



DERBY CITY COUNCIL

**COUNCIL CABINET**  
**14 JUNE 2005**

Report of the Director of Development and Cultural Services

## **Waste Strategy**

### **RECOMMENDATION**

- 1.1 That Cabinet approves the proposal to procure a treatment plant to deal with residual waste without the benefit of PFI credits.
- 1.2 That Cabinet agrees to the Council working closely with Derbyshire County Council to procure a waste treatment plant sited in or near to Derby and sharing costs proportionally and approves the placing of the necessary notices advertising a procurement process.
- 1.3 That Cabinet notes the reports of the consultants recommending this preferred procurement strategy.
- 1.4 That Cabinet notes that a similar report is being submitted to Derbyshire County Council Cabinet and that some of these recommendations will only have effect if the County Council give the appropriate approval.

### **SUPPORTING INFORMATION**

- 2.1 To enable the Council to divert waste from landfill and achieve high recycling and diversion rates a treatment plant must be procured in the shortest possible time. The report from the consultants, Deloitte, has suggested that the procurement process could be extended by several years, up to a total of four or five years, through the need to satisfy DEFRA when using PFI credits. The consultants have advised that the procurement process can be shortened to about 18 months by a direct procurement process handled in house but with the benefit of advice from consultants.
- 2.2 The Council needs to have an assured outlet for residual waste, i.e. waste left after as much as possible of the recyclables and compostables have been taken out by the public and dealt with separately. The residual waste needs to be treated to reduce that element of waste which produces methane when it is landfilled, that is reduce its bio-degradability, and meet the targets set by government. The council has been given allowances to landfill certain amounts of biodegradable waste. The allowances decrease annually and while the measures already put in place to divert biodegradable waste will enable Council to meet the allowances/targets until about 2008/09 new measures are needed to meet the allowances after that time.

- 2.2 Derbyshire County Council faces the same issues and potentially needs access to or to procure a waste treatment plant in southern Derbyshire. It will therefore potentially improve the economics of the procurement process and the gate fee for the treatment process if the two authorities work together.
- 2.3 The Council is approaching a crucial period in its management of the city's household and municipal waste. Although major strides have been made in the last few years in the expansion of recycling, new government regulations will require a further major investment to be made in the reduction of waste sent to landfill. This report considers the urgent need to develop further facilities.

### **Background**

- 2.4 The City Council has a legal duty, as defined by The Environmental Protection Act, to collect and dispose of waste generated by households within the city boundary. In 2004/05 this amounted to approximately 120,000 tonnes of waste collected from the kerbside and through the Civic Amenity site at Raynesway. The council has further duties and responsibilities to deal with this waste by recycling certain minimum amounts and diverting some types of waste away from landfill

### **The current position on recycling**

- 2.5 In 2004/05 the residents of Derby produced approximately 120,000 tonnes of waste. Just over 21% of this waste was either recycled or composted. The balance of the waste, some 96,000 tonnes, was deposited in landfills.

All the actions which the Council has taken to deal with waste are driven by both the Council's environmental policy and the targets set by Central Government. The Council has to achieve a 30% recycling rate by 2005/06. This target is statutory and with the measures already put in place there is a very good chance that the Council will achieve this target.

A chart showing the growth in recycling and composting achieved to date and the forecast for the next few years is shown in Appendix 4.

### **Present position – black bin waste and the waste disposal contract**

- 2.6 Derbyshire County Council entered into a contract in 1995 with Derbyshire Waste Limited, a subsidiary company of Waste Recycling Group (WRG) for a period of ten years. The contract was primarily designed to dispose of a bulk material that had no apparent value. The contract did suggest that the contractor could carry out recycling but this was not an obligatory part of the contract and, in fact, none has ever been carried out. At the time of Derby becoming a unitary authority the contract for Derby City's waste was separated from the main contract and passed to the City Council. The contract has generally satisfied the needs of the Council by disposing of the waste in a safe manner at a landfill site. WRG supply a transfer station on Raynesway and have hauled the material to various landfill sites in the region including some in Nottinghamshire.

The contract was due to expire at the end of February 2005. The Council had no other outlet for the waste and decided to negotiate an extension to the existing contract with WRG. The extension was agreed in late 2004 and provides for WRG to take all of Derby's black bin waste for a further two year period with a possible option of an additional year if the Council need it. Other options, for example a new contract awarded after a tender, were examined but the WRG option provided continuity of service and minimised any risk of inflated costs through a new tendering procedure.

