

Report to: Council

Date of report: 18 October 2021

Report author: Contract Manager (Parks and Streetcare)

Title: Sustainable vehicle options for Street Cleansing and Parks

1 Summary

- 1.1 Under the contract the council has with Veolia for managing the street cleansing and parks services the council has the responsibility for procuring and paying for replacements to the vehicle fleet. The current capital budget for replacing the fleet is £441,600 based on an estimate of like for like replacement. Currently the council has no electric or hybrid vehicles in this fleet.
- 1.2 New vehicles are purchased to replace the fleet in 5 year cycles and part of the fleet is due to be replaced. Following discussions with the Mayor and Portfolio Holder officers have been investigating the possibility of replacing some of the required vehicles with electric or hybrid models.
- 1.3 The report sets out what investigations have been undertaken by officers with regard to electric/hybrid alternatives and officers are recommending that 7 of the required new vehicles be purchased as electric alternatives. In order to do this an additional capital budget of circa £296,160 is required along with associated infrastructure costs at 3 sites (Wiggenhall, Woodside and Cassiobury Depots). Officers have identified that £200,000 of this can be met from the current capital budget for Woodside Sports Village and the remainder can be found by costs savings within the overall budget. Virements between capital budgets in excess of £100,000 can only be approved by council.

2 Risks

Nature of risk	Consequence	Suggested Control Measures	Response (treat, tolerate, terminate or transfer)	Risk Rating (combination of severity and likelihood)
Purchase prices of full electric and hybrid vehicles are significantly higher than diesel or petrol versions, costs of charging infrastructure are also high, and specialist maintenance providers may be required.	Budgets exceeded.	Additional budget to be requested and approved before procurement carried out.	Treat	Severity 3 x Likelihood 3 = rating of 9

Part A

<p>The market segment for the larger commercial vehicle types required is not as well established as for 'light commercial vehicles' e.g. cars and small vans.</p>	<p>Limited choice and availability of suitable electric and hybrid vehicles.</p>	<p>Target vehicle types where there is known availability. Use a specialist sustainable vehicle procurement framework e.g. Nottingham City Council.</p>	<p>Treat</p>	<p>Severity 3 x Likelihood 3 = rating of 9</p>
<p>The council uses an agreed framework for procurement and the options available will be limited to the suppliers registered.</p>	<p>Limited electric and hybrid vehicle submissions received via procurement portal.</p>	<p>Target vehicle types where there is known availability. Use a specialist electric vehicle procurement framework e.g. Nottingham City Council.</p>	<p>Treat</p>	<p>Severity 3 x Likelihood 3 = rating of 9</p>
<p>Vehicle submissions through the procurement framework do not meet operational requirements.</p>	<p>Poor performance and ineffective service delivery.</p>	<p>Evaluate based on the following criteria:</p> <ul style="list-style-type: none"> • Pricing/Cost (45%) • Compliance with the Specification and Quality Criteria (25%) • User Experience and Performance of Vehicles (20%) • Delivery (5%) • Social Value (5%) 	<p>Treat</p>	<p>Severity 3 x Likelihood 3 = rating of 9</p>
<p>Lack of suitable sustainable vehicle options, few or no tenders received or demonstration vehicles not available.</p>	<p>Delay to vehicle replacement programme timeline, deterioration of current fleet resulting in reduced service quality and reliability.</p>	<p>A vehicle working group meets regularly to review current fleet performance and adjust vehicle replacement timelines accordingly.</p>	<p>Treat</p>	<p>Severity 3 x Likelihood 3 = rating of 9</p>

3 Recommendations

- 3.1 That £200,000 capital budget currently allocated to the Woodside Community Sports Village project be vired into the capital budget for vehicle replacements for the Veolia contract.

