NORTH WEST LEICESTERSHIRE DISTRICT COUNCIL

CABINET – TUESDAY, 21 SEPTEMBER 2021

Title of Report	**ADOPTION OF FLEET MANAGEMENT STRATEGY**	
Presented by	Andrew Woodman Community Services	
Background Papers	Corporate Scrutiny considered the Fleet Management Strategy at its meeting on 1st September 2021	**Public Report:** Yes **Key Decision:** Yes
Financial Implications	Section 6 of this report outlines the financial exposure to the council which is expanded in further detail within **Annex A.** It is anticipated that the adoption of the fleet management strategy, as proposed in this report, will increase the annual revenue costs of running the fleet by £322,000. This will require savings to be made elsewhere in the revenue budget and this will be picked up during the annual budget process.	
	Signed off by the Section 151 Officer: Yes	
Legal Implications	Procurement activities will be supported by the council's in house legal team	
	Signed off by the Monitoring Officer: Yes	
Staffing and Corporate Implications	The fleet management function is contained within current staffing responsibilities within Community Services. Service specific working practices and ways of working will be developed by respective teams in line with the action plan.	
	Signed off by the Head of Paid Service: Yes	
Purpose of Report	To recommend to Cabinet the Fleet Management Strategy.	
Reason for Decision	To enable the council to procure replacement vehicles and reduce CO_2 emission across the fleet, embracing the council's Zero Carbon commitments.	
Recommendations	**THAT CABINET:** **A) CONSIDERS AND APPROVES THE FLEET MANAGEMENT STRATEGY, RECOMMENDATIONS AND ACTION PLAN WITHIN ANNEX A** **B) AGREES TO THE ALLOCATION OF RESOURCES AND A RELATED PROCUREMENT EXERCISE TO FUND THE INITIAL 3 YEAR FLEET REPLACEMENT PLAN (OUTLINED IN SECTIONS 5 AND 6 OF THIS REPORT)** **C) AGREES TO THE ALLOCATION OF RESOURCES TO**	

	SWITCH TO AN ALTERNATIVE FUEL (OUTLINED IN SECTIONS 2 AND 6 – SPLIT ACROSS THE HOUSING REVENUE ACCOUNT AND THE GENERAL FUND) **D) DELEGATES AUTHORITY TO THE HEAD OF COMMUNITY SERVICES, IN CONSULTATION WITH THE PORTFOLIO HOLDER AND HEAD OF FINANCE, TO AWARD CONTRACTS FOR THE FLEET REPLACEMENT PROGRAMME WITHIN THE APPROVED BUDGET SCHEME**.

1.0 BACKGROUND

1.1 In late 2020 it was agreed that no further vehicles would be purchased until a fleet management strategy had been created to demonstrate how the council's fleet could transition to zero carbon by 2030.

1.2 The council owns and maintains its fleet for all services within the council. The council's fleet is made up of 114 vehicles which is a mixture of refuse collection vehicles, parks maintenance vehicles, medium sized panel vans and smaller vehicles alongside more specialist equipment, such as sweepers and mowers.

1.3 The fleet replacement plan helps the council to ensure that all vehicles are replaced in a timely manner but previously has not considered vehicle emissions and environmental impact.

1.4 A fleet forum was created to bring together representatives from the main fleet user groups along with finance, procurement and zero carbon, to understand current and future challenges and concerns and to develop early fleet management strategy thinking.

1.5 Governance and legal compliance forms an element of a fleet management strategy. Officers have worked with the council's insurers to undertake a motor fleet risk assessment service.

1.6 A fleet management action plan has been developed to take a holistic approach. This report focuses on fleet and infrastructure for the first three years due to quickly changing technology.

2.0 TECHNICAL FLEET ASSESSMENT

2.1 In April 2021, Cenex, consultants specialising in low emission transport and associated energy infrastructure, were commissioned to undertake the development of a fleet management strategy, considering the fleet and infrastructure, and recommend how the council could transition to a zero carbon fleet by 2030. Cenex have undertaken similar projects in the East Midlands for Nottingham City Council, Derbyshire County Council and Severn Trent Water. The suite of Cenex reports is contained within **Annex B, C, and D** to this report.

Current Fleet

2.2 The medium van segment produces the highest proportion of air quality emissions on the fleet, amounting to 60% and 69% of NO_X and PM emissions respectively. The high NO_X and PM emissions are impacted by the large proportion of older Euro 4 diesel vehicles currently in operation.

2.3 The rigid truck 3-axles (refuse vehicles) segment contributes 54% of CO_2e emissions despite only accounting for 16% of the total fleet. This is a result of the high fuel consumption of these vehicles and associated high energy usage due to the use of bin lifts and compaction units.