It is this contract, which now expires in February 2007, or possibly February 2008 with the additional extension, that needs to be renewed or replaced and is the subject of the rest of this paper.

## **2.7 Brightstar**

In 1999 the Council offered a contract to a company, Brightstar, to process the residual waste left after the collection of the recyclables and compostable fractions. The contract would have produced a relatively high recycling rate and diverted most of the residual waste away from landfill while producing electricity for sale to the National Grid. Unfortunately the company never fulfilled their obligations under the contract and has recently advised the Council that it will shortly cease to exist as a company. The only outlet for residual waste at the moment is landfill.

## **2.8 The Effect of European and Government requirements on residual waste**

The Government has published limits on the amount of biodegradable material that can be placed in landfill. These are known as landfill allowance targets and arise from a European Directive which requires material to be diverted away from landfill. The allowances take the form of permits to place specific tonnages of biodegradable waste into a landfill each year. The graph shown in Appendix 2 illustrates the way in which the kerbside recycling will divert waste but it also shows the increasing gap between what the City will be allowed to landfill without purchasing permits (red line) and the waste remaining to be dealt with (green line).

The allowances are tradable under the Landfill Allowance Trading Scheme (LATS). There are four methods of trading:

1. Selling, that is they can be sold to other authorities who do not have enough allowances to dispose of all of their waste to landfill
2. Buying, if an authority is short of allowances because they have not taken measures to divert biodegradable waste away from landfill they can purchase the allowances
3. Banking, allowances may be banked for use in a future year
4. Borrowing, from the following years allowance by up to 5%

Borrowing of allowances from future years is not allowed in the target years of 2009/10, 2012/13 and 2019/20. Any surplus allowances carried into these years will be lost.

The trading in allowances will take place between authorities in a way which is still being established. It is likely that one of the county councils will set up a brokerage scheme to facilitate the sale and purchase of the allowances although authorities are free to trade without using a broker. Each authority is required to appoint a 'Trading Officer' who will be the point of contact between DEFRA and the Council on LATS matters. For the interim period C Stewart has been appointed as the 'Trading Officer' but will need to have clear instructions and authority to trade should it become necessary. The exact value of the allowances cannot be predicted except that there will be a maximum value of £150 which the Government will impose upon those authorities that have not purchased sufficient allowances for them to dispose of their waste into landfills. These are referred to as 'penalties'.

The penalty levy in the target years will be a proportion of the penalty imposed by the EU against the National targets. The £150 per tonne level will not apply in these years and could be considerably higher.

Calculations have been undertaken on the diversion of the Derby's waste through the measures outlined above. The anticipated surplus and shortage of allowances are shown in Appendix 3. Due to the proactive measures that Derby has put in place, the Council should have a surplus of allowances until about 2008/09. After that date the Council will be forced to purchase allowances unless other measures are put in place to divert biodegradable waste away from landfill. As such the Council has a three year window to develop a means to treat its residual waste before it faces a shortfall in allowances.

## **2.9 The Situation for Derby**

Derby is likely to meet its basic recycling and composting target provided all households, including flats and housing complexes, are converted to the new kerb side separation system – Rethink Rubbish.

However in order to meet the landfill allowance targets the residual waste left in the black bin will need to be treated. It is theoretically possible to divert all biodegradable waste from the residual waste bin through the co-operation of the public. In real terms this will not happen and it is forecast that the best possible diversion of biodegradable waste that could be achieved in a city like Derby is 50% of the total amount of biodegradable waste. Even this level will require extensive public education and co-operation from householders.

The exact calculations of the amount of biodegradable waste that needs to be diverted to meet the LATS allowances are relatively complex. The Government has stated that authorities must assume that 68% of all waste is biodegradable. The amount of biodegradable material such as paper, textiles, garden and food waste that are diverted through kerb side collection schemes can then be deducted from the biodegradable (68%) total. This results in a calculated amount of biodegradable waste that will need to be treated and to be offset against the allowances (LATS).

