficiency. Furthermore, initial information collected from the districts indicated that there the exact figures were not known. The Kitchen only collection required the use of a lockable Kitchen Bucket that was not represented in the KAT model, therefore, expert opinion was sought and a figure of 8.7 seconds for the collection time was utilised.

33. KAT defaults for the supervision percentage of crew costs and overheads as a percentage of operating costs shall be used to ensure that all Districts are modelled under the same parameters, removing the potential for financial bias between models.

34. When the KAT model estimates that a collection system will require a proportion of a vehicle this shall be accepted. When the model indicates 0.1 of a vehicle is required, the reality is that the collection teams would be asked to work slightly longer/quicker so that the new vehicle (and its full set of costs) is not required. This assumption will not be made in this modelling exercise. Therefore, should a collection system require 5.1 vehicles, this will not be amended to 5.0 vehicles and the resulting capital cost for 6 vehicles will be calculated.

35. The KAT default figure of 7hrs 30mins working hours per day will be used for all new collection systems in the Options models.

36. An annual education cost per household has been included in the WCA costs as detailed in the Table below in all the Options including the Baseline since this education/advertising activity is currently on going. The WDA have also been charged the same annual amount to go towards re-education of the public and advertising campaigns about the new collection systems. In the Baseline model, the cost per household figure is assumed to remain constant from 2005/6 onwards. It has been assumed that in order to successfully instigate the

target Options collection systems from 2008/9 onwards, an enhanced public education programme has been implemented. The costs for this public education scheme have been estimated from evidence from the high diversion trials and are assumed to be shared equally between the WCAs and WDA (50% borne by WCA and 50% by WDA). The years in which the education programme costs have been set are detailed in the table below and they have been profiled in-between these years.

Year	Cost/hh
2005/06	£1.00/hh
2008/09	£3.50/hh
2033/34	£3.50/hh

37. To calculate the increase in garden waste captured as a result of the provision of a **free** green waste collection scheme, the potential kg/hh of green waste was calculated based on the garden waste composition arisings in the waste composition. A figure of 70kg/hh/yr was agreed between experts to be added to the current household garden waste arisings. This 70kg represents the garden waste arising at the kerbside as households use the kerbside system instead of RHWCs or home composting. Where the capture rate of any fully rolled out current garden waste collection in a Baseline KAT model exceeds the calculated capture rate in the Options models which include the extra 70kg, the Baseline capture rate is used in the Options in order to fairly reflect a very successful scheme (e.g. for Colchester). However, if the capture rate of a partially rolled out garden waste collection system in a Baseline KAT model exceeds the calculated capture rate in the Options models which include the 70kg, the Baseline capture rate is kept for the current households on the scheme and the calculated capture is used for the remaining households (e.g. for Maldon). The overall tonnage of garden waste collected from the kerbside by the WCA was then calculated using the kg/hh/yr figure multiplied by the number of households that are provided with Garden only or Garden & Kitchen waste collection services

38. Below is the table of set out, participation and capture rates for all the Options modelled. In the baseline the participation and set out rates are tailored to each districts current performance in their baseline KAT models. The capture rates are derived from the participation rates and the current recovery of each material by the each district.

    A weekly refuse variation of Options 2 and 4 was modelled for Harlow in order to confirm that increases in recycling rates can be achieved at lower costs, when switching from weekly to alternate weekly for residual waste. It should be noted that these two extra Options were modelled for the pilot district only and will not be run for any other districts.

    Forecasting future rates for each Authority is problematic and dependent on a number of factors such as contractor performance, socio-economic profile of the area, historical service quality and effectiveness of communication strategies, etc. The future performance rates would typically be estimated from current baseline system performances and similar schemes operating elsewhere. However, rapid improvements to performance in Authorities around the UK have usually resulted when multiple system changes have been implemented at the same time making it almost impossible to review the impact of each system change individually. For this reason, standard rates have been applied to each of the Authorities in this analysis, see table below. However, as performance data becomes available in the future it is possible for the KAT models to be amended.

Although the rates are kept the same for each district, their recycling rates will of course come out differently depending on composition of the waste arisings in that particular district. For example, if a district has low garden waste fraction in their composition this will be reflected in the tonnage of garden waste which can be collected.

The figures in the table below are averages for the whole of the UK which means they are realistic achievable rates for all the districts. By keeping the same rates for each district, it will give a fair comparison, otherwise there maybe unintentional positive bias towards certain districts who are already achieving high recycling rates and a negative bias to those who struggled to meet their 2005/6 BVPI recycling targets. Given the proposed investment in education and promotional material (up to £3.50 per household in the Options models), these rates are considered realistic for Essex authorities.

AWC Refuse				
Option 1 (AWC)		Set out	Participation	Capture
Coll 1	Fortnightly Refuse	95%	-	-
Coll 2	Fortnightly K/S Recy	75%	85%	75%
Coll 3	Fortnightly Garden	75%	85%	TBC
Coll 4	Weekly Kitchen	55%	65%	75%

Option 2 (AWC)		Set out	Participation	Capture
Coll 1	Fortnightly Refuse	95%	-	-
Coll 2	Fortnightly K/S Recy	75%	85%	75%
Coll 3	Fortnightly Mixed K&G	75%	G = 75% K= 40%	G = TBC K= 75%
Coll 4	N/A	-	-	-

Option 3 (AWC)		Set out	Participation	Capture
Coll 1	Fortnightly Refuse	95%	-	-
Coll 2	Fortnightly Co-min Recy	75%	85%	75%
Coll 3	Fortnightly Garden	75%	85%	TBC
Coll 4	Weekly Kitchen	55%	65%	75%

Option 4 (AWC)		Set out	Participation	Capture
Coll 1	Fortnightly Refuse	95%	-	-
Coll 2	Fortnightly Co-min Recy	75%	85%	75%
Coll 3	Fortnightly Mixed K&G	75%	G = 75% K= 40%	G = TBC K= 75%
Coll 4	N/A	-	-	-

Weekly Refuse				
Option 2a (WK)		Set out	Participation	Capture
Coll 1	Weekly Refuse	95%	-	-
Coll 2	Fortnightly K/S Recy	55%	65%	75%
Coll 3	Fortnightly Mixed K&G	70%	G = 70% K= 20%	G = 100% K= 75 %
Coll 4	N/A	-	-	-

Option 4a (WK)		Set out	Participation	Capture
Coll 1	Weekly Refuse	95%	-	-
Coll 2	Fortnightly Co-min Recy	55%	65%	75%
Coll 3	Fortnightly Mixed K&G	70%	G = 70% K= 20%	G =100% K= 75%
Coll 4	N/A	-	-	-

TBC = To Be Calculated. Based on each districts waste composition plus an additional 70kg/hh/wk to reflect the "new" waste collected.

KAT model assumptions

39. In the interim period, between 2008/9 and the end of 2012/13, when the new collection systems are in operation, for each district, both the weekly separate kitchen waste collection and the mixed kitchen and garden collections are assumed to be bulked at the local bulking depot before being transported to the appropriate interim IVC facility. After 2013/14 when the AD plants are operational for the treatment of organics, both the weekly separate kitchen waste collection and the mixed kitchen and garden collections are assumed to be direct delivered to the appropriate facility.

40. In the interim period, in the Options, the kerbside sorted and co-mingled dry recyclables are assumed to be bulked at a local depot before travelling on to either Reprocessors or MRFs. From 2013/14 onwards, for all Options without Transfer Stations where kerbside sorted recyclable collections are modelled,

the collection vehicle has been assumed to deliver to a local bulking point before the materials are taken on to their appropriate Reprocessor. Co-mingled recyclables collections on the other hand, are delivered direct to the MRFs located at Rivenhall in Braintree or Courtauld Road in Basildon (in models which exclude Transfer Stations). Please refer to the appropriate district maps to visualise this assumption.

41. In the models which assume the Partnership Transfer Stations are operational from 2013/14, these facilities can be used for the bulking of all waste collection streams where appropriate i.e. for residual waste, for kerbside sorted recyclables, for co-mingled recyclables, for kitchen waste only collections and for mixed kitchen and garden collections. Since bulking of garden only waste can have operational challenges and the WDA contracted composting sites are relatively well distributed for each district, it is unlikely that this waste stream will warrant bulking at the TS first. However, this point of detail can be assessed once the requirements for the TS are fully demonstrated.

Assumptions for the wasteflow input data

42. In all options where food waste is collected, two rolls of kitchen caddy liners (25 liners/roll) were assumed to be paid for by the WCA, at £1.50 per roll in wasteflow. All other collection container costs (including the 25litre lockable kitchen waste bucket) have been included in the KAT models.

43. The performance of the Bring sites are kept constant from 2005/6 and therefore the tonnages collected over the life of the contract only increase with waste growth. The justification for keeping the tonnage constant is because regardless of whether there is a kerbside collection of recyclables, it is believed that the type of people who currently using Bring sites will continue to do so as this has been seen in other authorities which have introduced similar kerbside schemes. Where the actual cost of bring waste collection was unknown, a cost for this collection service has been modelled at an average cost of other districts in Essex, which includes any haulage of the materials to the Reprocessors but not the income from the sale of these materials, as this income is included separately.