Further information:

Hayley Page, Contract Manager (Parks and Streetcare)

Email: hayley.page@watford.gov.uk

Report approved by: Chris Fennell, Head of Leisure & Environmental Services

4 Detailed proposal

4.1 Introduction

- 4.1.1 Watford Borough Council declared a Climate Emergency in July 2019 and set out a commitment to reduce the carbon footprint of the borough, with the ambitious goal of becoming carbon neutral by 2030. The council's Sustainability Strategy sets out how it intends to achieve this, which includes reducing emissions (such as from transport), and improving air quality.
- 4.1.2 Watford Borough Council are keen to lead by example. There is strong political support from Mayor Taylor and his Cabinet to introduce additional sustainable vehicles into our own fleet where practical and possible. This ambition is even more of a priority in light of the government's announcement to ban sales of new petrol and diesel engine cars and vans from 2030.
- 4.1.3 Electric vehicles still contribute to congestion and many councils and businesses have targets to reduce personal vehicle use. However, many journeys and deliveries will still require vehicles, and electric vehicles offer a 'clean' way to meet this need. Acquiring electric vehicles can lead to significant savings for the council to cut its carbon and nitrogen dioxide emissions from day one of operation of the new fleet units. Ultra-low emission vehicles (ULEVs) are an excellent choice for local authorities, both financially and environmentally. As well as much lower fuel costs, there are various grants and tax incentives for electric cars and vans, which enhance the business case for acquisition.
- 4.1.4 There a number of environmental benefits when driven on electric power, ULEVs emit zero tailpipe carbon dioxide emissions. Whilst the vehicles are only as green as the electricity supply, vehicles charging from the UK's National Grid emit considerably less carbon dioxide per mile than petrol or diesel models.
- 4.1.5 It is not just air pollution that is improved. An advantage of electric vehicles is that they are much quieter than petrol and diesel vehicles, so noise pollution can be greatly reduced benefiting both residential and town centre areas. In fact, electric vehicles are so quiet, that they are now required by law to have an Acoustic Vehicle Alert System (AVAS) to emit an artificial sound to signal their presence to pedestrians when reversing or travelling below 12mph (19km/h).

Part A

- 4.1.6 Many of the vehicles used by Veolia are now reaching the end of their lifecycle and are due for replacement now. This is an ideal opportunity to assess whether it may be possible to introduce any further sustainable vehicles into the fleet. The procurement of new vehicles is decided by criteria which include cost, specification requirements, and operational performance.
- 4.1.7 The contract the council has with Veolia places the purchase and ownership of the fleet with the council. The rationale being resilience in case of contractor insolvency with the council still having its own useable fleet.
- 4.1.8 The council has a capital budget of £441,600 for vehicle replacement but this is based on a like for like replacement and the council currently has no electric vehicles in the vehicles to be replaced.

4.2 Current position

- 4.2.1 Within this current set of fleet replacements the council looking to replace 18 units. Following discussions with the Mayor and Portfolio Holder officers have been investigating introducing some electric or hybrid vehicles into the fleet.
- 4.2.2 The following vehicles are required for the Veolia contract now

Number required	Department	Vehicle type
1	Street Cleansing	4t/5t box van - Graffiti
1	Street Cleansing	3.5t box van - Street furniture
4	Street Cleansing	3.5t cage tipper
6	Parks and Open Spaces	3.5t cage tipper
1	Refuse - Special Collections	7.5t cage tipper
1	Street Cleansing	7.5t cage tipper
1	Street Cleansing	12t sweeper
1	Parks and Open Spaces	4x4 pick up
1	Parks and Open Spaces	Utility vehicle
1	Street Cleansing	Compact sweeper

4.3 Overview and insight of the vehicle market

- 4.3.1 The Procurement Partnership Limited (TPPL) are leading providers of compliant framework agreements and specialist procurement services, working with Watford. They are experienced in procuring vehicles for councils across the country and are therefore very knowledgeable about the current state of the market and options available. They have approximately 800 public sector members, procure thousands of vehicles and have stronger purchasing and discount power than the borough council.

Part A

4.3.2 All TPPL vehicle framework agreements are scoped to include electric, LPG - Liquid Petroleum Gas, hydrogen & all bio fuel mixtures, in addition to conventionally fuelled petrol, diesel and hybrid vehicles. However, TPPL have advised that electric and hybrid options for the types of vehicles we are currently looking to procure are very limited at the moment as this is a new segment of the market which only started to emerge recently. As a result, there tends to be less choice, lower availability and a much greater purchase price compared to diesel and petrol versions.

