

Report of Director of Resources and Housing

Report to Executive Board

Date: 18th April 2018

Subject: Corporate Fleet Replacement Programme

Are specific electoral Wards affected? If relevant, name(s) of Ward(s):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are there implications for equality and diversity and cohesion and integration?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the decision eligible for Call-In?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the report contain confidential or exempt information? If relevant, Access to Information Procedure Rule number: Appendix number:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Summary of main issues

The Council has an ambition for all of its fleet to comprise of ultra-low emission vehicles (ULEVs) by 2025. It already has 44 electric vans with a further 51 on order, this will make it the local authority with the largest electric fleet in the United Kingdom. By 2020 this figure will have increased to almost 300 electric vehicles.

To support the transition to ULEVs, significant progress has already been made on infrastructure for the Council's fleet with 90 electric vehicle charge points installed across the Council and a small capacity of storage for compressed natural gas (CNG). There is also a project underway to construct an alternative fuel station for the city.

This ambition has been recognised as the Council has already won awards for its fleet at the Fleet Heroes Awards, Ultra Low Emission Fleet 2017 and the Green Fleet Awards, Green Fleet Champions 2017 as well as commendations at the Green Fleet awards for Fleet Manager of the Year 2017 and Public Sector Fleet of the Year (Medium to large) 2017 and 2016.

As the Council is currently consulting on a proposal to implement a charging Clean Air Zone (CAZ), it is imperative that the Council continues to reduce the emissions of its own fleet as well as ensuring compliance with the required standards under the CAZ.

The current contract used for the procurement of vehicles ended on 31st March 2018. There is a requirement, therefore to identify a new supplier framework for the vehicles highlighted in this report and for future years. The anticipated spend using this contract over the next two years is likely to be in the region of £30M.

Recommendations

Executive Board are asked:

- Approve the expenditure of £14.7m for the fleet replacement programme in 2018/19 financial year to ensure compliance with the introduction of the CAZ by January 2020.
- Give authority to enter into a procurement for a supplier of vehicles to the Council for a four year period to cover the vehicles contained in this report.
- Note that officers will return to Executive Board in the Spring of 2019 to seek approval for 2019/20 fleet replacement programme.
- Note the development and implementation of the Fleet Replacement Strategy detailed in section 3.

1 Purpose of this report

1.1 The report details:

1.1.1 The proposed fleet replacement strategy;

1.1.2 How the Council will ensure that its own fleet is compliant with the proposed CAZ by January 2020 and its own ambition to make its fleet ultra- low emission by 2025;

1.1.3 The costs associated with the fleet replacement programme for the 2018/19 financial year.

2 Background information

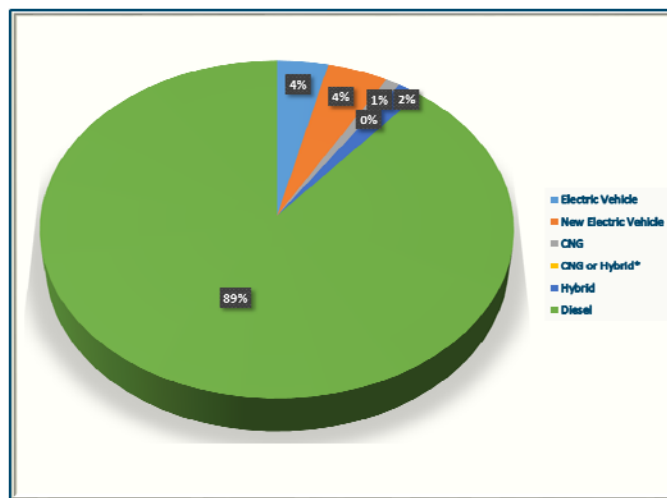
2.1 The current and previous governments have made a policy commitment for almost every car and van to be a zero emission vehicle by 2050¹ and that it will end the sale of all new conventional petrol and diesel cars and vans by 2040².