Technology Options

2.4 Given the wide range of vehicles in operation, Cenex advised that it was unlikely that there would be a single technological solution to reduce the council's carbon footprint and that some technologies are not yet considered mainstream solutions. They considered all the available technology in their review and noted that the harder task for fleet decarbonisation relates to the heavier duty vehicles

2.5 Three main technologies were identified based on current UK vehicle availability and supplier/ market maturity.

2.5.1 A zero-tailpipe emission vehicle or **ZEV** is a vehicle which does not emit greenhouse gas (e.g., carbon dioxide/CO_2) or air quality pollutant emissions from the vehicle exhaust/tailpipe. These include Battery Electric Vehicle (BEV), Fuel Cell Range Extended Electric Vehicle (FC REEV) and Fuel Cell Electric Vehicle (FCEV).

2.5.2 An ultra-low emission vehicle **ULEV** is currently defined as any car or van that emits less than 75 g/km of CO_2 from the exhaust/tailpipe. Due to advances in technology, it is expected that from 2021 an ULEV will be defined as a car or van that emits less than 50 g/km with a minimum required zero emission range. These include Range Extended Electric Vehicle (REEV) and Plug-in Hybrid Electric Vehicle (PHEV).

2.5.3 Low emission vehicle **LEV** technologies include all ULEVs and ZEVs in addition to internal combustion engine vehicles capable of using renewable fuels. This includes compressed natural gas (CNG), biodiesel (FAME) and renewable diesel (HVO) each have different levels of supplier maturity and different economic models.

Vehicle recommendations

2.6 A Battery Electric Vehicle (BEV) Assessment was completed using three key measures, does it:

- lead to a carbon saving compared to diesel
- have the range to complete the average daily journeys
- lead to a total cost of ownership saving compared to a new diesel vehicle

2.7 The analysis demonstrated that BEV is suitable for small cars, small vans, and medium vans across all three measures.

2.8 Hydrotreated Vegetable Oil (HVO) fuel was identified as an alternative to fossil diesel and a method of achieving an immediate removal of CO_2e emissions pending vehicle replacement across the fleet or where alternative technology is not yet viable. It is a "drop-in" fuel so can be added directly to the existing diesel tank at Lindon Way Depot.

2.9 HVO is generally more expensive than diesel due to the market demand, however the market rate does vary. Costs are covered in section 6.

2.10 It is recognised that the market and technology is changing quickly, and it is anticipated that there will be further options available for the larger fleet over future

years. Cenex advises repeating the analysis in 2024 to identify whether there are any viable options to replace HVO with BEV or alternative technology, such as hydrogen.

3.0 INFRASTRUCTURE

3.1 Cenex assessed the infrastructure required to facilitate the uptake of BEVs, taking into consideration that Housing staff would need home charging facilities. They provided a separate report on what best practice would look like for a home charging scheme.

3.2 Cenex considered charging powers, charge point providers, types of parking, reimbursement mechanisms, grant support, tax implications, ensuring installation readiness and liability for home charge points. The actions suggested by this study are included in the Action Plan.

3.3 Waste Services is rapidly outgrowing Linden Way depot, due to the increase of properties in the district producing more waste, needing more vehicles and staff to service them. As a key enabler to the progress of the fleet strategy the long term location of the depot is critical. With the potential to run the HGV fleet on hydrogen or another technology in a few years, provision needs to be considered for alternative fuel tanks. It is proposed that a project board is established to assess the requirements and if agreed, source a location for a new depot, meeting the future requirements of the service and enabling long term infrastructure investment.

4.0 SPECIALIST FLEET

4.1 There are 20 specialist fleet vehicles on the NWLDC fleet, dominated by mowers, sweepers, tele-handlers, and tractors, these operate primarily on diesel.

4.2 Low emission options for specialist equipment and plant are at a lower level of product maturity and availability than those used in road vehicles. Therefore, a higher level analysis was taken than that used for other operational road vehicles.

4.3 Cenex assessed the technologies available and advised that electric vehicles are significantly more expensive than their diesel variant. It is recommended that HVO is used in the specialist fleet in order to reduce the emissions until an alternative technology is available.

5.0 REPLACEMENT PLAN

5.1 A three year replacement plan has been created to transition the fleet in line with the seven year lifecycle to carbon zero. Technologies will be reviewed before any procurement activity is commenced.

