

London Borough of Enfield

Portfolio Report

Report of: Julian Minta – Head of Fleet and Transport Operations

Subject: Options for changing the waste services fleet to electric

Cabinet Member: Cllr. Rick Jewell

Executive Director: Sarah Cary

Ward: All

Key Decision: 5414

Purpose of Report

- 1 To seek authorisation to replace four diesel powered Refuse Collection Vehicles (RCV's) with a trial for four electric powered refuse collection vehicles.

Proposal(s)

- 2 To return four diesel powered refuse collection vehicles (RCV's) that are currently on rolling short-term hire arrangements to the Council.
- 3 To approve the procurement of the four electric vehicles from Renault Trucks UK Ltd and award the contract to Renault Trucks UK Limited in line with the proposals outlined within this report
- 4 To procure four electric RCV's from Renault Trucks UK Ltd on a five-year lease arrangement, and to enter into a contract with Renault for the four vehicles. The four vehicles would be Renault ZE vehicles.

Reason for Proposal(s)

- 5 The proposals outlined above would provide a range of benefits for the Council: They include:
 - The project would enable the Council to work towards its commitment of electrification of the vehicle fleet, described in more detail below, by taking four diesel vehicles off the road and testing new electric technology, that if successful could be rolled out across the entire RCV fleet of 60 vehicles.
 - An estimated CO₂ reduction of 496 tonnes over the life of the proposed five-year trial of four vehicles.

- An opportunity to test a new product to the waste industry through an extended trial of existing electric motor technology with reduced risks to the Council. This is because the manufacturer is offering the vehicles with a ten-year warranty and a five-year maintenance package. This offer reflects the confidence that Renault have in their vehicle, and reduces the Council's exposure to risk during the proposed trial.
- The opportunity to procure four electric RCV's at a reduced lease price due to Renault Trucks' desire to 'road-test' and develop their product in partnership with the Council.
- Enfield Council would become a development partner with Renault, giving the Council the ability to influence future design and enhancements.
- Public health benefits through the reduction of air pollution within the borough.

Relevance to the Council's Corporate Plan

- 6 Good homes in well-connected neighbourhoods
The proposals within this report will contribute towards the Council's Corporate Plan by ensuring that high quality services can be provided to the borough's residents.
- 7 Safe, healthy and confident communities
The Council has made a commitment to decarbonise its vehicle fleet by 2030, and the proposed trial of electric vehicle technology will inform future decisions about how the commitment is achieved. A decarbonised fleet will create healthier communities by reducing CO₂ emission and helping to mitigate climate change.
- 8 An economy that works for everyone
It is not believed that the proposals outlined within this report will directly affect the local economy, but in the long-term, as the Council works towards its commitment of a decarbonised fleet, there may be benefits to the local green economy.

Background

- 9 In July 2019 Enfield Council declared a climate emergency and agreed the commitment to be carbon neutral by 2030. As part of the commitment, the Council pledged to replace its existing petrol and diesel-powered fleet by 2030 with a fully electric fleet, of which 60% of the fleet would be transferred by 2025. A significant part of the fleet, both in terms of number of vehicles (60 vehicles) and emissions, is the Council's waste collection fleet.
- 10 Until recently there has been a very limited number of manufactures that have provided an electric refuse collection vehicle. Feasibility studies conducted by Fleet Services identified that the vehicles currently available on the market have not been widely tested within the waste industry and feedback from operators has not been overwhelmingly positive to warrant considering them as potential options.

- 11 Officers have met with two other local authorities that between them operate fifteen electric RCV's. Both Council's have experienced regular breakdowns caused by battery faults, associated problems with the lifting equipment and battery charging faults. One of the Authority's also highlighted that due to battery range, their vehicles cannot travel to the outer reaches of their authority, a round trip of up to 50 miles. Consequently, that authority only operate the electric vehicles on some their town centre routes. For comparison, the furthest residential properties from the Council's Morson Road depot are a round trip of approximately 20 miles.
- 12 Given the limited options available on the market, Fleet Service entered into discussions with Renault Trucks about their ZE model, a production line, fully electric vehicle that could potentially be adapted for the refuse collection market. After some collaborative working with Fleet Services, Renault have fitted a low entry cab, a specific requirement of the refuse collection market, to the Renault ZE 26t chassis to produce a fully electric, manufacturer backed product.
- 13 Fleet Services has identified that this is the only mainstream large vehicle manufacturer product currently on the market that carries a full manufacturer backed 10-year warranty on the vehicle and batteries. Renault give this assurance on the basis that the motors, running gear¹ and the electrical system used (battery & computer) have been successfully operating within London's electric bus fleet for the last 10 years and consequently is proven technology. Renault are now looking for Enfield Council to partner with them in the trial and further development of this product, with the first stage being the trial of a small number of the RCVs to test the concept and quantify the benefits.
- 14 The proposed 5-year pilot would aim to determine whether the electric RCV's are fit for purpose and inform wider thinking around the decarbonization of the entire fleet. Subject to approval, the pilot vehicles would replace four diesel vehicles that are currently on hire to the Council and that currently provide cover for breakdowns and routine maintenance.