2.2 In January 2018 the Committee on Climate Change said that 60% of new cars must be electric by 2030 to meet greenhouse gas targets³ and that with the sale of low emission vehicles increase and diesel vehicles reduce that the sale of electric vehicles will outstrip that of diesel vehicles by January 2021⁴.

2.3 Leeds has been named as one of many cities in the UK that needs to take action to address its air quality. As a result in December 2017, the Council proposed the implementation of a Class B Clean Air Zone (CAZ) for all buses, coaches, HGVs and taxi and private hire vehicles. A CAZ requires all impacted vehicles entering the zone to be compliant with either Euro 6 (diesel) or Euro 4 (petrol) engine standards, with a requirement for the taxi and private hire fleet to move towards petrol hybrid or electric. The first stage of the consultation for this proposal closed on 2nd March and a further report will be brought to executive board in June 2018.

2.4 The Council has a sizeable fleet of vehicles that operate all around the city. The fleet currently consists of 1,133 vehicles across all directorates.

2.5 The current fleet is well advanced in terms of proportion of ULEVs in comparison with other public sector fleets. The fleet comprises of 7% ULEV vehicles made up a mixture of pure electric, hybrid and CNG.



¹ DfT press notice [“UK Government pledges bold ambitions for electric cars”](#) 3rd December 2015

² DfT press notice [“Plan for NO2 concentrations published”](#) 26th July 2017

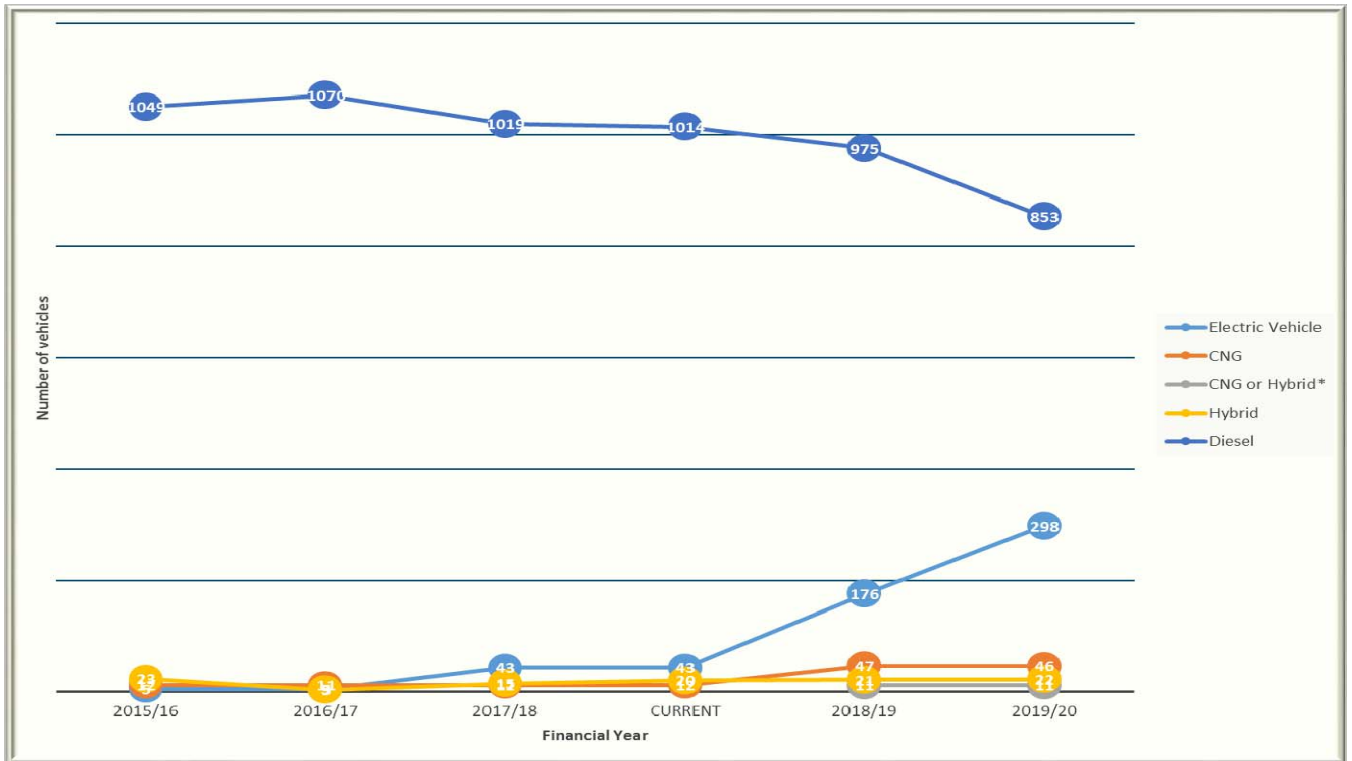
³ Committee on Climate Change [“An independent assessment of the UK’s Clean Growth Strategy: From ambition to action”](#) 17th January 2018

