Reduced Carbon Fleet

Report of the Recycling, Environmental Services and Car Parks Portfolio Holder

Recommended:

That the budget, as detailed in section 8 of the report be approved, in order to procure Hydrotreated Vegetable Oil (HVO) for the Council's fleet.

SUMMARY:

- In support of the Council's Climate Emergency Action Plan, and the Corporate Action Plan, this report details the options available to the Council, in order to reduce the carbon and greenhouse gas emissions from its fleet.
- The report offers three options for the Council to consider.
- The report recommends 'Option Two' as the most appropriate direction for the reasons set out in section 6 and in the summary in section 12.

1 Introduction

1.1 The purpose of this report is to seek approval for the allocation of additional budget towards the fuel purchase costs for the Council's fleet, to enable the use of an alternative, renewable fuel source.

2 Background

2.1 The Council declared a climate emergency in 2019 and committed to investigating options to become a carbon neutral organisation as soon as possible.

2.2 Decarbonising and reducing the Council's greenhouse gas (GHG) emissions is a corporate priority. As identified in the Council's Climate Emergency Action Plan, investing in electric vehicles and alternative fuels will reduce the organisation's carbon footprint. Particularly as the GHG emissions associated with operating the Council's fleet, accounted for about 65% of the Council's reported GHG emissions for 2021/22.

2.3 The Council has 119 road registered vehicles on its fleet with 33 of these vehicles being classed as Heavy Goods Vehicles (HGV). The majority of the HGVs are used to provide frontline waste and recycling collection services across the borough. Rounds, routes and schedules are regularly reviewed to ensure that they are operating at optimised efficiency.

2.4 The Environmental Service has investigated the feasibility of switching to electric waste collection vehicles. Whilst the technology has been developed and is available on the market, the cost to change the fleet would be significant. This coupled with operational constraints relating to vehicle travel speed, and total payload, makes this option unviable at this time.

2.5 In the absence of suitable options to replace the fleet, there is an option to substitute the diesel fuel the Council uses, with Hydrotreated Vegetable Oil (HVO) fuel.

2.6 HVO is a biofuel derived from vegetable oils, grease waste, and residues from the agriculture and food industry. Unlike traditional liquid fuels such as petroleum, biofuels like HVO are considered to be renewable energy sources. This is because the materials used for creating HVO can be quickly, and easily, replenished. HVO is a low carbon, low emission, fossil-free, sustainable fuel.

2.7 With a couple of very small exceptions, HVO fuel could be used in all Council vehicles, plant and machinery which would traditionally use diesel.

2.8 In practical terms, this would have no impact on Council operations as HVO is considered a ‘drop-in’ fuel. This means that it would blend with any existing fuel and, crucially, there would be no requirement to modify any existing equipment or vehicles or to change any existing infrastructure.

2.9 The anticipated benefits of a transition to HVO are significant. For instance, from a climate change mitigation perspective, it is estimated that reported GHG emissions from fleet vehicles would reduce by 95%, which would result in a substantial saving of approximately 1,070 tCO_2e per year. Therefore, based on the gross GHG emissions reported for 2021/22, this would represent an overall reduction of about 60%.

2.10 The report is recommending approval of the required budget in order to change the type of fuel used within its fleet in order to reduce the Council’s emissions. There will be no difference to the delivery of services.

3 Corporate Objectives and Priorities

3.1 The Corporate Action Plan 2019 to 2023, Year 4, includes a project on progressing actions within the Climate Emergency Action Plan. A key area of this work includes reducing the Council’s emissions as it works to become a carbon neutral organisation. This includes vehicle fleet emissions amongst other items.

4 Consultations/Communications

4.1 The use of HVO has been discussed at with members as part of the Climate Emergency Action Working Group, the Leader of the Council and the relevant portfolio holders have also been involved in discussions around fleet and fuel use.

5 Options

5.1 There are four available options at this time:

5.1.1 **Option One** – to maintain our current approach and continue to use traditional diesel for the Council's fleet.

5.1.2 **Option Two** – to transition to a low carbon, low emission, fossil free, sustainable fuel (HVO) which will deliver significant reductions in the Council's emissions.

5.1.3 **Option Three** – to invest in an electrified fleet.

5.1.4 **Option Four** – to phase the transition to HVO over a period of time.

6 Option Appraisal

6.1 **Option One – No Change.** This option would not see a difference in cost, nor would it see a reduction in carbon emissions. This option would not support the Council in its plans to reduce its overall emissions.

6.2 **Option Two – Transition to Hydrotreated Vegetable Oil (HVO) – Recommended**. This option would see no disruption or change to service delivery, as the Council moves to a renewable, low carbon, low emission, fossil-free fuel. All infrastructure, vehicles and plant would remain unchanged. It is important to note that the cost of HVO, when compared to a traditional fuel, is more expensive. Section 8 of this report sets out more detail on the cost, but at the time of writing, the difference between the agreed budget base for fuel in 2023/24 and transitioning to HVO would cost £168,000 pa. It is important to note that any change to HVO is not irreversible, should it at any point become preferable to revert to traditional diesel fuel then that change could be made easily and without cost or disruption.