4.3.3 Research has identified that the market is much better established and more competitive for light commercial vehicles such as small electric vans and electric cars – usually between 650kg and 2000kg. The council would benefit from replacing such vehicle types with electric in the future, for example the vans in Cassiobury Park, Community Protection and Facilities Management.

4.4 Purchase price comparison

4.4.1 In order to establish whether there are any electric or hybrid alternatives available for the vehicles we need to replace, TPPL, Veolia and the council's Energy team have been consulted.

4.4.2 Purchase prices of full electric vehicles tend to be significantly higher than diesel or petrol. Exact purchase prices will depend on the specifications and conversions required, and the indications may be greatly exceeded.

4.5 Whole life costs

4.5.1 It is important to consider potential whole life costs of vehicles, as well as initial purchase prices. This includes costs relating to servicing, maintenance and running of the vehicles, such as replacement batteries, or electricity vs. fuel usage.

4.5.2 TPPL have advised that whole life costings are not currently available as an industry standard, but are hoping to have a costings model available soon. Analysis so far has shown lack of overall savings for larger vehicles due to the much higher purchase prices. This may change in the future as this new segment of the market becomes more established, with economies of production. Hybrid whole life costs are more comparable as these vehicles do not require charging points, have much lower purchase prices than full electric and there are cost savings on fuel. It is much more likely that whole life cost savings would be made with small electric vans and electric cars.

4.5.3 Over a 5 year vehicle lifespan through replacing 6 x 3.5t cage tippers with electric alternatives, it is anticipated that £38,000.60 would be saved in fuel costs along with a 6,360.00 g/km reduction in carbon emissions. This is based on data from use of the current vehicles in the fleet during 2020/21 totalling £7,600.12 on fuel and 1,272.00 g/km in CO² over the year. These cost savings do not include the electricity costs incurred to charge the vehicles. Cost savings linked to the electric compact sweeper are yet to be identified and will be measured during year one of operation to create a baseline.

4.6 Charging infrastructure logistics and costs

- 4.6.1 Electric vehicle charging requirements will depend on the vehicle type, make/model, quantity and location.
- 4.6.2 The council's electric vehicle charging infrastructure supplier will undertake a site survey at the 3 operational depots (Wiggenhall, Woodside and Cassiobury) in order to establish needs and costs, based on purchasing 6 x 3.5t / 4.05t cage tippers.
- 4.6.3 It is estimated that supply and installation across the sites will cost circa £35,000.

4.7 Government incentives and grants

- 4.7.1 There are some grants available towards sustainable vehicles, such as the government's plug-in van grant, which is claimed by the supplier and reflected in the purchase price. The Workplace Charge Scheme grant may also provide support towards the costs of installing charging points for the vehicles. New funding opportunities will be explored as they become available.

4.8 Operational requirements and service delivery

- 4.8.1 Most vehicles in the fleet have an estimated lifespan of 5 years, after which they are replaced in order to ensure effective and reliable service delivery. Extending this could pose a risk to service delivery as the vehicles may become less reliable, incur greater maintenance costs and eventually sell for a lower value at auction.
- 4.8.2 In terms of maintenance, Veolia currently maintain mostly diesel/petrol vehicles, and may require specialist contractors for electric/hybrid vehicles and the charging infrastructure. This could result in additional costs for the council. Training would also be required for Veolia workshop engineers to acquire new skills.

4.9 Conclusion

- 4.9.1 Officers are recommending purchasing 7 of the 18 required vehicles as electric models. It is estimated that the additional cost of purchasing will be £296,160 over the existing capital budget agreed by council. Officers are recommending that £200,000 of this is found by transferring this sum from the Woodside Sports Village capital budget. The remainder will be found by cost savings elsewhere in the budget. The actual vehicle costs will not be known until the procurement exercise to purchase them has been completed, however officers are of the view that the requested increase should be sufficient.