⁴ Energy and Climate Intelligence Unit [“Diesels – running out of gas”](#) 28th November 2017

- 2.6 Since 2014 Fleet Services have used its own vehicle supply framework which now has to be re-procured as the contract ends in March 2018. The current framework contract is very limited on suppliers for certain categories with some having only 1 supplier available limiting competition and choice. The option to utilise an external framework has been recommended as it will offer value for money through increased competition and offer substantial time savings in procuring the framework and at mini-competition stage. Expert market knowledge will also be available through some frameworks should this be needed. An option appraisal will be undertaken to compare frameworks available.
- 2.7 The fleet replacement programme is being delivered alongside a number of other complementary initiatives across the Council and the city to improve air quality;
- The Council are supporting Autonomous and Connected vehicles for Cleaner Air (Project ACCRA). This is the development of a Geo-Fencing technology which would allow some control over where and when Hybrid vehicles operate in Zero emission mode using urban traffic control systems to communicate with vehicles.
 - Planning is underway for the establishment of the Leeds own alternative fuel station. This will be available for commercial fleets across the city as well as enabling the conversion of corporate vehicles to Compressed Natural Gas (CNG) from diesel, including the refuse collection fleet.
 - Telematics are being introduced to all vehicles in the fleet. The introduction of this software will improve driver behaviour by reducing harsh events (e.g. sudden braking), idling and speeding which in turn will improve fuel economy. This in turn will result in improvements to miles per gallon and emissions.

3 Main issues

- 3.1 The fleet replacement policy will be based on the following key principles:
- Where possible, the fleet will be rationalised, ensuring that vehicle utilisation is maximised whilst balancing operational needs;
 - If a vehicle is required long term, it will be purchased rather than hired to ensure better value for money;
 - When a vehicle is due to be replaced, it will be replaced with an ultra low emission vehicle (ULEV) as the vehicle of preference;
 - When a ULEV isn't available or economically viable, the replacement vehicle will as a minimum be CAZ compliant;
 - Once vehicles are CAZ compliant, where possible the lifecycle will be extended whilst balancing the day to day maintenance costs;
 - The roll out of telematics across the fleet will enable better vehicle utilisation, reduced fuel consumption and improved vehicle safety.
- 3.2 The following graph indicates how the profile of the Council fleet is intended to change, over time, showing a decrease in reliance on diesel and an increase in primarily electric but also CNG. The move to alternative fuels may be more substantial than currently shown as new vehicles are brought to market and become more affordable over time.