44. The process residues from the proposed MBT plants at Braintree and Basildon are both sent to Bellhouse landfill at Stanway.

45. Between 2005/6 and 2007/8 inclusive, in all wasteflow models (including the Baseline) the average level of rejects for all dry recycling collected at the kerbside for all districts, is 0.5% which reflects the amount of contamination reported by the districts in their BVPI audited data at their local MRFs. No rejects were reported at the composting sites or at the interim IVC facilities. In the Baseline wasteflow these levels of rejects are kept constant for the remainder of the contract. From 2008/9 onwards, 1% rejects have been assumed from all composting sites with 10% rejects from interim IVC facilities and long term AD plants. The disposal cost for the rejects from the AD plant has not been taken into account at the gate fee of the AD plants and consequently, the WDA are paying for this disposal of rejects to landfill. In the wasteflow models, the rejects from the MRFs are sent to the MBT facility where it is assumed that there is a 5% recovery of recyclable materials. This tonnage of recycling from the MBT plant has been apportioned back to each district based on their MSW arisings in 2005/6 and can therefore contribute towards each districts BVPI recycling target.

46. **Co-mingled and kerbside sorted recycling Options**

WRAP published a report in June 2008 which was a comprehensive study into different household recycling systems[8] which highlighted the following:

- In the current market, kerbside sorted schemes are more cost effective for Local Authorities than single stream co-mingled. However, two stream co-mingled collections where paper is kept separate, have similar net costs to kerbside sort schemes.
- Co-mingled schemes had generally been thought to be cheaper to run but fare less well when the cost of sorting the material at a MRF is taken into account.
- Contrary to the popular belief that co-mingling is more successful in collecting recyclable materials, what determines how much recycling people do is the size of the containers they have to put it in.
- Although earlier work had shown that kerbside sort schemes achieve higher quality recyclable materials than co-mingled collections, as there is less risk of non-recyclables being included, it has been observed that different areas have different needs and there is no such thing as a one-size-fits all "best scheme". In fact, co-mingled schemes may be the best option in some areas such as inner cities, where on street parking prevents kerbside sorting and there are lots of multi-occupancy houses where it is difficult to store multiple containers.

A few trends are evident related to single stream co-mingled recycling:

- More local authorities in the UK are implementing single stream co-mingled collection and processing schemes, with and without including glass as a designated co-mingled material. It is a trend that seems likely to continue.
- Single stream co-mingled recycling can result in higher recovery of targeted recyclables but higher contamination than comparable 2-stream collections.
- Technologies continue to improve to separate and process single stream co-mingled recyclables. As a result, newer MRFs are able to produce grades of paper that meet and, in fact, exceed those of older MRFs.

There is evidence found in studies[9], which discuss that MRFs in the UK are reporting process reject fractions of between 2% and 15% (also known as the efficiency of the MRF). This process reject fraction includes:

- non recyclables (i.e. contaminants) which are mixed in with the targeted materials, and
- non targeted materials (i.e. glass when the MRF only accepts paper, card, cans and plastics).

When the recyclables vehicle arrives at the MRF, a visual inspection will determine whether the MRF will accept the load for processing. If there is deemed to be more than the agreed level of non targeted or contaminated recyclables in the load, it will be rejected at the gate, and the vehicle will usually have to go to landfill to dispose of its load. The agreed level of contaminants in each load of co-mingled materials accepted by MRFs is reported to be within the range of 7-15%[1]. However, this figure is dependent upon the number of

[8] http://www.wrap.org.uk/wrap_corporate/news/wrap_reveals_results.html
[9] http://www.wrap.org.uk/wrap_corporate/about_wrap/mrf_home_page.html

materials accepted in the co-mingled collection and the technology process in operation at the MRF.

In the MRF Costings Model User Guide[10] published by WRAP, the arisings and recycling performance data from a number of sources were then used to develop representative recovery rates for use in the MRF costing models. The projected recovery rates shown for each MRF system represent "best practice" for that type of programme. The recovery rates are higher than presently experienced in many UK collection programmes and are meant to reflect recovery rates that local authorities should be aspiring to achieve. They have been developed with due consideration of the performance of some of the leading recycling programmes in the UK and refined to project what is considered high level (but practical) householder participation and material capture rates.

The guidance goes on to discuss the expected recovery rates:
Experience shows that a fully co-mingled collection system experiences higher recovery rates than the equivalent 2 stream collection systems, primarily because of increased convenience for the user. For the purposes of the MRF costings model, it is conservatively projected that recovery rates for the 2 stream systems are 90% of those for the single stream co-mingled system. In addition, in the case of 2 stream systems, where collectors have opportunities to sort visible contaminants from a box, recovery rates of some of these unwanted materials (e.g. liquid beverage cartons, non-recyclable paper, etc.) have been assumed lower than for those materials in the fully co-mingled single stream systems, since there is no opportunity in a bag or a wheeled bin collection to sort out these materials. These material compositions are used as in-feed to each of the respective MRF designs. Even though most of the non-recyclables are assumed to be removed during collection, small quantities are still assumed to be included in the incoming recyclables stream delivered to the MRF. These materials will form part of the MRF residue stream requiring ultimate disposal.

Recovery rates for the targeted recyclables are used to calculate the quantity of each recyclable to be marketed. The remaining tonnage (comprised of recyclables not recovered and non-recyclables that are in with the recyclables delivered to the MRF) is identified as residue. Residue is highlighted for both fibre and the containers and then averaged for all of the incoming material. With the default values used in these models, residue is 14-18% for the single stream MRFs and 7-8% for the 2 stream MRFs.

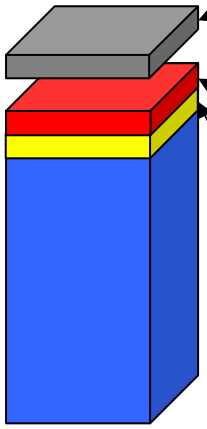
BVPI guidance[11] states that a WCA can use the MRF's overall contamination rate if there is no more accurate information on their waste stream is available when reporting BV 82a (Percentage of household waste arisings which have been sent by the Authority for recycling). However, current practise for reporting accurate reject rates from the MRF within WCA's is not common practise since the MRF operators are not required by law to report the overall reject level of the plant back to each WCA. Therefore, small discrepancies over the actual amount of household waste "sent for recycling" (not sorting) claimed under BV 82a can occur.

[10] http://www.wrap.org.uk/downloads/User_guide_for_publication_LC_21Dec06.833229a4.pdf
[11] http://www.audit-commission.gov.uk/performance/downloads/acbestvalueperformanceindicators.pdf

In order to reflect current practise, the System Design modelling assumes that when dry recyclables are collected in a single co-mingled stream, the WCA's are penalised 5% of their recycling sent to the MRF[12] as this is assumed to be the average level of contamination in each load. Also, the cost of treating[13] and disposing[14] of 10% of the materials sent for recycling is charged back to each WCA in the calculated gate fee. Again, to reflect current practise, the System Design modelling assumes when recyclables are collected using a kerbside sort arrangement, the WCA's are penalised 0% of their recycling sent directly to third party reprocessors.

The text below assumes that the figures provided are for an average household.

Co-mingled recycling wheeled bin (wb)

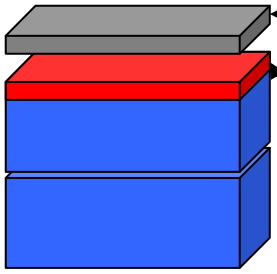


X% of wb's are left at the curtilage because the loader can see contamination when they open the lid. The whole bin is rejected but the corrected contents are likely to be represented at the next collection, although some potentially recyclable material is likely to be placed into the residual bin.

5% of the wb is either contaminated targeted materials or non targeted materials which gets identified usually when the materials are being loaded into the MRF or during the MRF process and gets reported back to the WCA.

5% of the wb is recyclables which have to be sent to landfill because the MRF has been unable to sort them or there has been some mechanical failure. This is not reported back to the WCA under the current BVPI guidance notes[1] and they are not penalised for this. The MRF operator takes the risk and pays the price of landfill when this occurs and when there is no more space available to stock pile. However, a proportion of the gate fee the WCA pay at the MRF will be to cover this eventuality.

Kerbside sort recycling boxes x2



X% of the boxes are left at the curtilage because the loader can see the specific contaminated materials. However, usually only the contaminated recycling is left at the curtilage and not the whole box.

Y% of the box is contaminated which gets identified during processing at the individual reprocessors and in general doesn't get reported back to the WCA.

47. From 2013/14, all of the WCA collected commercial waste, bulky waste, other household waste and 100% of street sweepings are sent to the MBT plants for processing. Before 2013/14 these waste streams are assumed to continue to go to their local landfill sites. The recycling collected at RHWCs which diverts

[12] Note: If the MRF's are procured under the PFI contract along with the residual treatment contracts, it is likely that the reject rates passed back to the WCA's may be higher than what the WCA's are currently experiencing with third party MRF operators because the performance of the MRF will be more transparently linked to the tonnage sent for residual treatment.

