Staff Travel – Council Light Commercial Vehicle Fleet Review 2024

Introduction

This review assesses East Staffordshire Borough Council's (ESBC) light commercial fleet, **excluding waste collection and street cleaning vehicles**[1].

The objective is to understand the current composition, usage, and environmental impact of these vehicles, the findings of which will to feed into the larger Sustainable Staff Plan which looks at how staff going about their duties and the Councils approach to 'business miles'

Data is sourced from the council's vehicle records and charging infrastructure information.

Review Findings

Light commercial fleet composition:

- Total vehicles: 7 light commercial vehicles
- 5 electric vehicles (4 Vauxhall Vivaro-e, 1 Vauxhall Vivaro-e L2)
- 2 diesel vehicles (Vauxhall Navara)

These vehicles are used by the Civil Community Enforcement, Environment, Facilities and Open Spaces teams.

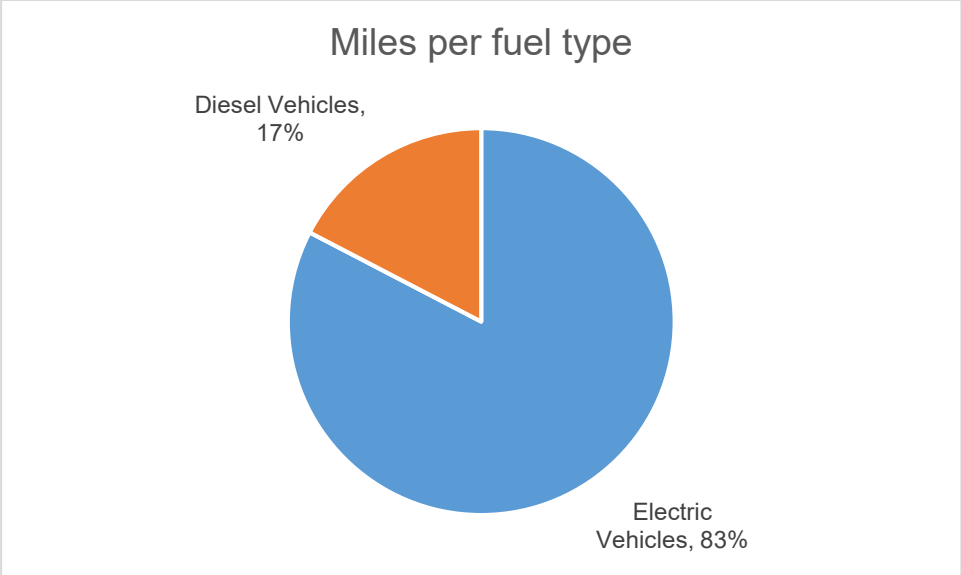
Charging Infrastructure:

- Six EV charging ports across two locations:
  - Stapenhill Cemetery: 1 x 7kW Single charger (floor-mounted)
  - Miller Lane Depot: 1 x 7kW Single charger (wall-mounted), 2 x 7kW Dual charger (wall-mounted)
- They are used solely for charging fleet vehicles.
- Due to the poor electric supply capacity at the sites these are slow chargers, taking, 8+ hours to deliver a full charge.

Vehicle Usage:

- Total annual mileage: 66,427 miles

[1] A fleet decarbonisation and infrastructure plan for the waste depot and waste collection vehicles is currently being undertaken, the findings of which will inform future versions/reviews of this plan.



- **Electric Vehicles:**
  - Total annual mileage: 54,887 miles
  - Highest annual mileage: 34,714 miles (Mobile Cleansing/Public Toilets van)
  - Lowest annual mileage: 803 miles (Cemetery van)
  - Other electric vehicles: 7,678 miles, 7,365 miles, and 4,327 miles
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- **Diesel Vehicles:**
  - Total annual mileage: 11,540 miles
  - Vehicle 1 (Mobile Cleansing/Graffiti): 5,702 miles
  - Vehicle 2 (Operations/Supervisor): 5,838 miles

It's worth noting that in April 2024, the Council switched to using Hydrotreated Vegetable Oil (HVO) fuel for all suitable diesel vehicles in its fleet. This change represents a significant step towards reducing the carbon emissions of our necessary diesel vehicles. HVO is a more sustainable alternative to conventional diesel, producing up to 90% less CO2 emissions.

However, some diesel vehicles in our fleet are not currently suitable for HVO and continue to use conventional diesel.

Emissions:

- Scope 1 (Diesel vehicles): 6.07 tonnes CO2e per annum
- Electric vehicles: Charged using electricity supplied through a green tariff, resulting in zero reported Scope 2 emissions

Financial Data:

- Maintenance costs range from £179 to £402 per month per vehicle
- Initial capital expenditure for vehicles ranges from £24,395 to £35,382

Analysis and interpretation

1. The fleet shows a **strong shift towards electrification**, with 5 out of 7 vehicles being electric.
2. Electric vehicles account for 82.6% of the total fleet mileage despite making up 71.4% of the fleet. This suggests **effective utilisation of electric vehicles for a majority of light commercial vehicle needs**.
3. The **use of a green electricity tariff for charging electric vehicles demonstrates the Council's commitment to reducing overall emissions**. While the electricity consumption isn't available in kWh, if this electricity were from the standard grid mix, it would have resulted in additional emissions. The Council's choice of a green tariff avoids these emissions.
4. Scope 1 **emissions from diesel vehicles** (6.07 tonnes CO2e) represent the actual carbon footprint of the fleet and **are the primary area for potential future reductions – aligning with the council's move to HVO.**
5. There's a wide range in vehicle usage, from 803 to 34,714 miles per annum, suggesting **potential for optimisation**.
6. **Charging infrastructure** is limited and relatively slow, potentially constraining the usability of electric vehicles.
7. Maintenance **costs for electric vehicles are generally higher** than for diesel vehicles, but this may be offset by lower fuel costs and reduced emissions.

Recommendations

- As a long-term goal continue the transition to electric vehicles to further reduce Scope 1 emissions, whilst noting that current EV options are limited for this vehicle type.
- Invest in faster-charging infrastructure to improve the efficiency of the electric fleet.
- Maintain the use of the green electricity tariff and consider expanding renewable energy usage across other council operations.
- Implement a system to track electricity consumption (in kWh) for the electric fleet to better quantify the reduction in emissions.
- Review the usage patterns of low-mileage vehicles to ensure they're being utilised effectively.
- Develop a comprehensive fleet management strategy that includes regular reviews of vehicle usage, emissions, and costs.
- Use the success of the electric vehicle fleet and green tariff usage as a case study to encourage similar practices across the council, and in the wider community.

This review highlights ESBC's progress in reducing the environmental impact of its light commercial fleet through electrification and renewable energy use, while also identifying areas for potential further improvement.