3.3 There is an ambition for the fleet to be comprised fully of ULEVs, primarily full electric or CNG by 2025. There are presently barriers to the Council to achieving this, certainly within this current replacement programme;

- Maturity of the market – there are not sufficient numbers of vehicles available on the market and certain themes of vehicles are not available,
- Price – due to the recent development of ULEVs the price of replacing certain vehicle theme types is very high in comparison to vehicles currently on the market that would also be compliant in the CAZ. These differences in price are not even offset by the savings that can be realised by switching to alternative fuel types (e.g. electric and CNG), using available grants etc.
- Range – the electric vehicles that are available on the market in some vehicle types have insufficient range and payload to undertake their daily duties within a full working day and would require refuelling part way through the day which would impact upon service delivery.



Iveco Daily Electric - price comparison (six year lifetime - 5,000 miles per annum)

	Mileage	Price	Fuel	CAZ levy	Grant	Vehicle duty	Overall Cost	Cost differential	
								Lifetime	Per Annum
Iveco Daily Electric 3.5 tonne	30,000	£80,000.00	£1,230.00	£0.00	£8,000.00	£0.00	£73,230.00		
Iveco Daily Electric 5.0 tonne	30,000	£100,000.00	£1,230.00	£0.00	£20,000.00	£0.00	£81,230.00		
Iveco Daily 3.5 tonne Euro VI	30,000	£35,000.00	£1,980.00	£0.00	£0.00	£840.00	£42,020.00	£31,210.00	£5,201.67
Iveco Daily 5.0 tonne Euro VI	30,000	£35,000.00	£1,980.00	£0.00	£0.00	£840.00	£42,020.00	£39,210.00	£6,535.00

- 3.4 The above table highlights the whole life cost differential between a diesel and electric vehicle of this type. The overall cost for replacing this type of vehicle with electric as opposed to diesel Euro VI would currently add £7M to the budget requirement over the next two years. There are other vehicle types where an electric version is available, which currently would incur too significant an additional cost to be viable at this stage.
- 3.5 However, it is expected that as electric vehicles become more common place, there will be a reduction in costs of ULEV alternatives around 2025 and this will allow vehicles that we currently have to replace with EURO 6 diesel to be replaced by electric when next due for replacement.
- 3.6 There is a requirement for a strategy to be developed to ensure that the new electric vehicles have the appropriate charging infrastructure in place. An infrastructure of charging points across the Council's portfolio of assets will be delivered to ensure that there is an available charging point in appropriate locations.
- 3.7 Leeds has been successful with a number of organisations in a bid to Innovate UK for the Vehicle to Grid (V2G) Demonstrator Project. This would provide LCC with up to 10 V2G charge units that would belong to LCC and be located at LCC depot sites, allowing the flow of electricity between the vehicle and building to be two way enabling better electricity management at a site level.
- 3.8 It is recognised that not all charging will be done at depots and a pilot project been undertaken into the feasibility of home charging. Outcomes from this pilot indicate that it will deliver savings in terms of fuel, linked with the data received from telematics will further improve intelligence around driver behaviour and routing to deliver more savings.
- 3.9 Six years ago Leeds became the first council to introduce a refuse collection vehicle fuelled by CNG and there are now currently five in the fleet and plans as part of the overall replacement strategy for there to be 93 CNG vehicles by 2023/24.



- 3.10 The Council has also just taken delivery of the first CNG sweeper in the UK (picture overleaf) and this is currently under trial.



- 3.11 The fleet replacement plan is expected to realise a number of benefits which are identifiable and quantifiable at this stage as follows:
- 3.11.1 Vehicles will be compliant with the proposed CAZ, which is due to be considered by Executive Board in June. The Council has consulted on a proposal that pre-Euro 6 diesel HGVs, which enter the CAZ from 2020, would be subject to a charge of £100 a day. The majority of the Council fleet is currently compliant but, if approved, there are currently 89 vehicles within the fleet that would attract this charge, 42 of which are Refuse Collection Vehicles. Based upon the current proposal, the charge for the refuse vehicles would be in the region of £1.3 million per annum if they were not upgraded.
- 3.11.2 Reduced operational costs – both electricity and CNG are cheaper than diesel and petrol. The overall purchase price of the vehicles are typically more expensive than a traditional diesel fuelled vehicle, however these initial costs can be offset by the savings from reduced fuel, maintenance and road tax costs. Electric vehicles also currently attract funding in the form of a grant from the Office for Low Emission Vehicles (OLEV).
- 3.11.3 The project is expected to realise a number of non-cashable benefits which are not quantifiable in terms of cashable savings but instead will realise service or environmental improvements;

