

North Wales Fire and Rescue Authority

Environmental Strategy 2023 – 2030

Fleet Decarbonisation Plan

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Mae'r ddogfen yma ar gael yn y Gymraeg
This document is also available in Welsh

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1.0 INTRODUCTION

- 1.0.1 Section 10.2.1 of the Authority's Environmental Strategy (2023-2030) requires the Authority to prepare a Fleet Decarbonisation Plan which sets out how it proposes to eliminate Scope 1 emissions arising from transportation. Accordingly, this Plan has been prepared following a period of consultation with the public and Members of the North Wales Fire and Rescue Authority.
- 1.0.2 Our fleet plays a crucial role in responding to emergencies and keeping our communities safe. However, it is also important that we consider the environmental impact of our fleet operations. We are committed to reducing the emissions and environmental footprint of our fleet, as well as to promoting sustainable transportation within our Service. As affirmed by our Environmental Strategy, we aim to lead by example and demonstrate that it is possible to balance safety and environmental responsibility in our operations.
- 1.0.3 Our fleet can be described within three distinct categories. The red fleet consists of operational and response vehicles. The white fleet is entirely Service-provided cars and vans, and the grey fleet consists of employee-owned vehicles used on official business.
- 1.0.4 The red fleet consists of a mixture of fire appliances and 'special' vehicles - such as all-terrain vehicles and foam carriers; there are also aerial ladder platforms, portable power tools, lifting and winching and other specialist equipment to enable us to respond to many different types of incidents, as well as a dedicated incident command unit.
- 1.0.5 The Scope 1 carbon emissions arising from our fleet operations in FY 2021/22 were nearly 614 tonnes of CO₂ equivalent; enough to fill 307,000 CO₂ fire extinguishers.

2.0 FLEET PROCUREMENT

2.1 Background

- 2.1.1 Procurement plays a crucial role in the transition to a greener fleet. By adopting vehicles and equipment reduce greenhouse gas emissions, minimise air pollution, and utilise cleaner energy sources, fire and rescue services can not only contribute to a healthier and more sustainable environment but also demonstrate leadership in the pursuit of a low carbon future.
- 2.1.2 In this section, we will outline the key objectives, strategies, and considerations for the fleet procurement process. We will examine the various technologies and alternative fuel options available to ensure the evolution of our fleet aligns with our decarbonisation commitments.
- 2.1.3 Ultimately, by aligning our fleet procurement practices with our wider environmental objectives, the Authority can set a standard for sustainability and contribute to the wider national and global efforts to combat climate change, ensuring the safety and well-being of our communities for generations to come.

2.2 Red Fleet

- 2.2.1 An operational fire appliance in the North Wales Fire and Rescue Service fleet has a serviceable life in excess of 15 years. For special appliances with low utilisation, this can be considerably longer. Red fleet vehicles are replaced on a rolling year-by-year basis, with end-of-life appliances typically being donated to Fire Aid.
- 2.2.2 Whilst electrically-powered fire appliances are available, the Authority believes that, at present, the significant capital cost required for each represents a poor return in terms of pounds spent per tCO₂e emissions mitigated, and the cost of replacing the existing operational fleet would be prohibitive. However, as the market and technology evolve in this area, use of electric LGVs will remain under review.
- 2.2.3 To meet the requirement to eliminate Scope 1 emissions arising from this segment of our fleet, the Authority will continue to purchase diesel-engine LGVs, and will seek to fuel them using sustainably-sourced Hydrotreated Vegetable Oil (HVO) where possible (see Section 3.1).
- 2.2.4 This practice is a time-limited measure over the period of the Environmental Strategy, to allow a technological consensus to develop over fuelling of LGVs, which will be available to the mass market with appropriate economies of scale and sufficiently resilient supporting infrastructure.

2.3 White Fleet

- 2.3.1 The Welsh Government's Carbon Budget 2 (CB2) requires public bodies within Wales to purchase only zero or ultra-low emissions cars and vans by 2025.
- 2.3.2 We will comply with this deadline and order (or commence an ordering process for the supply of a lease vehicle) only zero-emission (and where duty cycle does not allow for a zero-emission vehicle, an ultra-low emission) vehicles from the beginning of calendar year 2025. This may include the use of diesel engines where run entirely on Hydrotreated Vegetable Oil (see Section 3.0).
- 2.3.3 Any residual hydrocarbon-fuelled vehicles still in operation at this time will continue to be operated until the end of calendar year 2029, by which time they will be removed from service unless they can be safely run on an alternative fuel with zero Scope 1 carbon emissions.