[13] Treatment of the MRF rejects is through the MBT plant between 2011-13 and after that the MBT and SRF energy plant.

[14] Disposal of the waste from the MBT plants and SRF energy plant is sent to landfill and charged at the appropriate gate fee.

more waste from landfill has also been taken into account when calculating the LATS performance of the Options. Half of the RHWCs residual waste was sent to the MBT plant for processing and half was sent landfill due to the unsuitable nature of part of this waste stream to be processed at these facilities. The collection of bulky waste is paid for by the waste producer, where WCA's levy a bulky waste collection charge, however, the disposal costs for this waste, other household waste and street sweepings are paid for by the WDA.

48. The assumed incomes from the sale of all recyclates and compost up until 2013/14, are detailed in the table below and are on 2006 price basis. These figures are averages over the last 2 years of recyclate prices. After 2011/12, the kerbside recycling prices decline from £67.21 to £40 by 2020 and to £20 by 2038, and the bring and RHWC's recyclables prices decline at the same rate. After 2020 the prices remain static. This reduction in recyclate prices is to reflect the current buoyant market and that it is unlikely to continue at these high prices indefinitely. It is almost impossible to accurately forecast income prices beyond 5 years into the future. It should be noted that the reason for the income rates for both kerbside sorted and co-mingled dry recyclables being the same is because the range of materials collected are the same and the papers and glass have to be collected mixed due to the size constraints on the kerbside sort vehicle.

Average Value of…	**2005/6**
Kerbside sorted recyclables	£ 67.21
Kerbside Co-mingled recyclables (post sorting)	£ 67.21
Bring recyclables	£ 33.22
RHWCs dry recyclables	£ 10.74
Garden waste composting	£ 6.68
Mixed kitchen & garden waste composting	£ 0.00
Kitchen waste only composting	£ 0.00
Recyclables from the MBT plants	£ 10.59

49. Any new bulking activities from 2008/9 attract a charge to the WCAs of £7/tonne[15] plus haulage costs to the next delivery point charged at £0.15/tonne-km[16] for co-mingled and kerbside sorted recyclates and compost like materials. In the case of the kerbside sorted recyclables where the distance to the delivery point is dependent upon the type of material, an average distance of 70 miles has been assumed. This figure has been approximated assuming that 80% of the materials travel a fairly short distance (40 miles) to their appropriate reprocessors and the other 20% of the materials have to travel a fairly long distance (200 miles) to their appropriate reprocessors.

[15] This assumed bulking cost was generated after discussions with WRAP and WCA's currently using bulking arrangements. A sensitivity using an increased bulking rate for kerbside sorted materials can be run in order to take in to account the increased cost of baling the low density materials, for example plastics.

[16] This assumed haulage cost was generated by taking an average of prices being costed into recent waste management bids.

Wasteflow model assumptions

50. The 25 year contract period for this System Design Project is assumed to be from 1st April 2014, the operational date of the SRF Energy facility, to 31st March 2039.

51. The growth in waste arisings alone has been modelled to reflect the recent trends seen within Essex. The trends observed are that of a 1% overall growth rate per annum of which approximately 0.3% is attributed to waste growth rate and 0.7% to household growth. The overall growth rate, which is the sum of the waste growth rate and the household growth rate, is applied to the base year tonnages entered in 2005/6 in order to calculate the future waste tonnages. The household growth rates have been calculated for each district using the projected household figures.

52. Between 2005/6 and 2033/34 for each district where applicable, the tipping away payment for the tonnage of residual waste which is sent to landfill excludes any commercial waste but bulky and street sweepings are eligible.

53. The waste composition for each district is assumed to stay constant and is based on the data provided from the 2004 MEL study.

54. For each district, the location of the landfill site used in 2005/6 is assumed to be the same throughout the life of the contract. Even though the district's current local landfill site may potentially be unavailable in the future, it is impossible at this time to make an accurate assessment of these changes. The landfill gate fee used in the model was £27.09 in 2005/6 with the addition of the appropriate deflated landfill tax for future years after 2008.

55. Landfill tax for active waste has been assumed to increase at the specified rate of £8/year up until it reaches £48/tonne in 2010/11. After this year, the rate increases linearly up until £7/tonne by 2020 and remains static after this year. Note: these prices were deflated to a 2008 basis in the models. The landfill tax for inactive waste is at £2/tonne up to 2008/9 and at £2.50 thereafter.

56. After 2005/6, the garden waste from the RHWCs has been apportioned to the 3 windrow composting facilities, Pitsea, Heatherlands and Birch, based on the arrangements observed in 2005/6.

57. Any changes to actual delivery points for the WCA's in 2006/7 or 2007/8 in the baseline model have not been taken into account until 2008/9.

58. For each Option modelled, in order to calculate more accurate sizing of the treatment facilities and therefore the treatments costs in the wasteflow model, it was necessary to approximate the diversion performance of Uttlesford District Council and Southend Borough Council. Southend were assumed to collect the same profile of waste as was identified in the 2008 OBC reference case and Uttlesford were modelled to hit their 2008 LAA recycling target and to remain static at that rate. Since the data for these two councils is identical in each Option model, there is no bias effect.

59. In order to assess the difference in the costs of the Options to the Essex taxpayer, it has been necessary to apportion the whole system costs of all the waste treatment facilities (including the cost of the long term MBT and SRF Energy plants actually funded by the WDA) back to the districts. This calculation is for illustration purposes only and was based on their proportion of the MSW arisings in Essex in 2005/6. For example in 2005/6, Braintree produced 7.3% of the total MSW arisings in Essex, therefore they are apportioned 7.3% of the treatment and disposal costs in this calculation.

60. Although the EU Landfill Directive and WET Act 2003 set BMW Diversion targets up to 2020, it is assumed for the purpose of this modelling that such targets will continue to be in force throughout the contract. A LATS trading profile has been entered into the model so that any spare allowances are sold or any required allowances are bought at the same rate per tonne. This assumed profile can be seen in the table below (note these prices are on a 2008 basis). No LATS penalty values have been assumed.

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020+
£0.00	£24.22	£23.46	£22.72	£30.81	£25.88	£24.80	£27.06	£34.79	£37.05	£53.67	£80.18	£50.31

61. To assist with the sizing of the waste treatment facilities, assume:

- The facilities at Rivenhall will treat waste from Braintree, Chelmsford, Colchester, 50% Epping Forest, Harlow, Maldon, Tendring and Uttlesford.
- The facilities at Courtauld Road in Basildon will treat waste from Basildon, Brentwood, Castle Point, 50% Epping Forest, Rochford and Southend.

62. It is been observed that the introduction of a kerbside garden waste collection increases the overall waste collected within an authority area, and that the garden waste collected on this new scheme comprises of three elements, where:

- One third is garden waste that would have otherwise been collected in the residual waste stream;
- One third is garden waste that would have otherwise been taken by the householder to the RHWCs; and
- One third is garden waste that would have otherwise been disposed of in other methods such as home composting.

Therefore, the MSW arising in a district which has introduced a kerbside collection of garden waste has been increased by the one third of the garden waste tonnage collected on this scheme to take account of the new waste which would have otherwise not been accounted for.

63. Due to the fact that introducing a garden waste collection scheme diverts garden waste away from the RCHW sites, an appropriate deduction has been made in all the wasteflow models to take account of this.

64. Since the WDA contracted windrow composting sites are relatively well distributed throughout the geographical area of Essex, all green garden waste is sent to the nearest composting site and does not take into account any potential contractual North / South split in the WDA geographic area.

65. For the financial year 2013/14, out of every tonne of residual waste entering into the MBT plant, it is assumed that 30% is lost as water evaporation and other gasses, 5% is recovered as recyclables materials, 3% is recovered as useable compostable material and the remaining 62% process residues are sent to landfill. After the energy plant becomes operational in 2014/15, it is assumed that out of every tonne entering the MBT plant 25% lost as water evaporation and other gasses, 5.3% is recovered as recyclables materials, 3% is recovered as useable compostable material and 49.6% SRF which is burnt, resulting in 17.1% process rejects and 4% ash residues being sent to landfill. The assigned national average of BMW out of MSW is 68%. The BMW content

of the process residues which go to landfill from the MBT in 2013/14 are assumed to have been reduced by approximately 32% and after 2014/15 when the SRF Energy plant is also operational by approximately 78% i.e. from 68% to 15% BMW content.

66. The SRF Energy plant is assumed to export 992 kWh of electricity per tonne of SRF burnt with a CV of 17 MJ/kg and 21% efficiency of conversion to electricity.

67. It has been assumed that the 5% recycling which is recovered from the front end of the MBT process will be apportioned across the WCA's. This is why a rise in WCA recycling can be seen in all the Options including the Baseline when the MBT plants become operational in 2013/14. However, no funding to the WCA is eligible on this extra recycling.

68. Electricity exported from the AD plants is assumed to be at 75kWh/t plus two ROC income based on £35/MWh in addition to £35/MWh for base electricity. This also assumes that the biomass content is 35% in line with recent RO scheme changes.