- 3.11.4 Improvements in air quality – the current fleet is primarily diesel fuelled which creates problems due to their tailpipe emissions. By replacing the fleet with diesel (Euro VI), petrol (Euro IV), Electric and vehicles fuelled with CNG these emissions are drastically reduced. Studies have shown that CNG vehicles produce approximately 5% less CO₂, 80% less NO₂ and up to 90% less PM than pre-Euro VI diesel fuelled vehicles, and 60% less NO₂ and 17% less PM than a diesel Euro VI vehicle. EVs do not produce NO₂ or PM and therefore will reduce emissions by 100% in comparison with a diesel fuelled vehicle.
- 3.11.5 Visibility of information to identify savings – With the introduction of separately metered EV charge points, home charging, telematics and dedicated CNG refuelling stations a better understanding of the cost and use of fuel within the Council can be used along with the data provided by the telematics project to better inform decisions with regard to fleet management across the authority.

4 Corporate Considerations

4.1 Consultation and Engagement

- 4.1.6 Fleet Services have consulted with service managers within the departments on the specifications of all the vehicles being purchased. The new vehicles will meet the specification required by the service to operate.
- 4.1.7 Fleet Services and the team delivering the Cutting Carbon and Improving Air Quality Breakthrough project have worked closely together to ensure that vehicles being purchased support the strategic work to reduce emissions from our fleets and make a contribution to improving public health through improving Air Quality.
- 4.1.8 There are a number of inter-related projects being delivered at the same time as the fleet replacement and there are dependencies across all projects. The team dealing with the fleet replacement programme are liaising closely with project teams delivering all of these projects. The complementary projects include;
- The CNG Station Construction Project
 - The Electric Vehicle Charging Infrastructure Project
 - The New Waste Depot Construction Project
 - Leeds Building Service expansion
 - Hire Fleet Reduction strategy
 - The introduction of telematics across the fleet

4.2 Equality and Diversity / Cohesion and Integration

- 4.2.1 An equality, cohesion, diversity impact assessment has been undertaken as part of the business case development phase. This showed that there were no equality, diversity or cohesion issues with this fleet replacement programme.
- 4.2.2 Due to the large number of vehicles involved along with the number of staff who will be using these vehicles there may be a requirement to apply appropriate reasonable adjustments for the use of vehicles and this will be identified and addressed by the service upon order and receipt of the vehicle on a vehicle by vehicle basis.

4.3 Council policies and the Best Council Plan

4.3.1 This report draws attention to co-ordinated working that demonstrates a contribution towards the following priorities contained in the Best Council Plan:

- Achieve the savings and efficiencies required to continue to deliver frontline services

4.3.2 The report highlights the contribution to the following Council Business Plan priorities:

- Developing Leeds as a Low Carbon city
- A carbon reduction target of 40% by 2020
- Improving the city's Air Quality through reductions in harmful pollution from diesel engines
- Spending Money Wisely – Achieving Value For Money in respect of its fleet replacement programme
- Ensuring that Leeds City Council's Fleet will be compliant with the introduction of a Clean Air Zone by 2020 in line with Government Legislation.

4.4 Resources and value for money

4.4.1 There has been a fleet replacement programme in place for many years and this is funded through the Capital Programme. In recent years there has been limited replacement of vehicles and additional work has been undertaken by Fleet Services to extend the life of the fleet.

4.4.2 This programme of works will ensure that the Council is compliant with the Clean Air Zone by January 2020 and will also include those vehicles whose life has already been extended and are due for replacement between 2018/19 and 2023/24.