3 Year Replacement Plan (in line with vehicle lifecycle)

Fuel	Team	What	Notes	Year 1 (29)	Year 2 (37)	Year 3 (20)
Electric	Environmental Protection (EP) & HR	Small Car (A)	Car parks Pool cars	3 EP 2 HR		
Electric	Parks Waste	Small van (B)			1 Parks 2 Waste	1 1 Waste
Electric	Housing	Medium Van (C)	Phased approach	6 (1 per trade)	29 (2 phases)	2
Electric	Waste EP	Medium Van (C)		1 Waste		1 Waste 1 EP
Diesel/HVO	Waste	Large Van (D)	Waste collection	1		
Diesel/HVO	Waste	Large van (D)	Food waste vehicles (pending approval)	5		
Diesel/HVO	Waste	Rigid Truck (E)	Waste collection vehicles	6		4
Diesel/HVO	Waste/Parks	Rigid Truck (F)	Reach truck	1		
Electric	Parks Waste	Large van (G)			4 Parks	3 Waste 2 Parks
Diesel/HVO	Parks & EP	Large SUV	4 x 4 pick up		1 Parks	1 EP
Diesel/HVO	Waste	Specialist	Forklift truck	1		
Gas oil	Parks Waste	Specialist	Chipper, mowers, boxing off machine, sweepers	3 Parks		2 Parks 2 Waste

Note: All diesel/HVO vehicles will meet latest emissions standards and will be an improvement on the oldest fleet which is Euro 4. Current standard is Euro 6. From an air quality perspective, No_x standard is 0.08 (68% improvement v Euro 4) and PM is 0.005 (80% improvement v Euro 4)

6.0 FINANCE AND EMISSIONS

6.1 The total capital cost of the three year replacement plan is £5.2 million. This along, with the costs of adopting HVO, is expected to increase the average annual revenue costs of running our fleet by £322,000.

6.2 Of the £5.2 million programme, £661,000 relates to the additional capital costs of adopting electric vehicles and the associated charging infrastructure. These costs are expected to be offset by lower running costs over the lifetime of the vehicles, bringing the net additional costs over their lifetime down to £118,000. The carbon emission savings from these vehicles is expected to be 1,221 tCO_2e over the vehicles' lifetime, when compared to using diesel vehicles, representing a cost of £97 per tCO_2e saved.

6.3 Using renewable diesel (HVO) in the remaining fleet is estimated to cost an extra 15 pence per litre over fossil diesel, which is expected to equate to £265,000 over the next four financial years. This will save 3,531 tCO_2e over the next four financial years, representing a cost of £75 per tCO_2e saved.

6.4 These proposals go beyond the council's stated objective of making the council carbon zero by 2030, as the fleet will become carbon zero as soon as the proposal is adopted, which is likely to be later this year if members approve the proposal. This does, however, risk reducing funding available to reduce our carbon footprint in the longer term. Both proposals are currently unfunded, meaning savings will need to be made in other areas to balance the budget. This will be picked up in the budget setting process.

7.0 CORPORATE SCRUITINY

7.1 This paper was presented to Corporate Scrutiny Committee on 1st September 2021 for their comments.

7.2 Feedback and comments are captured in the meeting minutes.

7.3 Key considerations of the committee included:

- When sourcing HVO that no palm oil is part of production
- Keep a close watch on technological developments including electric and hydrogen technology
- Sustainability credentials form a key part of all procurement activities in relation to the strategy

8.0 LEGAL IMPLICATIONS

8.1 NWLDC Legal Services are part of the fleet forum and will continue to advise on governance, decision making and specific legal implications of the action plan as they arise.

9.0 RISK IMPLICATIONS

9.1 Risk Management will be a central consideration of each action. Availability of technology that can deliver the required low emission solution will be reviewed as part of all procurement activity.

10.0 ANNEXES

10.1 Annex A Fleet Management Strategy Report
10.2 Annex B Cenex Report 1 – Fleet Management Strategy
10.3 Annex C Cenex Report 2 – Specialist Fleet
10.4 Annex D Cenex Report 3 – Home Charging

Policies and other considerations, as appropriate	
Council Priorities:	- Developing a clean and green district - Our communities are safe, healthy, and connected
Policy Considerations:	Zero Carbon Policy and Roadmap as Fleet is a key area of work to reduce emissions. Human Resources Policies and Terms and Conditions in respect of staff training to use new technology as well as the need to charge from home.
Safeguarding:	N/A
Equalities/Diversity:	Housing vehicles are currently parked at home overnight, however, it is anticipated that not all properties will be suitable for home charging.
Customer Impact:	Housing Services is implementing a new electronic scheduling system designed to improve productivity. The impact of this system on their current operational practices together with the introduction of electric vehicles will need to be managed to ensure no adverse impact on their customers.
Economic and Social Impact:	N/A
Environment and Climate Change:	Reduction in CO_2e emissions by 100% in year 1

Consultation/Community Engagement:	Internal engagement with relevant stakeholders
Risks:	Risks and issues considered and highlighted in tab in the action plan
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