The calculations suggest that the city will have a surplus of allowances until 2008/09 but after that date there will be an increasing deficit (see Appendix 3). The forecast deficit for the first target year is 11,484 tonnes. As no banking or borrowing is allowed in this target year the cost of buying allowances could reach £0.6 million (based on £50 per tonne). The exact value/cost of the permits will be determined by the market forces of supply and demand. By 2018/19 the deficit is forecast to reach 40,000 tonnes per year and if these allowances are valued at say £50 then the city could be facing a bill in excess of £2.0 million per year to buy permits. This position is clearly untenable and action must be taken so that the city is not at the mercy of trading in permits but has a facility to treat the waste and possibly allow the Council to sell excess allowances on the open market and generate income.

## **2.10 The Situation for Derbyshire**

Derbyshire County Council have similar disposal problems to the City and faces a similar scenario to the City in terms of having a sufficient surplus of LATs for roughly the next three years. Work has been proceeding to investigate the merits of obtaining funds through a PFI submission to under-pin the costs of waste treatment and disposal for a joint Derbyshire and Derby City approach. The County Council have appointed Deloitte's as consultants to carry out an option analysis on both PFI and alternative procurement methods.

The 4Ps (a government organisation who assist Local Authorities in obtaining PFI credits) have indicated that the County Council as a whole, and including the City, could expect credits of approximately £35 million. The credits would be spread over the life of a project which would be 25 years. It is possible that the County Council will not get PFI funding without the City but very unlikely that the City would get PFI funding on its own.

With the City's portion of the county wide waste being approximately 25%, a successful PFI project with the County would result in the City benefiting to the extent £8.5 million over the 25 year life of the project, or £350,000 per year. These are very significant sums but they must be measured in terms of the total cost of waste disposal during that 25 year period. The total value of the contract to deal with the City Council's waste treatment for the 25 year period is likely to be of the order of £125 million at today's prices. In relative terms therefore, the amount of funding a PFI would provide is modest.

The consultants, Deloitte's, appointed by the County Council to prepare an Outline Business Case (OBC) for the PFI application have subsequently advised that the time to procure a PFI is likely to be of the order of 7 years. This would result in both City and the County being exposed to the risks involved in purchasing LATs. The value/cost of LATs is unknown but is likely to be similar to the cost of waste treatment (£50 or more per tonne).

Preliminary calculations suggest that if treatment costs £50 per tonne and land fill allowances, LATs, are valued at £50 per tonne then there is a strong reason for the City to implement a treatment contract as soon as possible. The value of the allowances that the Council could sell, having procured a plant, could exceed the value of the credit provided through the PFI scheme.

Conversely if treatment is substantially higher than £50 per tonne then there would be a strong reason to delay the implementation of the treatment plant and purchase allowances. There are significant risks in adopting this approach as it is highly probable that many authorities will have difficulties in meeting their allowances in 2010 and the price of the allowances will increase. This would then mean that the City should proceed at an earlier date to procure a treatment plant so that we are not exposed to the risk.

For the last few months the City has been working with the County and the district councils on developing a new joint waste strategy which DEFRA advise would be one of the essential requirements for award of PFI credits. The challenges faced by the City are described above and are substantial in themselves. However, the situation for the County is far more complex in that they are completely reliant on the eight district councils to collect the waste that needs to be treated. It is vital to the County that each district not only makes specific and binding commitments on the collection and separation of waste but that the amounts they commit to are adequate to meet the County's requirements. The vital nature of this relationship is reflected in DEFRA's insistence that to approve any county PFI all the districts must have signed up to a joint waste strategy first. No binding commitments will mean no PFI approval. There have already been embarrassing failures in this regard, for example Cambridgeshire, where the districts pulled out of a PFI agreement at the eleventh hour.

## **2.11 Opportunities for Derby**

The City has full control over all the waste arising from households in the city since it is both collector and disposer of household waste. The City also has the major advantage of a site with a planning approval for a waste treatment process at the old tannery site on Sinfen Lane. Officers are presently investigating the costs and means for remediating this site, with a view to having the site ready for development as quickly as possible. Remediation will require a substantial amount of money and the means to fund this work in the relatively near future will need to be found.

A ready, prepared site, with the benefit of planning permission for a waste treatment plant will be seen as a major advantage to potential bidders for any contract; and some contacts have been received from contractors about the city's future plans, since the Brightstar contract faltered. A prepared site will eliminate risks for the contractor and also enable the contractor to start construction at an earlier date.

