Report of : The Director of Environment and Neighbourhoods

Report to : Executive Board

Date: 11\textsuperscript{th} April 2012

Subject: Refuse Collection Vehicle Replacements

Capital Scheme Number: 16506 / ENV/ REF

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
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<tr>
<td>Are specific electoral Wards affected?</td>
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<td>If relevant, name(s) of Ward(s):</td>
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<td>Are there implications for equality and diversity and cohesion and integration?</td>
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<td>Is the decision eligible for Call-In?</td>
<td>Yes</td>
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<td>Does the report contain confidential or exempt information?</td>
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<td>If relevant, Access to Information Procedure Rule number:</td>
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<td>Appendix number:</td>
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Summary of main issues

1. Of the current Refuse Collection Fleet, 25 vehicles are now aged over 5 years which is considered to be the normal vehicle life expectancy for this service. It is planned to replace 13 of these vehicles in 2012/13.

2. The approved capital programme for 2012/13 includes a sum of £4.6m for vehicle replacements. This report seeks authority to spend of approximately £1.85m with the final prices being confirmed following a tender process.

3. An opportunity exists to replace up to 8 of these 13 vehicles with gas powered vehicles which will not only contribute to the Council’s Cleaner Greener strategic outcome through reduced carbon emissions and lower noise levels, but will also save approximately £3.5k per vehicle saving in annual revenue costs assuming current fuel prices compared to a straight replacement of diesel powered vehicles.
Recommendations

4. That Executive Board approves the purchase of 13 new Refuse Collection vehicles and gives Authority to Spend of £1.85m.

1 Purpose of this report

1.1 The purpose of this report is to:

a) Seek approval to the proposal to purchase 13 Refuse Collection Vehicles as part of a natural replenishment of the fleet and give Authority to Spend of £1.85m.

2 Background information

2.1 The Refuse Collection Service uses around 70 collection vehicles (including spare pool cover) each day to provide collections of Residual, Recycled and Garden Waste across the City.

2.2 The service operates 6 days per week (Mon-Sat) meaning that the vehicles are in constant use. Within this service, vehicles have a normal life expectancy of 5 to 6 years. During 2010/11, taking account of the age of the fleet, an exercise was done to determine whether it would be cost effective to retain some vehicles for a longer period than originally anticipated. It was concluded that some vehicles could be retained for up to 7 years. Based on the latest profile of vehicle replacements and taking account of reduced borrowing costs and forecast maintenance costs, savings of over £2m will be achieved over the four year period to 2013/14.

2.3 Further to the realisation of savings resulting from this deferral of the programmed vehicle replacements, as anticipated, a number of vehicles within the refuse collection fleet are coming to the end of their useful life and it is therefore appropriate that they are replaced. Provision was made in the capital programme in February 2012 for a re-commencement of the vehicle replacement programme during the 2012/13 financial year.

2.4 The current age profile of the front line fleet is shown in the table below. As can be seen there are currently 25 vehicles in service (including the spare pool provision) which are at or beyond their expected normal vehicle life during 2012.

<table>
<thead>
<tr>
<th>Number of Vehicles</th>
<th>Age</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>6-7</td>
<td>Fleet 4410 &amp; 4111 specialist vehicles. (4411 already approved for replacement)</td>
</tr>
<tr>
<td>23</td>
<td>5-6</td>
<td>Includes the spare pool provision. This report deals with replacement of 13 of these vehicles, which will be 6 to 7 years old when replacements are in place.</td>
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</table>
3 Main issues

3.1 All vehicles purchased for services within the City Council are procured by the Fleet Services team of the Resources directorate. The cost of the vehicle will initially be met from the Council’s vehicle replacement capital scheme, which is funded from borrowing.

3.2 The cost of the vehicle is then charged to the service revenue account by means of an annual charge over the anticipated life of the asset; the current annual financing cost to the service is approximately £26k per annum, based on a 5 year vehicle life.

