

Purchase of Low Emission Caged Vehicles

Overview and Scrutiny Panel	15 October 2024
By	Matt Elmer - Head of Cleansing
Cabinet Portfolio Member	Cllr Steve Albon - Cabinet member for Cleansing and Coastal Services
Key Decision	Yes
Decision classification	Unrestricted
Call in status	Yes
Ward:	All wards

Purpose of the Report

To propose the approval of the planned purchase of six new 7.5 tonne Cage/Tipper vehicles. These vehicles form part of the rolling vehicle replacement programme and are required to replace equivalent vehicles which have reached the end of their planned working life.

To help achieve the council's 2030 net Zero target, electric vehicles (EV) from multiple manufacturers were evaluated to assess their viability for service delivery. Alternative, cleaner fuel vehicles were also investigated.

From a relatively narrow field of potentially suitable 7.5 tonne vehicles, just two models currently on the market appear to have the required characteristics to meet our service needs. Information regarding the recent vehicle research is documented in Appendix A.

Due to a number of factors such as the range requirements for some rounds, the lack of existing charging infrastructure and capital cost, it is recommended that two of the six vehicles should be electric powered, while the remaining four be powered by more conventional Euro 6 diesel combustion engines. Rather than running these vehicles on conventional diesel there may be scope to instead use Hydrotreated Vegetable Oil (HVO) which would substantially reduce emissions,- please see Appendix B for more information on this point and a planned trial of HVO fuel by Cleansing Services.

The allocated 2024/25 capital budget for these vehicles is £480k (£80k per vehicle) subject to the recommendation in this report being approved at Cabinet on 24 October, the 2024/25 Vehicle Replacement Programme budget will be reprofiled such that the budget for these 6 vehicles is increased to £590k to reflect the estimated combined total purchase price of the

vehicles described in the recommendation below. This reprofiling of budget can be accommodated within the 2024/25 allocation in the rolling vehicle replacement programme

Recommendation(s):

1. That the Overview and Scrutiny Panel note and scrutinise the report and consider any representations to Cabinet in advance of its meeting on 24 October 2024;
2. That the Overview and Scrutiny Panel note and comment on the recommendation that Cabinet approves the key decision to purchase two electric powered tipper vehicles and four 7.5 tonne combustion engined diesel vehicles via a compliant procurement route using funding allocated for that purpose in the 2024/25 vehicle replacement programme.
3. That the Overview and Scrutiny Panel note the forthcoming Hydrotreated Vegetable Oil (HVO) fuel trial which is due to commence in November and that if the conclusion of this trial is positive that the four proposed combustion engine vehicles will be run on HVO rather than diesel.

1. Summary of Reasons

- 1.1 The vehicles in question (7.5 tonne caged tippers) are fundamental to core statutory service delivery and the efficient running of the waste service.
- 1.2 The proposed vehicles will be deployed in a number of key roles such as: bulky waste and Persistent Organic Pollutants (POPs) collections, fly-tip removal and street bin emptying.
- 1.3 The existing vehicles are at the end of their planned seven year working life. The cost of maintaining these vehicles is increasing and the risk of breakdown leading to increased service interruption is higher. This is consistent with vehicles of this type and age.
- 1.4 The replacement of these vehicles was planned and the original provision is included in the 2024/25 vehicle replacement programme with a budgeted cost of £80,000 per vehicle.
- 1.5 Subject to the approval of the recommendations at the meeting of Cabinet on 24 October 2024, the budget provision in the Vehicle Replacement Programme will be reprofiled from £480k to £590k to allow for the increased estimated cost of the electric powered vehicles (£144,456 per vehicle). An allowance for inflation and contingency for the capital purchase cost has also been included. It should be noted that the expected price of the diesel version is currently £66,456, which is lower than the

expected £80,000. More detail on the cost of the vehicles can be found in Appendix A.

2. Background

2.1 The rolling vehicle replacement programme is approved as part of the budget setting process each year. The programme ensures that provision exists to replace operational vehicles at the end of their working lives. These purchases are a scheduled part of this programme.

3. Relevant Issues

3.1 The Cleansing Service currently uses six cage/tipper vehicles to provide the following services:

- Bulky Waste Collection - paid for pre booked collections from households.
- POPs Collections - A relatively recent addition to the service, legislation dictating that items such as sofas be collected separately to avoid potential contamination. This vehicle has a closed back - a modification made in-house to comply with legislation in 2023.
- Fly Tip Collection - responding to reports of fly tips.
- Litter Bin Collections - two vehicles, with a dedicated side mounted bin lift are assigned the task of collecting on-street litter bins.
- Spare - a vehicle is dedicated as a spare to cover both planned and unplanned vehicle maintenance.

The vehicles that are currently in service are seven years old and as is common with working vehicles of that age, they are presenting an increasing issue in terms of reliability and maintenance cost.