The only other site that is likely to be available in the City is the Raynesway transfer station, owned by the County Council but currently leased to WRG. Planning officers are trying to locate other possibly suitable sites within the city boundary.

There is a dearth of British companies who have experience of building and operating residual waste treatment plants. There are however European companies who do have such experience. For example a German company, HESSE, have built a plant in Leicester for Biffa. Recently a company called ENER.G gave a presentation to officers of their pyrolysis process that is in operation at six sites in Norway and Germany and appears to be an economic solution to the residual waste treatment problem.

The City has the benefit of the control of all its domestic waste from collection to disposal as well as a prospective site for the development of a residual waste plant. It is known that waste companies are keen to do business with us because of these advantages. If the city were to start the procurement of a waste plant soon it could hope to have this operational in time to eliminate the need to purchase LATS permits. However a decision would need to be made on this in the near future as well as on the remediation of the Sinfin Lane site.

Deloitte, have examined the various procurement options and found that the quickest procurement route is to purchase a plant directly and without the benefit of PFI credits. This route will take about 18 months plus about one year to obtain all the necessary permissions and 18 months to build the plant. Thus it is just feasible the plant to be up and running by early 2009 thus avoiding the need to purchase landfill allowances. All other purchase options will take considerably longer with a PFI option taking 8 or 9 years.

If this approach were agreed then the City and County would jointly procure the first plant, sharing all costs and workloads. Steps have already been taken to appoint consultants to assist with the potential PFI procurement, and they could easily be diverted to a conventional procurement first. There is already a provisional agreement that the City will pay one quarter of the costs of these consultants, based on the relative amounts of waste produced. (That was for a procurement process to cover all waste in the county; if a joint plant is developed for the south the proportional costs of the consultants for procuring the southern, Derby, plant would logically be shared. Whatever agreement is reached, development costs would need to be confirmed and the source of the funding identified. There also needs to be careful consideration of the arrangement between the City and the County so that the City has first call on the capacity of the plant to treat local waste arisings.

## **2.12 Conclusions**

- The city is making excellent progress on Rethink Rubbish. It should be close to meeting its 2005/06 recycling target and has developed new contracts which will allow for the more cost efficient collection and disposal of the materials
- The introduction of LATS will mean that unless the city has a residual waste plant available from 2008/09 it could start to face increasingly punitive financial penalties
- The City and County Councils are making good progress on the development of a new waste strategy, which is an essential pre requisite for both procuring a new waste plant and obtaining PFI credits.
- It is now considered that there is insufficient time for a plant to be procured using a PFI route by either the city or the county that will meet the required implementation timetable to meet LATS requirements. This has now been confirmed by Deloitte.

- An opportunity exists for the City to procure a plant at Sinfin Lane. If this process is started soon (within the next few months) the timetable set by LATS could still be met. The site needs to be remediated as quickly as possible. The costs of the procurement and remediation will be substantial and funding will need to be identified.
- Deloitte have suggested that a plant is jointly procured and located in or close to Derby to deal with waste from the southern part of the county and from Derby. Cost and resource input sharing measures with the County Council will need to be identified. Mechanisms for control of the plant on completion will also need to be agreed.

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<b>Background papers:</b>	Waste Strategy 2000(DETR), Derbyshire Waste Management Strategy (1999), South East Derbyshire Waste Management Strategy (2000), Waste Minimisation, Recycling and Recovery Plan (Derby City Council 2002)
<b>List of appendices:</b>	Appendix 1 - Implications Appendix 2 – Forecast diversion from landfill Appendix 3 – Allowances to be bought /for sale



<b>IMPLICATIONS</b>
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**Financial**

- 1.1 The financial implications of not taking action to procure a waste plant are set out in paragraphs 2.8 and 2.9.
- 1.2 The precise method of securing a contract for recycling is still to be determined and the private sector would be invited to submit a range of proposals. This could include a private contractor funding the building of a recycling facility in return for a gate fee/ Alternatively the two authorities could fund the construction of such a facility and find an operator to work in partnership. These options and the full financial implications would be subject to a full business case being prepared and approved by the respective authorities.
- 1.3 The procurement process itself is likely to require further adviser and other costs to be incurred. A further report will be brought to cabinet should the share of costs attributable to the City Council not be able to be met from existing waste management budgets.