69. The capital and operating cost elements of building the centralised treatment facilities within the County were entered into the wasteflow models and an extra 10% was been added on to the costs each year in order to reflect the cost of borrowing this required capital.

70. In order to translate the lifecycle capital, operational costs and annual land lease costs for each treatment facility into an static gatefee over the life of the project, (to which WCA's can directly relate) it has been necessary to make an adjustment specific for the MRFs to take account of the expected change in income from the sale of recyclables. The profile of income is discussed in Assumption 51.

    This calculation resulted in a static gate fee for the life of the treatment facilities except for in the MRF's where an annualised gate fee has been calculated taking into account the expected change in income from the sale of recyclables. The benefit to the WCAs of this annualised gate fee arrangement is that in the short term the gate fees are relatively low since we have assumed that the WCA and the MRF contractor equally share the upside risk on the recyclate prices market.

71. Income from the sale of recyclates from the MRFs and MBT facilities and income from the sale of compost from the AD plants will be taken into account in the estimated gate fee charges to the WCAs.

72. Any PFI credits that may be available in the future have not been taken into account in this modelling work. It is intended that a sensitivity will be run in order to assess the impact of any PFI credits.

A list of the Maps which have been produced for each district.

Map 1: WCA/WDA cost allocations and tonnage flows in 2005/6 in all Options including the Baseline

Map 2: WCA/WDA cost allocations and tonnage flows in 2008/9 in the Baseline only

Map 3: WCA/WDA cost allocations and tonnage flows in 2013/14 in the Baseline only

Map 4: WCA/WDA cost allocations and tonnage flows in 2008/9 in the Option 1

Map 5: WCA/WDA cost allocations and tonnage flows in 2013/14 in the Option 1

Map 6: WCA/WDA cost allocations and tonnage flows in 2013/14 in the Option 1+TS

Map 7: WCA/WDA cost allocations and tonnage flows in 2008/9 in the Option 2

Appendix 2 Details about KAT

Description & definition

KAT is a Microsoft © Excel™ workbook that provides a method of assessing the costs of different kerbside collection options for meeting household waste recycling targets. KAT has been designed to require only a very limited amount of data before projections are possible. It provides a straightforward method to enable consistent projections of kerbside collection infrastructure and costs, tailored to a particular collection area. KAT is primarily intended as an aid to WCAs in the planning of new kerbside collection systems.

It can be used to:

- establish the infrastructure required for different collections;
- establish the relative costs of implementing different systems;
- by running different scenarios, assess and compare collection options to identify the most financially viable;
- compare the cost effectiveness of different scenarios (for example, decreasing capture, but increasing participation or coverage);
- assess costs submitted by contractors tendering for work to ensure proposals are realistic and provide value for money;
- better plan the strategic implementation of kerbside collection systems; and
- assist in supporting funding bids by providing efficient and comprehensive options appraisal.

Limitations

KAT does not present the user with an analysis of the results, for example, by presenting the most cost effective option or advising which materials to target. However, it does provide access to information that previously has not been readily available when planning kerbside systems.

It is important to remember that the costs projected by KAT are standard costs. These costs are not the same as the contracted price. It is beyond the scope of this report to provide a detailed description of the interrelation of all the factors influencing the infrastructure requirements and costs.

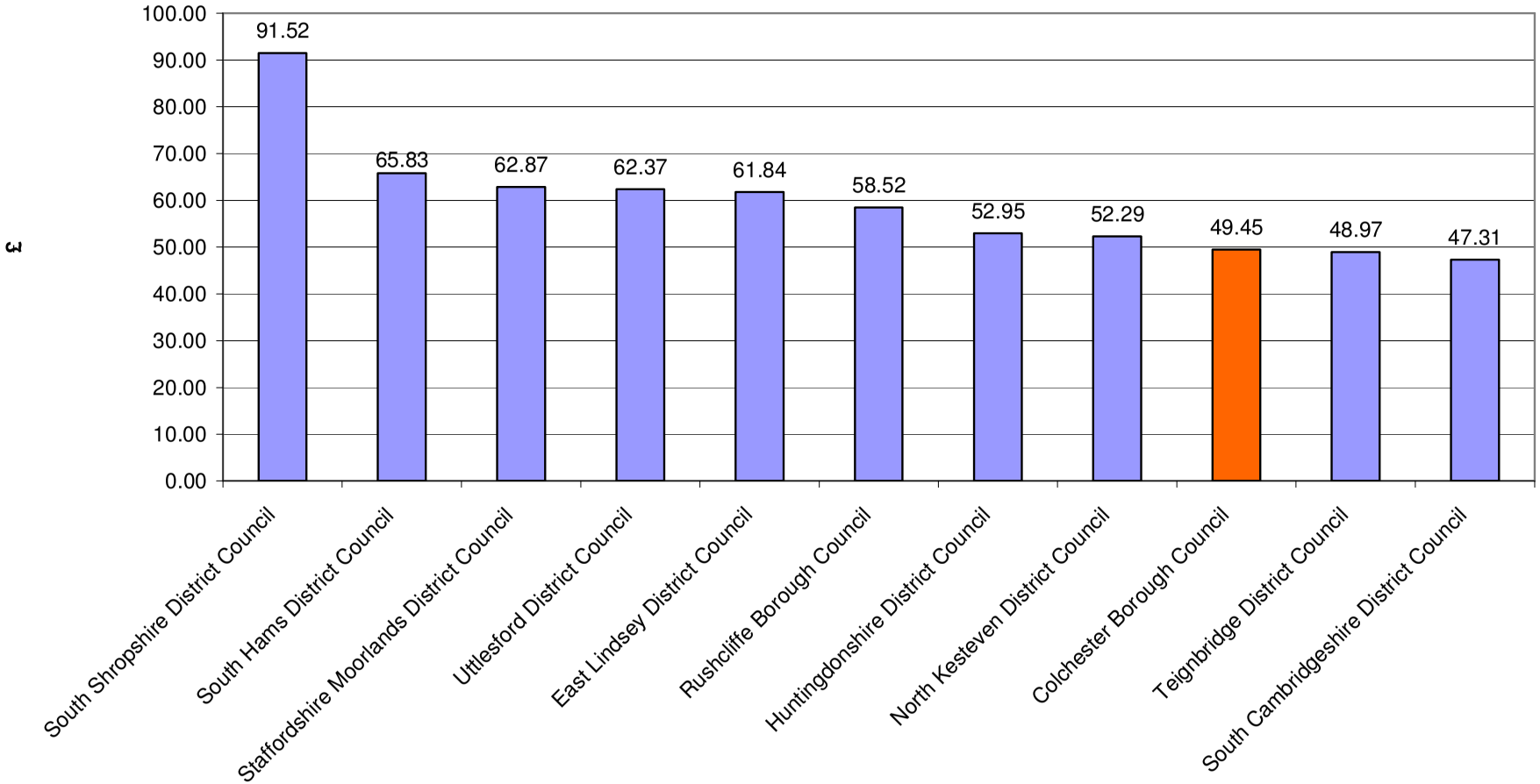
Other factors to consider include the following:

- Public perception
- Performance risk
- Collection system type
- Construction delay
- Set-out, participation and capture rates
- Estimates MBT efficiency
- Waste compositions
- Contamination assumptions
- PFI credits