6.3 **Option Three – Electrification of Fleet**. The Council has already procured a number of small electrically powered vans, along with electrically operated hand plant and other machinery. The current electrified fleet and plant has been procured where there was a supportive business case and it should be noted that technology, battery life and capital costs still prevent this approach from being entirely universal. As stated, it is possible to transition the waste collection fleet to being fully powered by electricity. However, in addition to issues with vehicle transit speed and payload, the capital cost differential is significant. Traditionally powered waste collection vehicles currently cost £195,000 each compared to an electric equivalent in the region of £430,000. Applying this to the whole fleet of 21 vehicles would see a capital expenditure difference of £4,935,000.

6.3.1 The final element of fleet electrification is the larger-sized vans such as the caged or flat-bed tipper vans such as those used by the street cleaning and grounds maintenance teams. There are currently no viable alternatives that would meet service requirements.

6.4 **Option Four – A phased Transition to HVO.** This can be achieved by ordering both types of fuel at the appropriate ratio depending on how quickly the phasing in was desired. However, a phased transition will lose the overall impact on carbon reduction that a full 'overnight' transition to HVO.

6.5 For the reasons set out above, Option Two is the recommended option.

7 Risk Management

7.1 An initial assessment of the risks has been carried out. The main risk is that of changes in the pricing of HVO which has proved to be far more volatile than that of diesel in recent years. The fact that the fuel is a drop-in and allows the flexibility to revert to diesel if the cost of HVO becomes prohibitive helps to mitigate this risk.

8 Resource Implications

8.1 Paragraph 6.2 has identified that the cost of HVO is more expensive than diesel. Not only that, but the cost per litre of HVO is also more volatile than that of diesel.

8.2 The base budget for diesel that was approved by Council in February was £570,000. This is based on an estimated annual consumption of 431,000 litres at an average price of £1.32 per litre.

8.3 At the time of writing this report, the current cost of a litre of HVO is £1.71. At this price, the annual cost would be £738,000. However, as recently as January the price was £2.01 per litre (annual cost £868,000). This would make the additional cost between £168,000 and £298,000.

8.4 The Medium Term Financial Strategy that was approved by Council in November 2022 included provision for £500,000 funding for the delivery of council priority projects. £235,800 was allocated to Regeneration Project staffing requirements (Council, November 2022), leaving £264,200 remaining.

8.5 As no specific projects had been identified to utilise this funding at the time the budget was approved, this balance has been included in the contingency provision in the approved budget for 2023/24.

8.6 It is recommended that £170,000 of this balance be transferred to the Environmental Services budget to enable the transfer to the use of HVO. The remaining £94,200 shall remain in the contingency provision, but will be earmarked to meet any pressure arising from increases to the HVO budget across the rest of the year. The budgetary position will be monitored as part of routine service budget management processes and reported to Cabinet throughout the year as part of the Corporate Financial Monitoring reports.

The ongoing base budget need will be assessed as part of the 2024/25 budget process.

9 Legal Implications

9.1 There are no legal implications with the recommended option

10 Equality Issues

10.1 The EQIA has been carried out and it has not identified any potential for discrimination or adverse impact and all opportunities to promote equality have been taken.

11 Other Issues

11.1 Community Safety - None

11.2 Environmental Health Issues - None

11.3 Sustainability and Addressing a Changing Climate - As indicated above, the use of HVO fuel, rather than diesel, in running the Council's fleet has the potential to significantly reduce the Council's reported GHG emissions.

11.4 Property Issues - None

11.5 Wards/Communities Affected – N/A

12 Conclusion and reasons for recommendation

12.1 The Council declared a climate emergency in 2019 and committed to investigating options to become a carbon neutral organisation as soon as possible.

12.2 The Council's Climate Emergency Action Plan identified that investing in alternative fuels would reduce the organisation's carbon footprint.

12.3 The Corporate Action Plan 2019 to 2023, Year 4, includes a project on progressing actions within the Climate Emergency Action Plan. A key area of this work includes reducing the Council's emissions as it works to become a carbon neutral organisation- this includes vehicle fleet emissions.

12.4 It is recommended that Option 2 is approved and the budget be increased in order for the Council to procure HVO, a renewable, low carbon, low emission, fossil-free fuel.

Background Papers (Local Government Act 1972 Section 100D) Climate Emergency Action Plan (2020)
Confidentiality It is considered that this report does not contain exempt information within the meaning of Schedule 12A of the Local Government Act 1972, as amended, and can be made public.

No of Annexes:	None	File Ref:	N/A
(Portfolio: Recycling, Environmental Services and Car Parks Portfolio Holder) Councillor N Adams-King			
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Report to:	Cabinet	Date:	12 April 2023