3.2 The default starting point for vehicle selection in this instance was to identify electric vehicles to replace the existing 7.5 tonne vehicles in alignment with the council's Net Zero Strategy. Two vehicles made by different manufacturers have been identified. See Appendix A for required range and vehicle options.

3.3 Current daily mileage data was studied for each of the existing 7.5 tonne vehicles at varying times of the year to determine what range will be required for the new vehicles.

3.4 It is important to note that while the vehicles identified in Appendix A have the capacity to meet the average requirements of the current vehicles, an "exceptional" day would be problematic due to insufficient range. To accommodate this factor the two electric vehicles would be deployed on the rounds with the lowest anticipated mileage. If these vehicles were deployed on the longer rounds they would likely run out of charge before the scheduled round was complete. It is primarily for this reason

that the recommendation is not to purchase more than two electric vehicles at this time.

- 3.5 Separately from the proposed 7.5 tonne vehicle purchase and as part of council's commitment to achieving net zero, Cleansing Services has been investigating the viability of Hydrotreated Vegetable Oil (HVO) fuel for the council's Heavy Good Vehicle fleet. This fuel reduces emissions by up to 80-90% in comparison to standard diesel. A trial involving selected Cleansing Services vehicles will commence shortly to assess the feasibility of this alternative fuel. It is anticipated that all of the existing diesel engined vehicles in the fleet will be capable of being fueled by HVO. The trial is planned to start in November for a period of three months. If successful, a future proposal will be made about its usage which would also include the proposed four new combustion engined 7.5 tonne caged vehicles. More information on alternative fuel options including the forthcoming HVO fuel trial can be found at Appendix B.
- 3.6 The actual delivery date will be influenced by the programme for procurement and lead in times for the new vehicles. Subject to the approval of the recommendation by Cabinet on 24 October, a contract award is anticipated in February 2025. The combustion engined vehicles are anticipated to have a lead in period from order to delivery of approximately 7 months. The electric vehicles will be longer and possibly up to 12 months. The new vehicles will therefore likely start in service between September 2025 and February 2026.
- 3.7 Manston Road depot currently has insufficient spare electrical capacity to accommodate the fast chargers required for commercial electric vehicles. Feasibility work has started to establish the potential to upgrade the electrical supply at the depot. This work will form part of a much larger feasibility study, proposed to start next financial year to look at long term depot improvements at Manston Road. This study will look at office, workshop, welfare and capacity improvements and will also explore options to make the depot ready for a future entirely electric vehicle fleet. Another key driver for this work is current and anticipated housing growth which will require a larger vehicle fleet and more staff in order to maintain scheduled kerbside collections.
- 3.8 The electrical supply study work will involve optioneering and a cost appraisal based on several scenarios that deliver upgrades with varying capacity. In the short term and before the two new proposed electric vehicles would be delivered early in 2026, it would be necessary to upgrade the supply to be able to accommodate 2 x 22kWh fast AC chargers. This work may go ahead next year using existing revenue budgets. Alternatively, depending upon the outcome of the costed optioneering, a larger upgrade to the electrical supply infrastructure may be taken forwards to make it ready for the future when the entire HGV fleet is likely to be electrically powered. This larger scale upgrade will have a higher cost and it is important that all scenarios are assessed before an option is recommended for approval next year.

4. Alternative Options

4.1 To not approve or delay the proposed purchase of the 6 vehicles

Although this option would delay the capital expenditure, it has not been recommended as this would quickly lead to a negative impact upon service delivery and increased revenue maintenance costs. It is essential that the council has reliable and fit for purpose vehicles and it is important that this procurement takes place soon to allow for the long lead time for these vehicles. The core budget for these vehicles has already been allocated to allow for this purchase.

4.2 Purchase six electric 7.5 tonne vehicles

To commit to all of the vehicles being powered by electricity would represent a number of risks: Whilst vehicles have been identified that have sufficient range to meet our average daily mileage. Committing to purchase electric vehicles to replace all six life expired vehicles would likely result in regular service failure due to vehicles needing to be recharged before the end of the working day. There is also currently insufficient budget to select electric vehicles to replace all six vehicles required. This option would therefore likely impact on other necessary vehicle purchases. Lastly, the power supply to the depot has insufficient spare capacity to allow for six dedicated charging points suitable for these vehicles without an upgrade as highlighted in section 3 above.

4.3 Purchase six diesel 7.5 tonne vehicles

While this would be a more cost effective option in terms of capital cost and would not require any adaptation of working rounds, not taking the opportunity to start converting our waste fleet to EV in alignment with the Net Zero Strategy would effectively be a backwards step.

5. Consultation

There is no statutory or public law duty to consult in relation to this decision.

6. Corporate Implications

6.1 Finance and Resources

6.1.1 It is expected that these vehicles will have a total cost of approximately £590,000 which is within the 2024/25 allocation in the rolling vehicle replacement programme.