3.3 Fleet Services now recommend that the vehicle replacement programme is recommenced starting with 13 of the 23 vehicles which will be 6 to 7 years old when the replacements become operational.

3.4 Option 1 Replacement of the Fleet with new diesel vehicles

3.5 The Council has the option of replacing these with standard collection vehicles on a like for like basis, i.e. diesel or look to increase the number of gas powered vehicles within the service.

3.6 The estimated capital cost of a standard refuse collection vehicle is £130k, although actual prices will be confirmed upon the receipt of appropriate tenders. The equivalent annual financing costs would be in the region of £27.3k.

3.7 Replacing 13 vehicles will cost around £1.69m with an annual financing cost of £355k. The current budget for the vehicles to be replaced averages £26k. Therefore, just replacing on a like for like basis would create an immediate additional revenue budget pressure of around £17k per annum.

3.8 Option 2 Replacement of part of the Fleet with new Gas Vehicles (Bio-Methane / Gas)

3.9 Since 2009, the council has trialled one gas powered vehicle and one which is dual fuelled. The dual fuelled vehicle has proven difficult to operate on gas, whereas the pure gas vehicle has operated as intended. The City Council installed a Gas station at the Refuse Collection Depot (Cross Green) in March 2011 which was funded by a combination of Government Grant, Local Transport Plan funding and the Council’s own Energy Fund. One of the terms of the LTP funding was a commitment to operate additional gas vehicles as part of the Council’s normal vehicle replacement programme.
3.10 The Gas station has an estimated operational capacity of up to 10 refuse vehicles. There are currently two vehicles in service with the capability of using gas (1 pure gas vehicle and 1 dual powered vehicle). Therefore, of the 13 vehicles planned to be replaced, a maximum of 8 vehicles can be gas powered. The remaining 5 will have to be diesel.

3.11 A gas powered vehicle is expected to cost £150k. The difference in estimated capital costs of purchasing 8 gas powered vehicles would be around £160k compared to standard diesel collection vehicles. This would give an additional annual financing charge to the service revenue account of around £33k compared to the diesel vehicle lease costs identified in 3.7.

3.12 **Comparison of Options**

3.13 As well as the differences in capital expenditure / financing costs, the fuel costs of the diesel and gas vehicles need to be considered. Gas powered vehicles can be powered by either Bio-Methane or natural gas.

3.14 Current prices payable by the Council for diesel are £1.17 pence per litre (ex VAT). Estimates of natural gas prices are 84p/kg.

3.15 The Council currently pays 94p/kg plus delivery charges for its Bio-Methane gas. The delivery charges currently calculate at 24p/kg. However, these costs could be reduced by a combination of a higher volumes of gas delivered and a more regular delivery, if more gas vehicles were used in the service. This would reduce the costs of the bio-methane option.

3.16 A refuse collection vehicle averages 3.31 miles per gallon and uses around 16,000 litres of diesel per annum. The current gas vehicle in service use around 15,000kg of gas.

3.17 The table below compares the total revenue and capital costs of the 13 replacement vehicles based on the assumptions in 3.6, 3.12, 3.15 and 3.16.

<table>
<thead>
<tr>
<th></th>
<th>Capital Cost</th>
<th>Annual financing</th>
<th>Estimated Fuel Cost</th>
<th>Total Revenue Cost</th>
<th>Variation from base</th>
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<tbody>
<tr>
<td>Existing Revenue</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Budget * 13 standard vehicles (£000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacement Standard Vehicles *13 (£000)</td>
<td>1,690</td>
<td>355</td>
<td>263</td>
<td>618</td>
<td>17</td>
</tr>
<tr>
<td>Gas Powered (Bio-Methane) *8 + 5 Standard Vehicle. (£000)</td>
<td>1,850</td>
<td>388</td>
<td>242</td>
<td>631</td>
<td>30</td>
</tr>
<tr>
<td>Gas Powered (Natural Gas) * 8 + 5 Standard</td>
<td>1,850</td>
<td>388</td>
<td>202</td>
<td>590</td>
<td>(11)</td>
</tr>
</tbody>
</table>
3.18 The cheapest alternative when taking all costs and the capacity of the gas station into account is the purchase of 8 gas vehicles to be powered by natural gas and 5 standard diesel vehicles.