Part A

4.9.2 Below is the proposed vehicles to be procured:

Quantity required	Vehicle type	Proposed Vehicle type
1	4t/5t box van - Graffiti	Procure diesel
1	3.5t box van – Street furniture	Procure diesel
10	3.5t or 4.05t cage tipper	Procure: <ul style="list-style-type: none"> • 4 x diesel (3.5t) • 2 x electric (3.5t) * • 4 x electric (4.05t)
<p>* The majority of the 3.5t cage tipper replacements require tail lifts, and a minimum payload of 800kg. The electric 3.5t cage tippers currently available on the market are not able to meet these requirements. We are aiming to accommodate a small number of these (two) through some operational adjustments. In order to meet wider service needs, we need to consider purchasing slightly larger 4.05t vehicles. Use of 4.05t vehicles will require training and licence updates for Veolia staff, and they have a higher purchase price (by circa £20,000).</p>		
2	7.5t cage tipper	The hybrid models have been withdrawn from the market and the cost of a full electric alternative is significantly over budget (circa £120,000) Procure diesel
1	12t sweeper	Procure diesel
1	4x4 pick up	Procure diesel
1	Utility vehicle	Procure diesel
1	Compact sweeper	Procure Electric We have been advised that the Green Machine is the closest model to meeting our requirements. We are looking into purchasing the smaller battery option (circa £82,000).
Total = 18 units		sustainable units = 7 units

5 Implications

5.1 Financial

5.1.1 The current capital budget for replacing the fleet is £441,600. This is sufficient to replace existing with like for like replacements.

5.1.2 The vehicle type with the largest quantity required is the 3.5t cage tipper at 10 units. It is being proposed that 4 are replaced with diesel and 6 with electric. It is also proposed that 1 x diesel compact sweeper is replaced with electric. This will have the following estimated cost implications:

Current budget

Current budget for replacing 10 x 3.5t cage tippers with like for like diesel replacements at £39,690 each	£396,900
Current budget for replacing 1 x compact sweeper with a like for like diesel replacement at £44,700 each	£44,700
Total	£441,600

Required additional budget

Cost of replacing 4 x 3.5t cages with diesel at £39,690 each	£158,760
Cost of replacing 2 x 3.5t cages with electric at estimated £62,000 each	£124,000
Cost of replacing 4 x 4.05t cages with electric at estimated £82,000 each	£328,000
Cost of replacing 1 compact sweeper with electric at estimated £82,000 each	£82,000
Cost of charging infrastructure (the council's existing supplier to be used)	£35,000
Contingency e.g. price inflation	£10,000
Total	£737,760
Minus existing budget	- £441,600
Additional budget required	£296,160

- 5.1.4 It is recommended that £200,000 of the capital budget currently allocated to the Woodside Community Sports Village project be vired into the vehicle replacement budget. The remainder of the additional budget required would be met by cost savings made through projected vehicle replacement budgets tending to be higher than actual vehicle purchase prices. Should the cost be greater than the revised budget of £641,600 then the balance of electric vehicles to traditional vehicles would need to be revisited to come within budget.

Part A

5.2 Legal issues (Monitoring Officer)

5.2.1 The Group Head of Democracy and Governance comments that virements between capital budgets of sums over £100,000 can only be approved by council under the budget and policy procedure rules in the constitution.

5.3 Equalities, Human Rights and Data Protection

5.3.1 There are no implications identified in this report linked to equalities, human rights and data protection.

5.4 Staffing

5.4.1 There are no implications identified in this report linked to staffing.

5.5 Accommodation

5.5.1 Charging infrastructure will need to be installed at Wiggshall Depot, Woodside Depot and Cassiobury Depot.

5.6 Community Safety/Crime and Disorder

5.6.1 There are no implications identified in this report linked to community safety/crime and disorder.

5.7 Sustainability

5.7.1 Purchasing electric and hybrid vehicles will work towards the council's Corporate Plan and goal of becoming carbon neutral by 2030, fulfilling elements of the council's Sustainability Strategy which includes reducing emissions (such as from transport), and improving air quality.