4.4.3 The total cost for the replacements is £14.7M. The costs by department, year and vehicle type are shown below.

Directorate	EURO VI	CNG or Hybrid	EV	2018/19 (total)
Children and Families	£1,850,000	£0	£0	£1,850,000
Number of Vehicles	50	0	0	50
City Development	£2,101,500	£156,000		£2,257,500
Number of Vehicles	29	3	0	32
Communities and Environment	£1,679,000	£288,000	£220,000	£2,187,000
Number of Vehicles	20	6	12	38
External Partnerships	£135,000	£0	£0	£135,000
Number of Vehicles	4	0	0	4
Resources and Housing	£7,333,000	£130,000	£778,000	£8,241,000
Number of Vehicles	179	3	43	225
				£14,670,500
				349

- 4.4.4 The larger numbers being replaced as a diesel Euro VI relate to the following types of vehicles by directorate;
- Childrens and Families – primarily relate to school mini buses,
 - City Development – primarily relate to tippers, gritters and snowplough type vehicles,
 - Communities and Environment – primarily relate to tippers within Waste Services,
 - Resources and Housing – primarily relate to mini buses in Passenger Transport and large and medium sized vans within Leeds Building Services

4.5 Legal Implications, Access to Information and Call In

- 4.5.1 There are no legal issues relating to this report and all information within this report is publicly available.
- 4.5.2 The procurement process is compliant with the Council's Contract Procedure Rules and involves a call off from an established framework that is compliant with European Union legislation.
- 4.5.3 Due to the value of this procurement exercise and the subsequent exercises that will utilise the new framework of supplier this decision is subject to call in.

4.6 Risk Management

- 4.6.1 A full risk assessment has been undertaken and risk register has been developed as part of the development of the business case to deliver this procurement exercise.
- 4.6.2 The primary risks in delivering a ULEV fleet by 2025 are:
- Alternative vehicles either not available on the market or remain unaffordable - preventing the Council from achieving a completely ULEV fleet by 2025. – to mitigate this the team will continue to work closely with the marketplace to inform them of our requirements and to influence potential future developments as well as supporting trials and research to help product development.
 - The CNG Station is not constructed within sufficient time i.e. December 2019 to provide a fuelling station for the transition of refuse collection vehicles from diesel to CNG. In mitigation the upgrade of vehicles will be closely managed to ensure that a decision can be made in a timely manner about when an order for CNG vehicles can be placed.

5 Conclusions

- 5.1 There is already a fleet replacement programme which will see vehicles within the Council's fleet replaced on a periodic cycle of usually five or six years dependent upon the mileage of the vehicle over that time and the costs of a new vehicle outweighing ongoing maintenance costs. This proposal will bring some vehicles into that cycle early due to the financial implication if the proposed CAZ were to be introduced.
- 5.2 At a time of continued financial pressure this investment will lead to longer term financial savings in terms of fuel, vehicle maintenance, potential CAZ charge and will form the backbone of a fleet reduction, rationalisation and management strategy which itself will at least financially break-even but will also deliver improvements in air quality.

- 5.3 The switch to alternative fuels such as CNG and electricity will help deliver the Council's longer terms aims to improve air quality and as a result health as well as developing Leeds as a low carbon city.

6 Recommendations

Executive Board are asked to:

- Approve the expenditure of £14.7m for the fleet replacement programme in 2018/19 financial year to ensure compliance with the introduction of the CAZ by January 2020.
- Give authority to enter into a procurement for a supplier of vehicles to the Council for a four year period to cover the vehicles contained in this report.
- Note that officers will return to Executive Board in the Spring of 2019 to seek approval for 2019/20 fleet replacement programme.
- Note the development and implementation of the Fleet Replacement Strategy detailed in section 3.

7 Background documents⁵

- 7.1 None.

⁵ The background documents listed in this section are available to download from the Council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.