**Legal**

- 2.1 The Government has set recycling targets for the City and if the Council does not achieve the targets, it could be deemed to have failed to deliver Best Value. The procurement of a waste treatment plant will enable the Council to meet its Landfill Diversion targets and ensure that it does not have to buy allowances at an unknown cost.

**Personnel**

- 3.1 No additional staff are needed to carry out the work to procure a treatment plant. Professional advisors will be used as necessary and the cost shared with the County council.

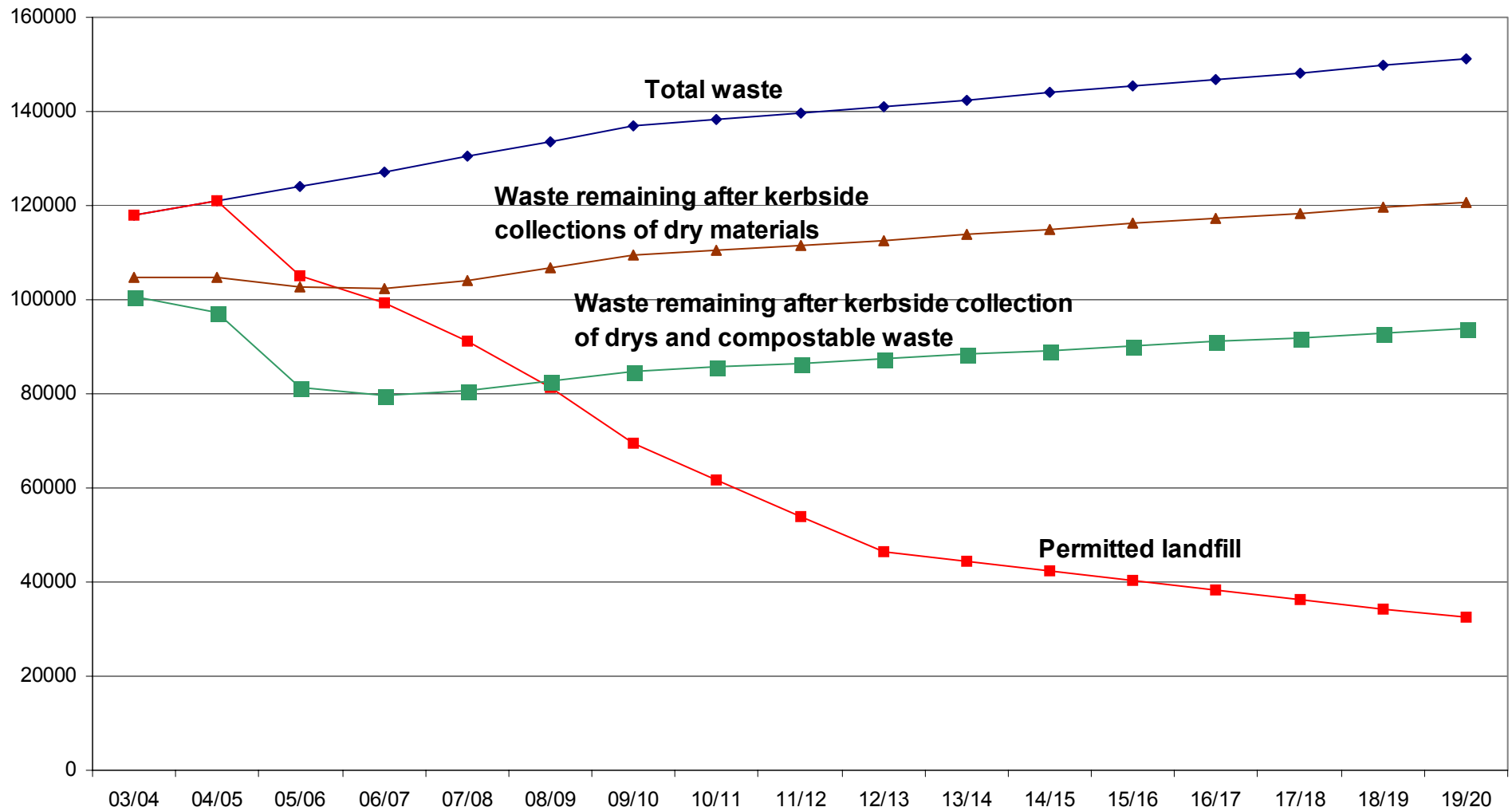