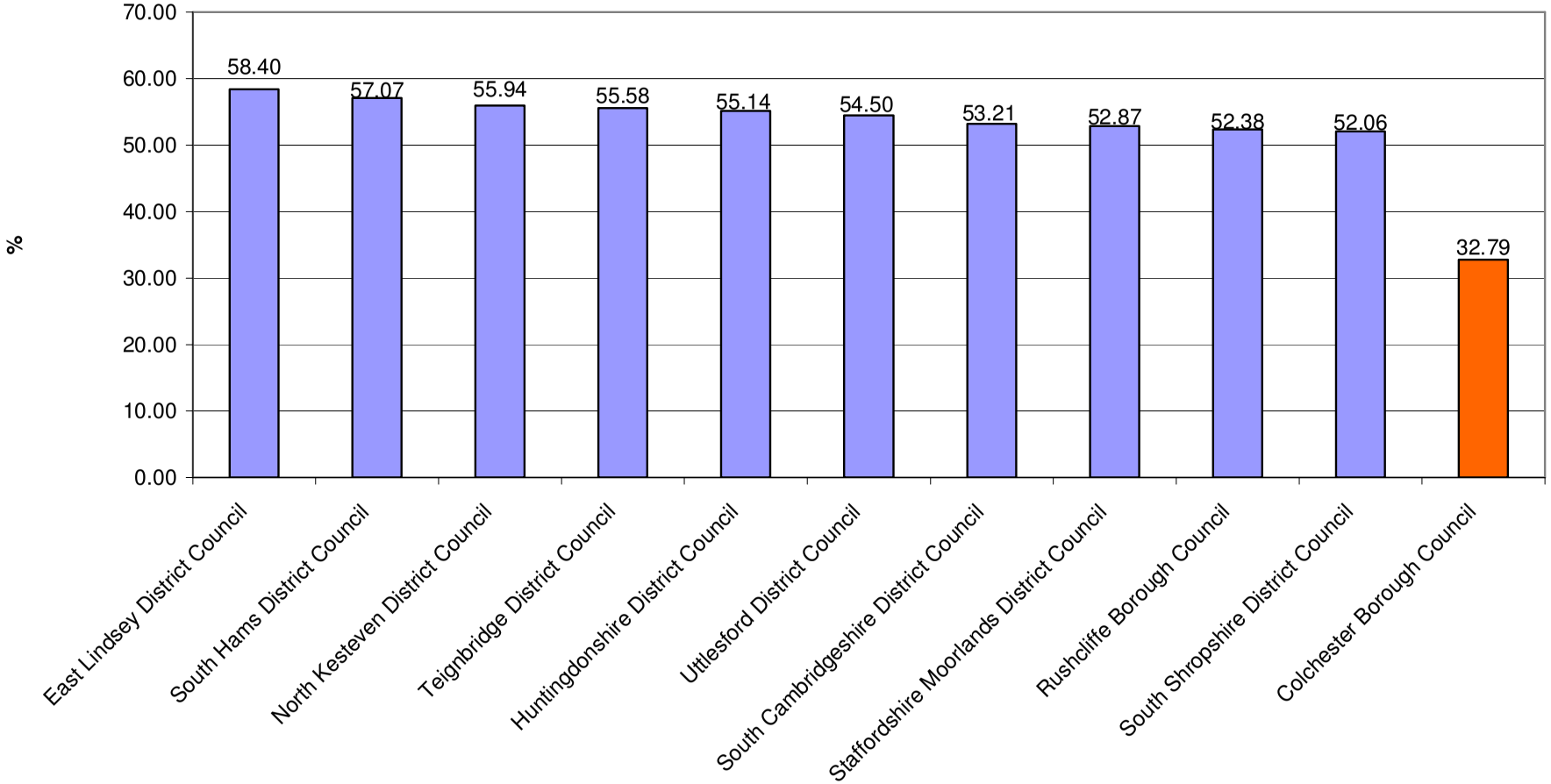
Items excluded from final cost

- It should be noted that KAT is unsuitable for use by a local authority if refuse is not collected from individual households, ie it cannot be used if refuse is collected in communal systems, such as paladins or euro-bins. Therefore, our refuse and recycling collection from flats' communal bins is not included in the final costs.
- Any costs related to the spare vehicles and home deliveries of recycling containers are not included.
- Neither the substantial increase in fuel costs, nor the considerable drop in recyclable materials' value this year has been factored into the fuel price.
- There are no costs added to run and to maintain both the depot and the workshop.
- Even though the final costs do not include the budget of the Strategic Waste & Sustainability Team, both baseline and all options do include an annual education cost per household, which is split equally between ECC and each district (see assumptions section below for further details).

Comparison for Colchester's Cost of waste collection per hd, £ (BV86) with the top 10 performing authorities for recycling and composting 2007/08



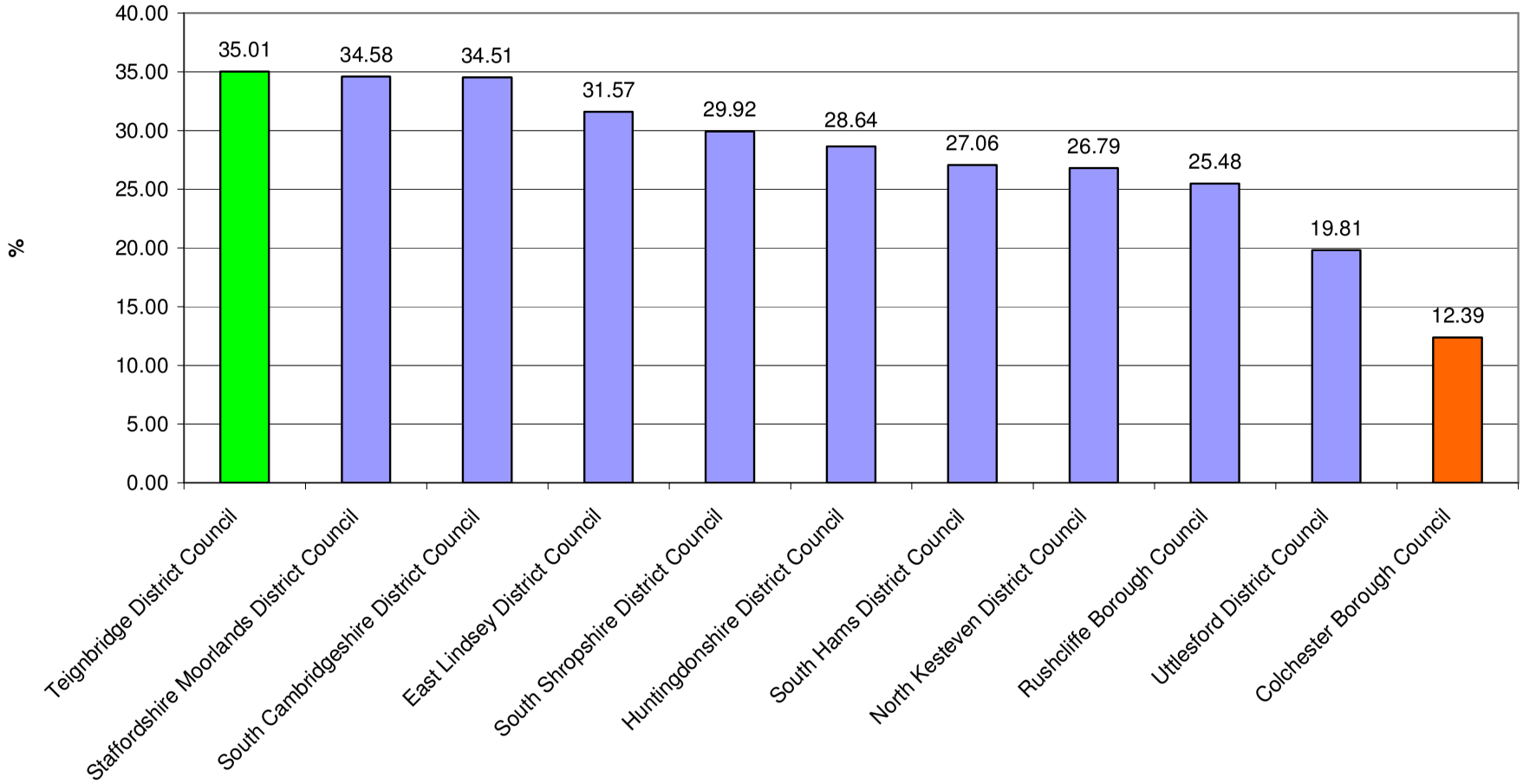
Colchester's combined recycling and composting performance compared with the top 10 performing authorities for recycling and composting 2007/08



100

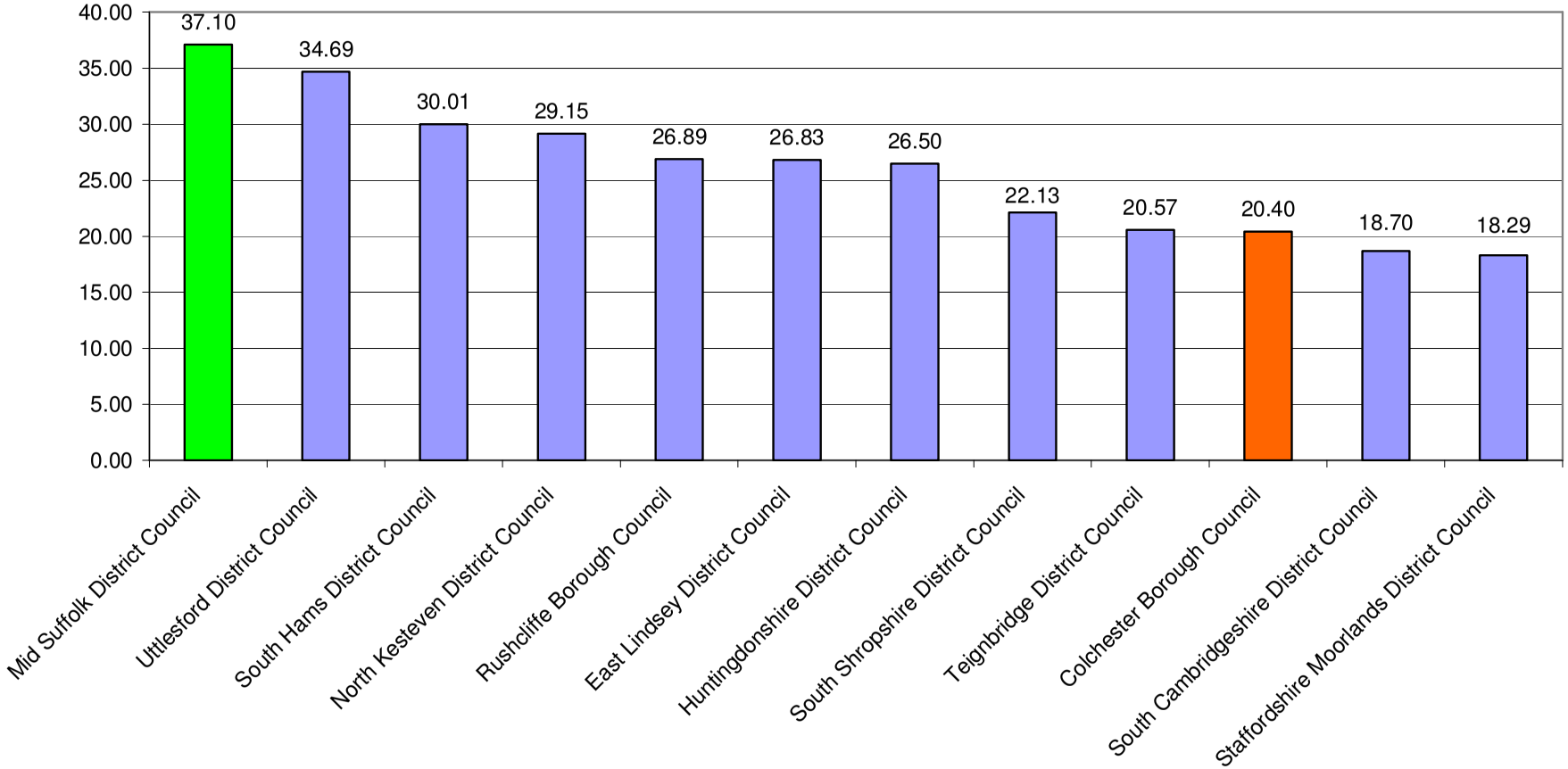
Colchester's percentage of garden waste composted compared with the top 10 authorities for recycling and composting 2007/08