Main Considerations for the Council

- 15 The main consideration for the Council are:
 - How the Council will meet its commitment to be carbon neutral by 2030 if Fleet Services does not start to trial and procure zero emission vehicles such as the Renault ZE;
 - Whether the technology will operate effectively within the waste industry as an RCV and enable the service to deliver their operations effectively;
 - Whether the shift from diesel to electric power will deliver the modelled CO₂ savings.

Safeguarding Implications

¹ Running gear refers to all parts that drive the vehicle including the wheels, axels, tyres, gear boxes etc.

- 16 It is not believed that there are any safeguarding implications from the proposals set out within this report.

Public Health Implications

- 17 The proposed trial of electric RCV's will deliver public health benefits for the borough via the removal of four diesel powered vehicles from the borough's roads. The electric vehicles will reduce carbon emissions and will not emit harmful particulates such as nitrogen dioxide. Whilst the impact of the four trial vehicles will be small, the trial will inform future decisions on the replacement of the council's full 60 RCV diesel fleet.

Equalities Impact of the Proposal

- 18 There are no equalities impacts from the proposals outlined within this report. This is because there will be no changes to the waste collection service delivered to residents within the borough, simply a change to the method of powering the vehicles that collect resident's waste.

Environmental and Climate Change Considerations

- 19 The proposals outlined within this report focus on mitigating climate change and reduce pollution through the decarbonisation of the Council's fleet. Plans are already in place to move to a decarbonised fleet for the Council's smaller vehicles where the technology is tried and tested, but the trial on which this report focusses would assess the feasibility of electrifying larger specialist vehicles where the technology is relatively new. As outlined above, the manufacturer estimates that the trial will prevent circa 496 tonnes of CO₂ from being emitted into the atmosphere.

Risks that may arise if the proposed decision and related work is not taken

- 20 If the decision is not taken to trial four Renault ZE electric vehicles, then the Council would miss the opportunity to test the new technology in a low risk environment. Whilst the proposed trial is small and low risk, in the future the Council will need to adopt electric technology across the fleet, and that will be high risk if thorough testing has not already taken place.
- 21 When the Council declared a climate emergency, a commitment was pledged to replace the Council's entire petrol and diesel-powered fleet with electric vehicles by 2030, with 60% due to be replaced by 2026. If the decision is taken not to trial the new technology at this early stage then the Council would find it more difficult to achieve its commitment.
- 22 The financial implications demonstrate that the replacement of four hire vehicles would reduce the Council's operating costs by £97,220 over the life of the trial (please see Part 2 report). The savings opportunity would be missed if the decision is not taken.

Risks that may arise if the proposed decision is taken and actions that will be taken to manage these risks

- 23 The main risk to this project is that the technology proves unreliable and the four electric RCV's fail to provide the service with the reliability they require to operate effectively. To mitigate this risk, the proposal is to trial the vehicles on a contract lease basis rather than an outright purchase. Outright purchasing would tie the Council to using the vehicle until the end of its life and would therefore expose the council to greater risk of breakdowns or unreliability. The recommended supplier Renault Trucks UK Ltd, uses ZE technology which has been successfully operating as part of London Bus fleet for the last ten years. Additionally, further mitigation to this risk is that Renault will provide a 10-year vehicle warranty and 5-year maintenance and breakdown assistance package. Renault have also given a commitment that should the vehicle experience problems during its lease period then Renault will replace it within 48 hours.
- 24 A further risk to the proposals outlined within this report is a significant change to the cost of electricity impacting on the business case. Whilst this is a risk that is difficult to mitigate, it should be noted that the cost of the current fleet is heavily impacted by recent fluctuating diesel prices.

Financial Implications

- 25 Please see Part 2 report for Financial Implications.

Legal Implications

- 26 The Council has a general power of competence under section 1(1) of the Localism Act 2011. This states that a local authority has the power to do anything that individuals generally may do provided it is not prohibited by legislation and subject to public law principles. There is no express prohibition, restriction or limitation contained in a statute against use of the power as recommended in this report. Section 111 of the Local Government Act 1972 further gives a local authority power to do anything (whether or not involving the expenditure, borrowing or lending of money or the acquisition or disposal of any property or rights) which is calculated to facilitate, or is conducive or incidental to, the discharge of any of its functions. The matters outlined in this report are incidental to the functions of the Council.
- 27 The contracts will be public supply contracts under the Public Contracts Regulations 2015 (PCR 2015). Prior to the award of any contract with an estimated value above the threshold of £213,477 (inclusive of VAT), the Council must comply with the PCR 2015. Additionally, the Council must comply with its Constitution, in particular, the Contract Procedure Rules (CPRs).
- 28 The contract must be in a form approved by the Director of Law and Governance and must be executed as a deed in accordance with the CPRs.

- 29 This decision is a Key Decision and the Council must comply with the Key Decision process in its Constitution.
- 30 Fleet Services must check the terms of the existing contract to ensure that terminating the hire of the four diesel vehicles under the terms of the existing agreement as proposed in this report is mutually agreed and will not result in a breach of contract by the Council.