**Equalities impact**

- 4.1 The treatment plant will treat waste from all parts of the City

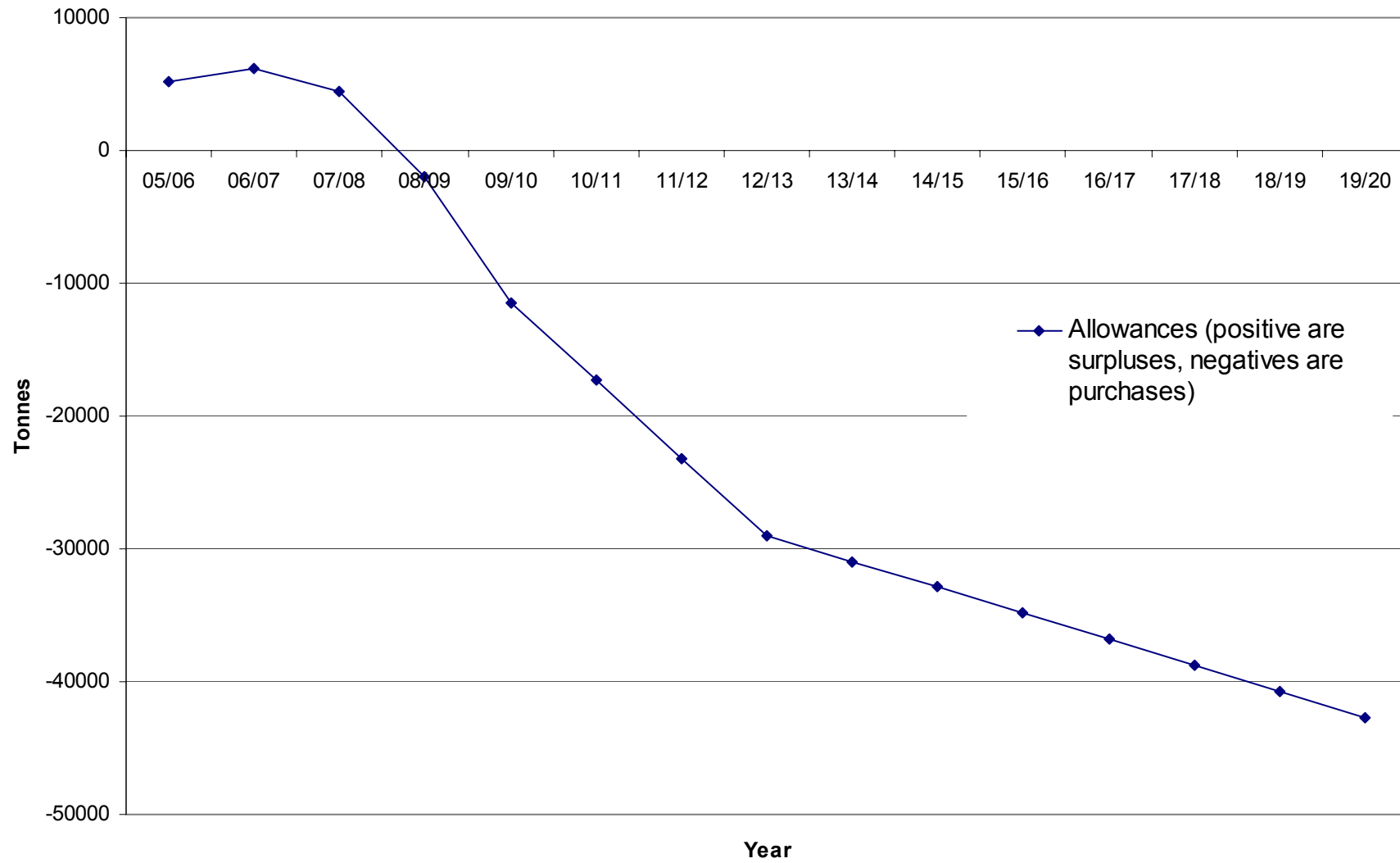
**Corporate objectives and priorities for change**

- 5.1 The proposal comes under the Council's Objectives of a healthy environment and cost effective services. This scheme will result in the Council achieving targets in a sustainable way and will significantly reduce the amount of waste that will require land filling.

## Forecast Diversion from Landfill



### Allowances to be bought / for sale



## Growth of Recycling and Composting