Teignbridge are the top performing authority for garden waste

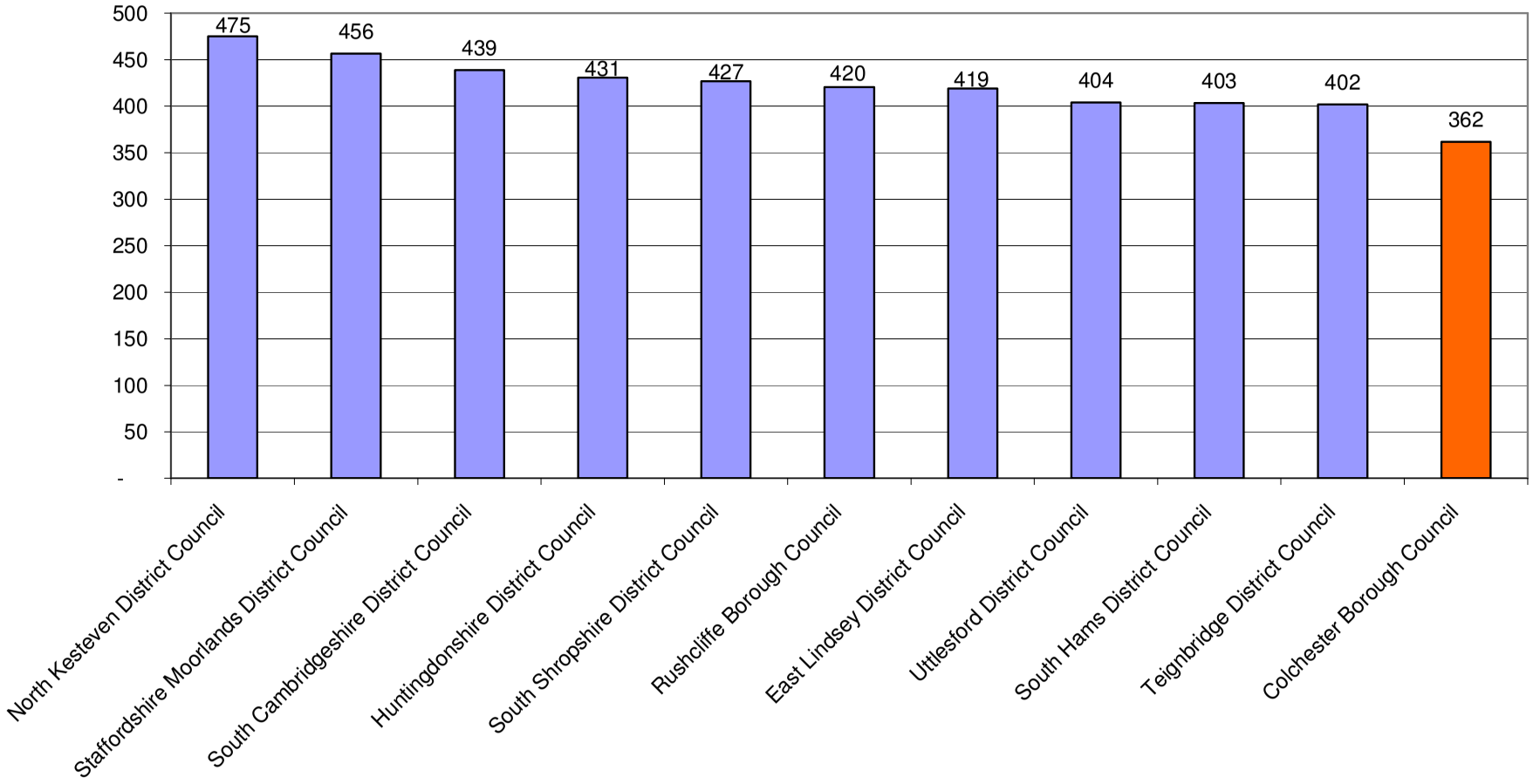


Comparison of Colchester's Dry recycling % with the top 10 performing authorities for recycling and composting 2007/08.

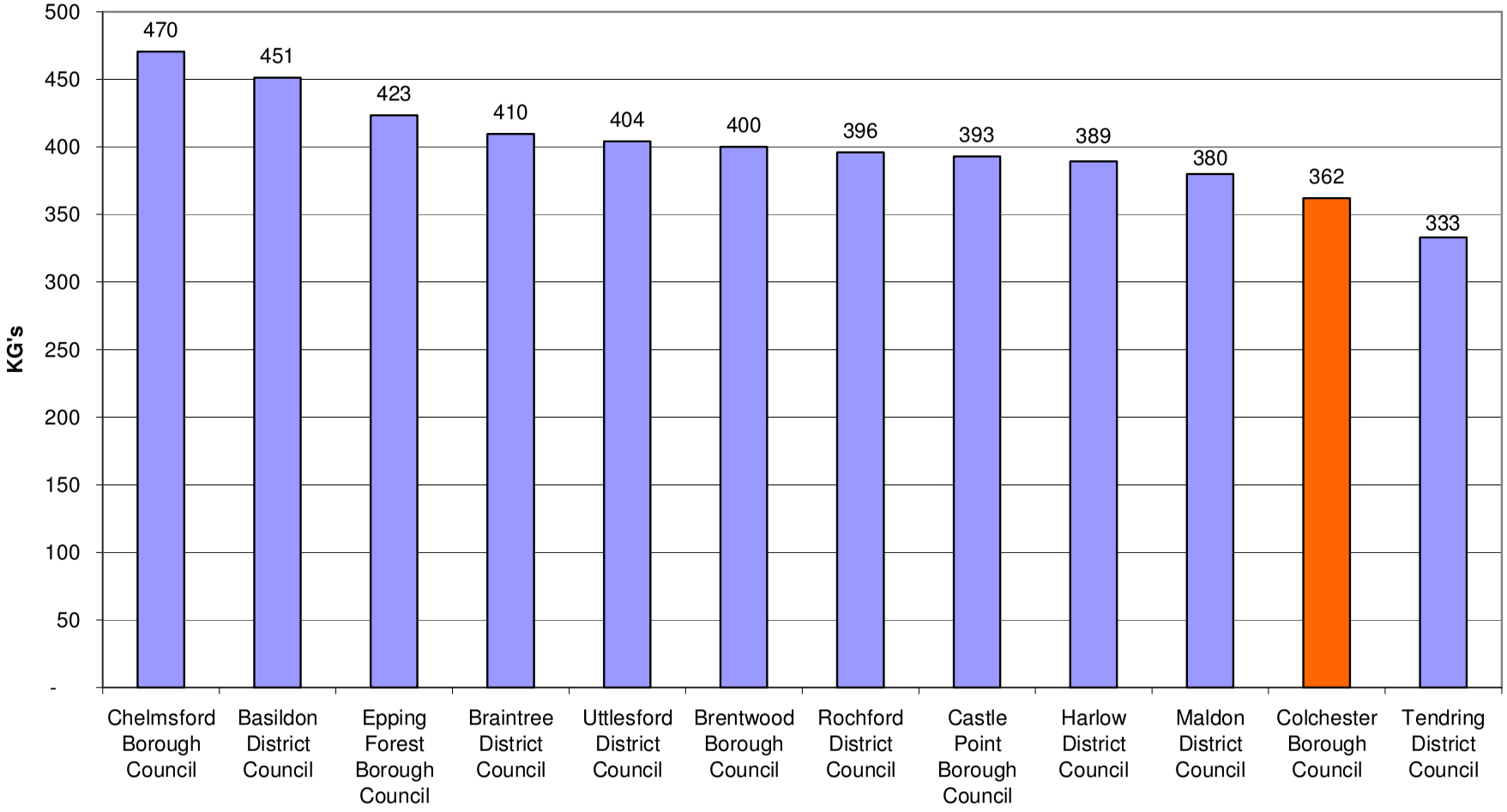
Mid Suffolk are shown as the top dry recycling authority.