Workforce Implications

- 31 The proposals set out within this report will have very limited workforce implications, except for any training that is required for the waste operatives to operate the vehicle. There will be no changes to size or structure of the workforce through the proposals outlined within this report.

Property Implications

- 32 There are no property implications from the proposals outlined within this report, other than the installation of charging points at the Morsen Road Depot. The units will be installed by Chargemasters Ltd (T/A bp pulse).

Procurement Implications

- 33 Call off from existing framework agreements was considered and explored by the Service, however the Electric RCV's to be procured did not fall within the scope of any existing agreements. Attention is drawn to the Public Contracts Regulations (PCR's) 32(2)(b)(ii), the use of the negotiated procedure without prior publication, as an option to procure goods where competition is absent for technical reasons as listed below:
- This is the only factory production electric refuse vehicle provided with a 10-year manufacturer's backed warranty;
 - This is the only product available on a fully maintained contract hire basis;
 - There are no alternatives unless we outright purchase which has been ruled out due to risk.
- 34 The use of the Regulation 32 has been undertaken in accordance with the PCR's and the Councils Contract Procedure Rules (CPR's).
- 35 A Business Case for the provision of procuring four electric refuse collection vehicles has been approved by Procurement Services.
- 36 The award of the contract, including evidence of authority to award, promoting to the Councils Contract Register, and the uploading of executed contracts must be undertaken on the London Tenders Portal including future management of the contract.
- 37 All awarded projects must be promoted to Contracts Finder to comply with the Government's transparency requirements. This is in line with the CPR's

and new Sustainable & Ethical Procurement policy that came into effect in February 2022.

- 38 Regular contract reviews will be held between the Council and Renault Trucks UK Ltd. Meetings will be led by the Head of Fleet Services and KPI's relating to the vehicle's performance will be monitored. The contract should have a nominated contract manager named in the LTP, and evidence of regular reviews uploaded to the LTP.

Options Considered

- 39 Several options have been considered as set out within the table below:

Option	Decision	Rationale
(A) Do nothing and continue to use current diesel fleet of hire vehicles.	Discounted	This option would not deliver any of the benefits outlined in paragraph 5. Namely, the Council would miss the opportunity to test the new technology risk free; the Council would miss an opportunity to work towards the Council's Climate Change commitments; and the opportunity to procure the vehicles with a 10-year manufacturer's warranty.
(B) Go to the wider market to obtain the four electrical RCV's.	Discounted	This has been explored and based on the feedback from the two Local Authorities using alternative electrical RCV's, the technology remains in its infancy and both Authority's cited operational challenges. From the challenges of charging the vehicles through to vehicle range and battery reliability, the two vehicles currently available on the market have significant operational challenges that does not warrant further investigation.
(C) Procure four diesel vehicles on a lease arrangement to replace the diesel hire vehicles.	Discounted	Whilst this option would deliver a saving for the Council, this option has been discounted because it would deliver a smaller saving than the Renault vehicles and would fail to deliver any of the other environmental benefits. Diesel lease vehicles are cheaper than hire vehicles, but work out more expensive than the Renault ZE vehicle when fuel and maintenance is included. In addition to offering a lower saving, this option would also fail to deliver the carbon savings or

		give the Council the opportunity to trial an electric vehicle. For these reasons this option has been discounted.
(D) Progress with the procurement of four Renault ZE vehicles on a five-year lease arrangement.	Recommended	This option is recommended because it offers financial savings over the diesel vehicle, whilst also enabling the trial of the new technology and delivering against the Council's climate commitments. This option allows the service to determine whether the vehicles are operationally viable and whether there is potential to replace more of the Council's diesel fleet in the future with the Renault ZE.

Conclusions

- 40 This report sets out the rationale to replace four of the diesel RCV fleet, currently on hire, with electric variants provided by Renault Trucks. The lease option that has been offered by Renault is estimated to deliver a relatively modest reduction in operating costs for the Council when compared to the current hire arrangements or compared to the procurement of new diesel RCV's on a lease agreement.
- 41 In addition to the reduction in operating costs, the Renault ZE vehicles will bring environmental benefits with the Renault RCV reducing the Council's carbon footprint by nearly 500 tonnes of CO₂ over the course of the proposed five-year lease agreement. The five-year lease option will allow the Council to fully test a small number of electric RCV's before making any wider decision on changes to the Council's remaining fleet. This will be of great benefit to the service and reduce the risk of purchasing any untested technology that has a life expectancy of ten years.
- 42 The Council's approach to vehicle replacements has been to outright purchase vehicles in recent years because it is generally the most cost-effective way of procuring the vehicles required. However, the risk of purchasing untried technology with a 10-year life expectancy is considered too high at this stage and therefore the lease arrangement is more beneficial at this point. The trial will inform future decision making regarding the purchase of electric RCV's.
- 43 In conclusion, the Renault ZE offers the Council a range of benefits that will not be realised via the hire or leasing of more diesel vehicles. The technology remains in its infancy, but the recommendation is to progress with the trial of four electric Renault vehicles given the learning they will provide and the financial and environmental benefits that they will deliver.

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