3.19 The overall financial implications of the replacement strategy are dependent upon the sensitivity of fuel prices. The Government have indicated that they intend to maintain the difference in duty relating to gas and diesel. Therefore, the key variable becomes the market price of the two fuels.

3.20 The price of diesel would have to fall by around 12ppl or the price of natural gas rise by 11p/kg for the costs to be equalised based on the mix of the recommended replacement vehicles. Any widening of the current gap in prices between diesel and gas would make the gas vehicles more cost effective, as well as being environmentally beneficial.

4 Corporate Considerations

4.1 Consultation and Engagement

4.1.1 The replacement of the fleet vehicles has been discussed with Fleet Services.

4.2 Equality and Diversity / Cohesion and Integration

4.2.1 An Equality, Diversity, Cohesion and Integration screening for the proposed capital scheme has been carried out and this concludes that an Equality Impact Assessment (EIA) is not required.

4.3 Council policies and City Priorities

4.3.1 The replacement of the fleet Vehicle will be purchased in accordance with the Council’s procurement policies.

4.3.2 The replacement of the fleet incorporating new gas powered vehicles will help contribute to the Cleaner Greener strategic outcome through reduced CO2 emissions and lower noise levels.

4.3.3 The procurement of Gas powered vehicles is also consistent with the aims of the Waste Strategy. Should the Council ultimately seek to procure an Anaerobic Digestor (AD) plant to treat future food waste collected from households in Leeds, the fuel from such a plant could be used to power Refuse vehicles.

4.4 Resources and value for money

4.4.1 Capital Funding and Cash Flow.
Parent Scheme Number : 16506/000/000
Title : Vehicle Replacement Programme 2012/13.

Revenue Effects

There are no additional revenue effects of this report as the additional financing costs will be offset by a reduction in fuel costs.

4.5 Legal Implications, Access to Information and Call In

4.5.1 There are no specific implications in this report; however it is subject to call in.

4.6 Risk Management

4.6.1 There is a risk with an ageing fleet that vehicle downtime will increase due to normal wear and tear. Such failures place additional pressures on a key front line service. The vehicles being replaced are already beyond normal life expectancy.

5 Conclusions

5.1 Thirteen Refuse Collection Vehicles require replacement as they are considered to be beyond their normal vehicle life.

5.2 The option to replace up to 8 of these vehicles with a Gas powered alternative should be taken up. This would ensure that the Gas Station at Knowsthorpe Gate is fully utilised.

5.3 Replacing 8 vehicles with a gas powered alternative will cost an estimated £160k more in capital expenditure. This is around £33k per annum in financing costs.

5.4 However, when taking into account potential savings in fuel costs the additional financing costs can be accommodated within the existing revenue budget and should
the price differential between gas and diesel widen, then the business case becomes stronger.

5.5 Gas powered vehicles offer significant environmental benefits when compared to diesel vehicles.

6 Recommendations.

6.1 Executive Board is requested to

   a) Give Authority to Spend of £1.85m from capital scheme number 16506/ENV/REF.

7 Background documents ¹

7.1 Procurement of a permanent Bio-Methane Gas Filling Station – October 2010
   LTP2 Grant Approval Highways 15/8/2010
   Infrastructure Grant Application (IGP) – Ministerial approval 28/7/2010.
   LCC Capital Programme – Executive Board February 2012

¹ The background documents listed in this section are available for inspection on request for a period of four years following the date of the relevant meeting. Accordingly this list does not include documents containing exempt or confidential information, or any published works. Requests to inspect any background documents should be submitted to the report author.