3.0 FUEL DECARBONISATION

3.1 Hydrotreated Vegetable Oil (HVO)

- 3.1.1 The Authority will transition the existing diesel fleet to HVO by the end of calendar 2029, with the exception of any residual vehicles that are mechanically unable to support it (those manufactured prior to the introduction of Euro 6 technical standards or those not otherwise certified as suitable by the manufacturer).
- 3.1.2 This fuel will be provided from dispensing tanks located at selected NWFRS sites. A stock with a maximum capacity of approximately three months use will be held in order to provide supply resilience for response vehicles.
- 3.1.3 At the time of writing, there is no consensus around certification of origin of the biomass used to create HVO. However, during procurement the Authority shall make best reasonable endeavours to ensure that no palm oil has been used, and that all HVO purchased is derived entirely from waste biomass, creating no land use additionality. Any certification of origin scheme which the Authority's procurement staff reasonably believe to be credible may be relied upon for this purpose.

3.2 Unleaded Petroleum

- 3.2.1 The majority of current petrol consumption arises from the white fleet, and will therefore be significantly reduced under the procurement policy set out in Section 2.3.
- 3.2.2 It is anticipated that some residual plant or equipment may require the use of petrol beyond 2030, for example boat engines and Holmatro cutting equipment. Where possible, these will be substituted with zero-carbon alternatives within the period of the Environmental Strategy.
- 3.2.3 No commercially available substitute for unleaded petrol is available at the time of writing, however this will remain under review and any future product with a resilient supply chain and reasonable cost shall be considered as a means to mitigate carbon emissions arising from petrol consumption.

3.3 Alternative Fuels

- 3.3.1 The stated decarbonisation measures set out within this Plan shall not prejudice the consideration or use of any novel or alternative fuel sources which may become available. The principle underpinning this Plan is to deliver a reduction in carbon emissions in the most sustainable way possible, within the financial and operational limits the Service

4.0 STAFF TRAVEL

4.1 Background

4.1.1 In addition to fleet procurement, staff travel is a critical aspect of the overall decarbonization strategy for the Fire and Rescue Authority. Recognising the importance of reducing carbon emissions from employee commuting and work-related travel, this section of the Plan will focus on implementing sustainable practices and initiatives to minimize the environmental impact associated with staff travel.

4.2 Objective

4.2.1 The primary objective of addressing staff travel within this Plan is to promote and facilitate sustainable commuting and work-related transportation options for Fire and Rescue Service personnel. By reducing the reliance on conventional vehicles and encouraging alternative modes of transportation, we aim to significantly decrease greenhouse gas emissions and contribute to the national targets for carbon reduction.

4.3 Strategies and Initiatives

4.3.1 Encouraging Active and Sustainable Commuting:

- Promote and incentivise walking and cycling to work by providing facilities such as bicycle racks, changing rooms, and showers where possible.
- Organize awareness campaigns and events to educate staff about the benefits of active commuting and provide guidance on route planning.
- Consider home locations of staff when deciding place of work.

4.3.2 Supporting Public Transportation:

- Encourage the use of public transportation for commuting by providing information on bus and train routes, schedules, and subsidies.
- Explore partnerships with public transport providers to secure discounted fares or special passes for Fire and Rescue Service employees.
- Continue to promote flexible working arrangements for office-based staff, such as compressed workweeks or hybrid working, to reduce the need for daily commuting.

4.3.3 Implementing a Green Fleet for Work-Related Travel:

- Prioritise the use of low-emission vehicles for work-related travel, such as inspections, meetings, and trainings.
- Promote carpooling and ride-sharing initiatives to optimise vehicle occupancy and reduce the number of individual vehicles on the road.
- Support staff use of personal electric vehicles where possible by considering allowing use of charging facilities at cost.

4.3.4 Education and Awareness:

- Conduct training and awareness programmes to educate staff on the importance of sustainable travel practices, carbon footprint reduction, and the benefits of alternative transportation options.
- Provide resources and information to support employees in making informed decisions about sustainable commuting and work-related travel.
- Promote national Action Days or similar campaigns to raise awareness of sustainability and environmental impact amongst staff.