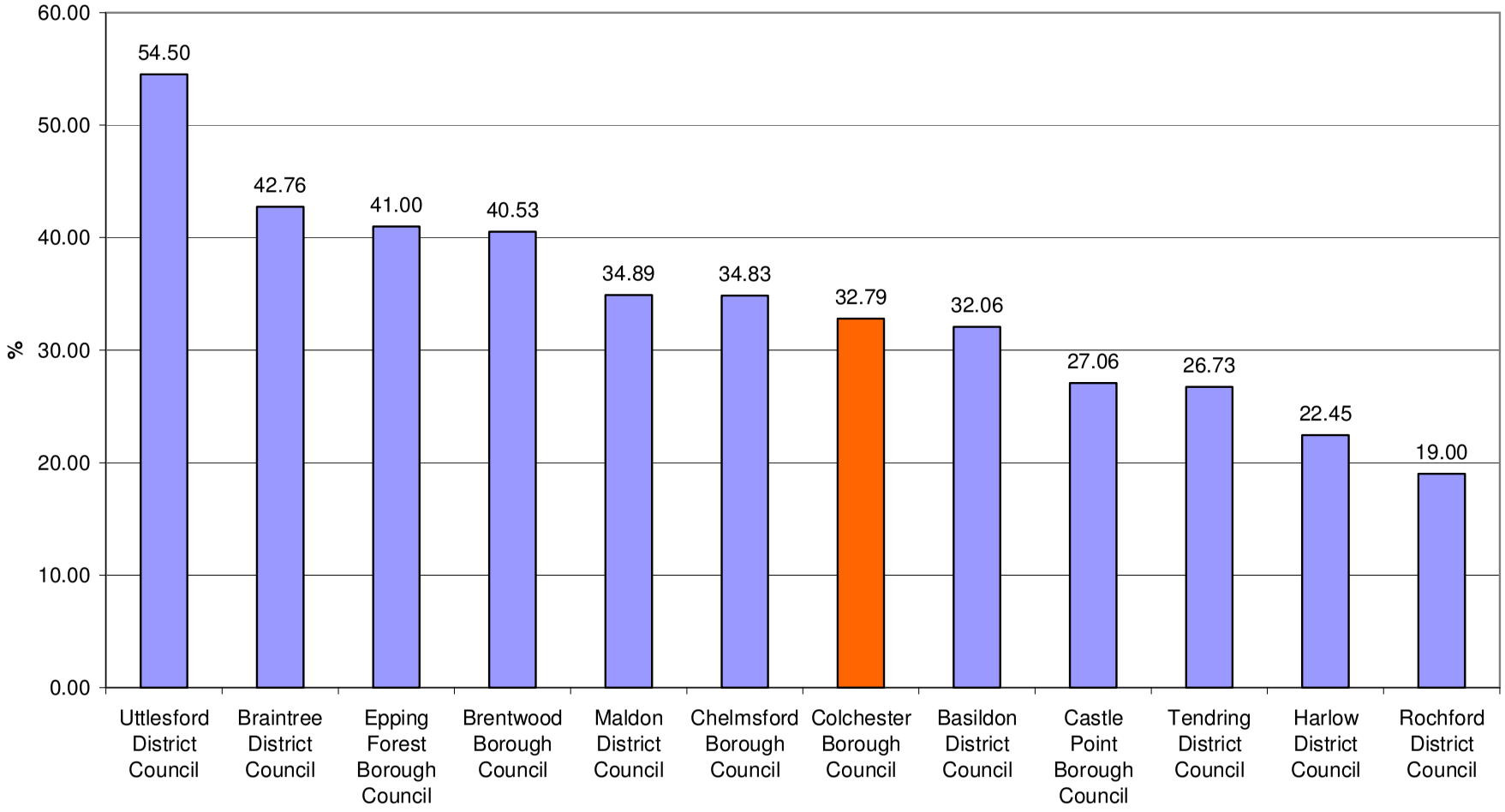
Comparison of Colchester's Collected Household waste per person, kg (84a)
with the top ten performing authorities for recycling and composting 2007/08

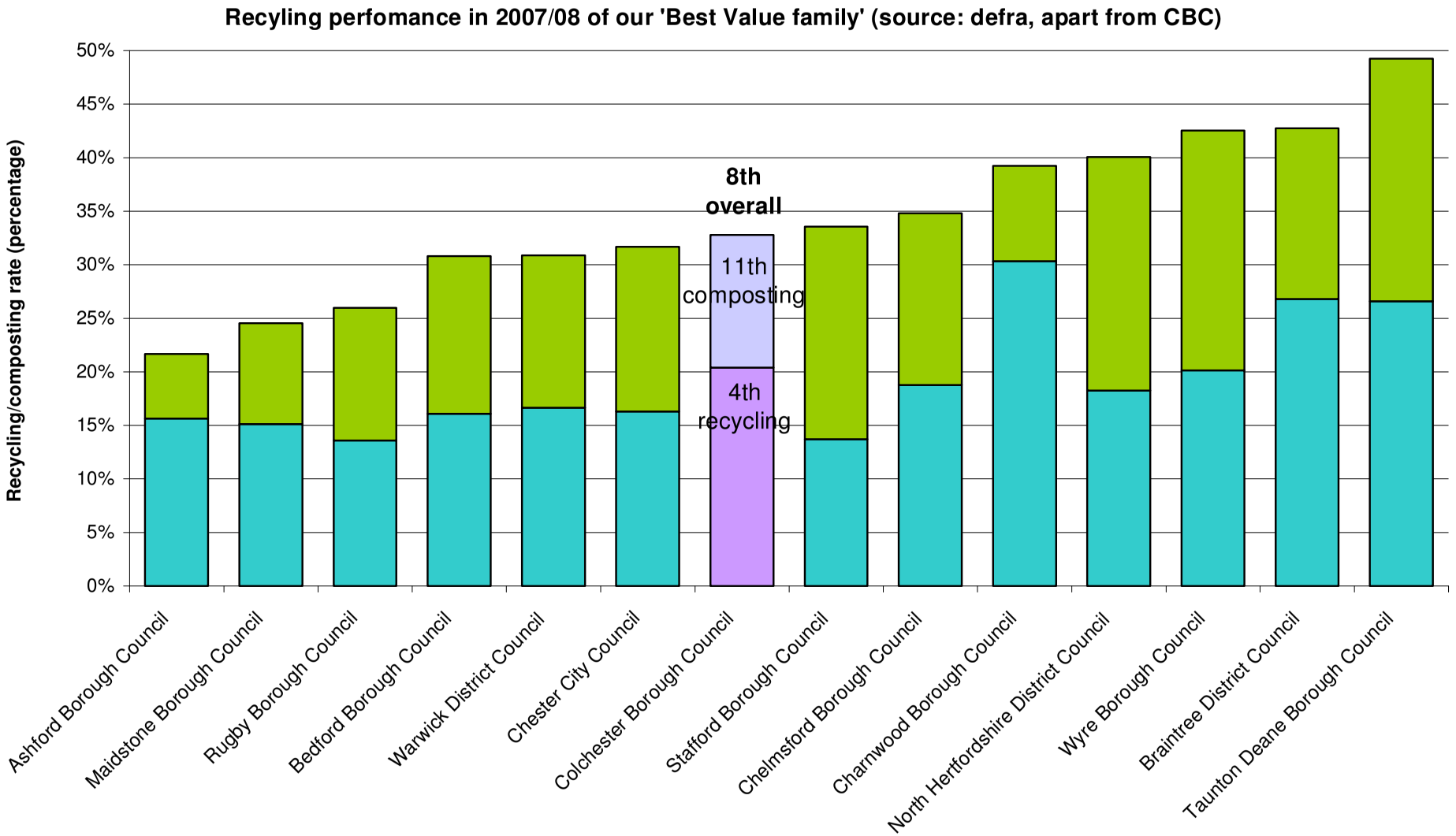


Comparison of waste per person for Essex Waste Collection Authorities 2007/08



Essex Waste Collection Authorities Recycling Performance 2007/08




Recyling perfomance in 2007/08 of our 'Best Value family' (source: defra, apart from CBC)
Recycling/composting rate (percentage)
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
8th overall
11th composting
4th recycling
Ashford Borough Council
Maidstone Borough Council
Rugby Borough Council
Bedford Borough Council
Warwick District Council
Chester City Council
Colchester Borough Council
Stafford Borough Council
Chelmsford Borough Council
Charnwood Borough Council
North Hertfordshire District Council
Wyre Borough Council
Braintree District Council
Taunton Deane Borough Council

Strategic Overview and Scrutiny Panel

Item **12**

17 March 2009

Report of	**Scrutiny Officer**	**Author**	**Robert Judd Tel. 282274**
Title	**Review of the work of the Portfolio Holder for Performance and Partnerships**		
Wards affected	Not applicable		

This report sets out the responsibilities of the Portfolio Holder for Performance and Partnerships.