6.1.2 Subject to the approval of the recommendations at the meeting of Cabinet on 24 October 2024, the budget provision in the Vehicle Replacement Programme will be reprofiled from £480k to £590k to allow for the increased estimated cost of the electric

powered vehicles (an additional £78,000 per vehicle) an allowance for inflation and contingency for the capital purchase cost has also been included. It should be noted that the expected price of the diesel version is currently £66,456, which is lower than the expected £80,000. More detail on the cost of the vehicles can be found in Appendix A.

6.2 Legal and Constitutional

- 6.2.1 In accordance with the provisions set out in Article 6 of the Council's constitution the Overview and Scrutiny Panel may make reports or recommendations to Cabinet in respect of the discharge of any function. Cabinet must then consider and respond to any recommendations made.
- 6.2.2 The council has a duty to secure Best Value. This can be achieved by ensuring the necessary competition via a compliant procurement process as referenced in this report. The Council's legal team will provide advice and support in respect of procurement and also in respect of the finalising of any contract terms.

6.3 Council Policies and Priorities

- 6.3.1 This report relates to the following Corporate Priorities:

To keep our district safe and clean

As outlined above these vehicles fulfil a number of roles across the Cleansing service, all of which contribute toward the cleanliness of Thanet. Replacing them now will ensure continuity of these services.

To protect our environment

The services provided by these vehicles will contribute towards protecting the environment by removing/preventing fly tipping and emptying litter bins (both standard litter and recycling). There is also potential for reduced impact on local air quality (subject to the proposed trial on the use of HVO to power selected vehicles), which could result in the four proposed combustion engined 7.5 tonne vehicles being fuelled exclusively with HVO. This, in combination with the two proposed zero emission electric powered tipper vehicles, will reduce the net amount of greenhouse gas emissions released into the atmosphere as a result of service delivery.

6.4 Risk

- 6.4.1 The main risk associated with these vehicles would be to delay the replacement of their procurement any further, as already highlighted not having these vehicles available impacts service delivery. A delay would lead to further risk of service interruption due to the increased likelihood of vehicle breakdowns and reliability issues. As indicated in 3.6 above there is a long lead in time between ordering and the delivery of these vehicles.

6.5 Climate Change and Biodiversity

- 6.5.1 As highlighted in this report, the recommendation considers both operational needs and the council's Net Zero Strategy and Carbon Reduction Plan. It is estimated that approximately 98 tCO₂e is produced by each existing 7.5 tonne tipper over its 7 year service life, therefore, switching partially to EV will significantly reduce these emissions, with an even further reduction if we move away from diesel altogether and switch to HVO.
- 6.5.2 Since EVs do not emit nitrogen oxide (NO_x) or particulate matter (PM) during operation, using them in urban areas can significantly improve local air quality. This helps mitigate secondary climate effects like the heat island effect, caused by pollution, and reduces health-related costs.
- 6.5.3 Although EV production, particularly the manufacturing of batteries, generates more emissions upfront compared to diesel vehicles, the long-term benefits in reduced emissions during operation offset this. Over the vehicle's lifetime, EVs generally result in lower total emissions, especially as grid electricity becomes greener.
- 6.5.4 EVs can support a shift away from fossil fuels. As the global energy mix shifts toward renewables, EVs will increasingly be powered by cleaner energy sources, reducing reliance on finite fossil fuels.
- 6.5.5 Large-scale electrification could increase electricity demand, requiring grid upgrades and more renewable energy to prevent shifting emissions to power plants. However, with proper grid management, electric waste vehicles can be charged during off-peak times, balancing demand and making better use of renewable energy.
- 6.5.6 EVs are much quieter, reducing noise pollution, especially in residential and urban areas.

7. Equality, Equity and Diversity Implications

- 7.1 An equalities screening tool has been completed which concludes that a full Equalities Impact Assessment is not required on the proposed vehicle purchases. However, as required by the Equalities Act, the purchase of the new vehicles and their operation will be monitored to consider whether this position may change by screening for unexpected equality impacts.

8. Crime and Disorder Implications and Community impact

- 8.1 These purchases would have no impact upon crime and disorder, but the improved service levels would impact positively upon the community.

9. Subject History

- 9.1 The council has a fleet of more than 100 vehicles from small car derived vans to 26 tonne HGV refuse collection vehicles. A vehicle replacement programme in place to ensure that the budget exists to replace vehicles when they reach the end of their economic life. The future provision for new vehicles has been increased to allow for the increased market cost of electric equivalent vehicles which in some instances have a purchase price which is twice the value of the equivalent combustion engine vehicle.

Report Author(s) Contact: Matthew Elmer, Head of Cleansing Services

telephone: 01843 577003

email: matthew.elmer@thanet.gov.uk

Appendices

Appendix A - Purchase of Low Emission Caged Vehicles - Vehicle Research

Appendix B - Purchase of Low Emission Caged Vehicles - HVO Research

Background Papers

None

Report Sign Off

Legal Ingrid Brown (Head of Legal and Democracy & Monitoring Officer)

Finance Matthew Sanham (Head of Finance and Procurement)