1. Action Required

1.1 The Panel is asked to review the work of the Portfolio Holder for Performance and Partnerships.

2. Responsibilities of the Portfolio Holder for Performance and Partnerships

2.1 The responsibilities are as follows;

(i) To promote partnership working with Essex County Council, the responsible waste disposal authority.

(ii) To determine investment in "third sector" organisations which deliver services to help the Council to meet its corporate objectives.

(iii) To ensure that the Council is working with partners to meet the key health targets identified in the Local Area Agreement.

(iv) To support initiatives which tackle deprivation throughout the borough, but with specific reference to the Council's work on Life Opportunities.

(v) To engender partnership working between the Council and Town and Parish Councils within the Borough of Colchester.

(vi) To explore the significance of rural issues in the borough and determine what programmes and actions may be needed to address these.

(vii) To authorise any grants to Town and Parish Councils.

3. Delegation to the Portfolio Holder for Performance and Partnerships

- Monitoring of the Council's performance in relation to National Indicators and Local Area Agreements (performance).

- Monitoring of the Council's performance dashboard (performance).

- Monitoring of partner organisations performance in relation to the delivery of the comprehensive area assessment (performance)

- To exercise the functions delegated to the East Essex Waste Management Joint Committee on behalf of the Council (partnerships).

- To oversee the Council's work with partners aimed at improving the life opportunities of residents (partnerships).

To procure and or encourage the procurement of the specified service in the provision, implementation, maintenance and management of:-

- The promotion of public health matters so as to increase public awareness (community services).

- Services for the elderly (community services).

- Community projects supporting the Council's work of life opportunities (community services).

- Welfare rights (community services).

- Matters relating to young people (community services).

- Grants to the voluntary and community sector and village and community halls (community services).

4. Standard References

4.1 There are no policy plan references or financial, human rights, community safety or health and safety implications in this matter.

4.2 Scrutiny is a key function to ensuring the work of the Portfolio Holder is subject to full appraisal and in line with the aims of the strategic plan.

Strategic Overview and Scrutiny Panel

Item 13

17 March 2009

Report of	**Scrutiny Officer**	**Author**	**Robert Judd Tel. 282274**
Title	**Review of the work of the Portfolio Holder for Planning and Regeneration**		
Wards affected	Not applicable		

This report sets out the responsibilities of the Portfolio Holder for Planning and Regeneration

1. Action Required

1.1 The Panel is asked to review the work of the Portfolio Holder for Planning and Regeneration.

2. Responsibilities of the Portfolio Holder for Planning and Regeneration

2.1 The responsibilities are as follows;

(i) To oversee the implementation and monitoring of the Council's policies and services relating to all planning activities including conservation and building control.

(ii) To monitor the implementation of the Local Plan.

(iii) To promote and procure the implementation of the Borough Council's Transport Strategy in partnership with Essex County Council, the responsible Transport Authority and other partners, to improve infrastructure.

(iv) To promote partnership working with Essex County Council, the responsible transport authority.

(v) To oversee major regeneration projects which impact upon the Council's landholdings.

(vi) To support local and regional partnerships which can lever in new investment into the borough's four regeneration areas.

Major projects in the portfolio include the Cultural Quarter, Vineyard Gate, North Colchester, including the Community Stadium and East Colchester.

3. Delegation to the Portfolio Holder for Planning and Regeneration

To procure the specified service in the provision, implementation, maintenance and management of:

- Functions as Local Planning Authority (planning)
- Building regulations and allied legislation relating to dangerous buildings and safety at sports grounds (planning).

- The preparation of Supplementary Planning Documents and the issue of draft Supplementary Planning Documents for consultation - Local Development Framework (LDF).

- To agree the Statement of Community Involvement and the Annual Monitoring Report (LDF).

  To procure and or encourage the procurement of the delivery of the Council's regeneration agenda including sustainable housing, infrastructure, employment and leisure facilities.

  To develop policies in relation to sustainability, and to oversee and promote the implementation of the Nottingham Declaration objectives.

4. Standard References

4.1 There are no policy plan references or financial, human rights, community safety or health and safety implications in this matter.

4.2 Scrutiny is a key function to ensuring the work of the Portfolio Holder is subject to full appraisal and in line with the aims of the strategic plan.

Strategic Overview and Scrutiny Panel

Item **14**

17 March 2009

Report of	**Scrutiny Officer**	**Author**	**Robert Judd Tel. 282274**
Title	**The responsibilities of the Portfolio Holder for Neighbourhoods**		
Wards affected	Not applicable		

This report sets out the responsibilities of the Portfolio Holder for Neighbourhoods in preparation for the review of the work of the Portfolio Holder at the April meeting.

1. Action Required

1.1 The Panel is asked to consider the responsibilities of the Portfolio Holder for Neighbourhoods in preparation for April's review.

2. Responsibilities of the Portfolio Holder for Neighbourhoods

(i) To promote the Council's Housing Strategy and to monitor its implementation.

(ii) To examine and review the operation of Colchester Borough Homes.

Major Project(s) includes the Allocations review.

3. Delegation to the Portfolio Holder for Neighbourhoods

3.1 To procure the specified service in the provision, implementation, maintenance and management of:-

- Public sector dwellings, management of Council owned dwellings and other properties and their environs including the setting of rents in accordance with the Management Agreement dated 11 august 2003 between the Council and Colchester Borough Homes Limited (Public Sector).
- Tenant selection and nomination criteria and conditions of tenancy (Public Sector).
- The Council's statutory responsibilities to homeless persons (Public Sector).
- The Council's relationship with Housing Associations (Public Sector).
- The Right to Buy Scheme (Public Sector).
- Non-statutory housing functions such as housing advice (Private Sector).
- The Council's statutory responsibilities in respect of housing standards (Private Sector).

- Support schemes to Building Societies and Banks and the making of mortgage advances by the Council for house purchase and improvement (Private Sector).

- Housing standards and the protection of persons from unlawful eviction or harassment (Private Sector).

- Private Sector Housing Grants.

- The promotion of the Council on regional and sub regional bodies in relation to housing completions and housing developments.

- Procurement of specified services for the dissemination of information regarding all housing matters.

- Home loss, disturbance and similar payments (general).

4. Standard References

4.1 There are no policy plan references or financial, human rights, community safety or health and safety implications in this matter.

4.2 Scrutiny is a key function to ensuring the work of the Portfolio Holder is subject to full appraisal and in line with the aims of the strategic plan.

Strategic Overview and Scrutiny Panel

Item 15

17 March 2009

Report of	**Scrutiny Officer**	**Author**	**Robert Judd Tel. 282274**
Title	**The responsibilities of the Leader of the Council, Portfolio Holder for Strategy**		
Wards affected	Not applicable		

This report sets out the responsibilities of the Leader of the Council and Portfolio Holder for Strategy in preparation for the review of the work of the Leader at the April meeting.

1. Action Required

1.1 The Panel is asked to consider the work of the Leader of the Council and Portfolio Holder for Strategy, in preparation for April's review.

2. Responsibilities of the Leader of the Council and Portfolio Holder for Strategy

2.1 The responsibilities are as follows;

(i) To oversee the development and ongoing review of the Council's Strategic Plan.

(ii) To monitor the implementation of the Council's Strategic Plan, including ensuring Council resources are deployed to support strategic priorities.

(iii) To promote the Council's Strategic Plan to Councillors, partners and the community as a whole.

(iv) To develop and promote community leadership in the Borough.

(v) To oversee and monitor the Council's financial strategy, budget and resource allocation.

(vi) To review the opportunities to work with other partners, both within the public and private sectors, to assist in developing 'joined-up' government.

(vii) To determine a communications strategy that will support and deliver the Council's vision and policy priorities.

Major Project(s) in Portfolio: Haven Gateway Partnership, Regional Cities East Partnership and Colchester 2020.

3. Delegation to the leader of the Council and Portfolio Holder for Strategy

- The promotion of the Council on regional and sub-regional bodies in relation to developing regional partnerships.

- Relations with the general public, local authorities, the media and all other external agencies including the Local Strategic Partnership (Colchester2020).

- Matters relating to financial strategy, the budget and resource allocation.

- Following consultation with Group Leaders, to make appointments during the municipal year to Council Groups and Outside Bodies.

- Financial management of the Housing Revenue Account.

4. Standard References

4.1 There are no policy plan references or financial, human rights, community safety or health and safety implications in this matter.

4.2 Scrutiny is a key function to ensuring the work of the Portfolio Holder is subject to full appraisal and in line with the aims of the strategic plan.