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NHS SCOTLAND

Driving Change: The Fleet, the Footprint and the Finances



Michael Simpson & Dr Kathryn Logan

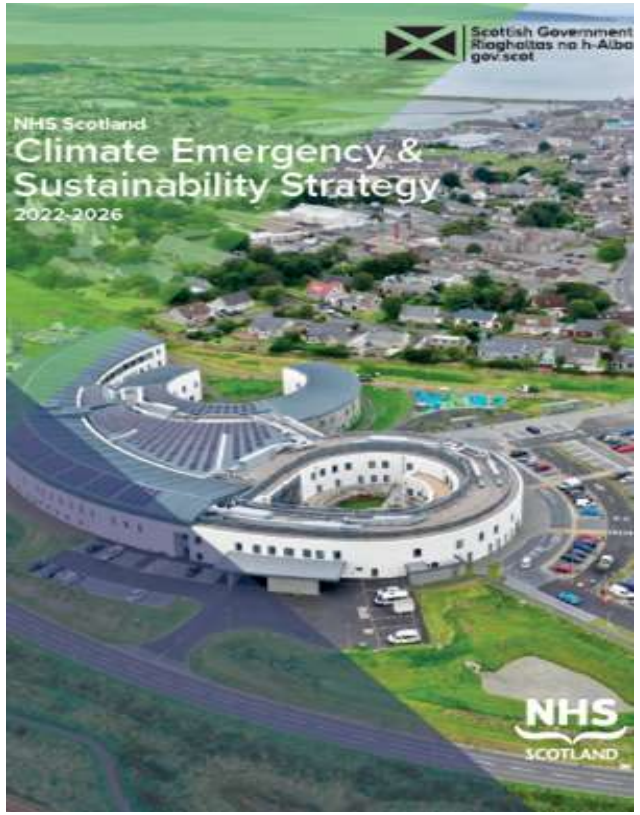
Sustainability Managers – Public Services Delivery Scotland

NHSScotland's Pathway to Fleet Decarbonisation

- **2030: Large Vehicles**
  - No new purchasing or leasing large fossil fuel vehicles (or earlier where possible).
  - **Enabling Action**: Expand electric vehicle charging across the NHS estate and collaborate across the public sector.

- **2032: Existing Fleet**
  - Each NHS boards to decarbonise their owned or leased fleet (or earlier where possible).

- **2040: Net-Zero Target**
  - Net-zero emissions from owned and leased vehicles by 2040 or earlier.



NHSScotland Climate Emergency and Sustainability Strategy 2022-2026

Heavy Goods Vehicle (HGV) Decarbonisation



- **What is an HGV?**
  - A goods vehicle weighing over 3.5 tonnes.
- **Why do HGVs matter for the NHS?**
  - Delivery of essential medical supplies
  - Transportation of medical devices and equipment
  - Laundry
  - Scottish National Blood Transfusion Service (SNBTS) logistics
- **Significant progress in fleet decarbonisation already made**
  - Only 1% of HGVs

From national ambition to evidence-led HGV transitions

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~127 HGVs

Across 9 NHS boards

Ranging from 3.5 tonnes, to 18 and 44 tonnes

Understand

- Build the evidence base
- Telematics where available, supplemented by enhanced route data.

- **Mileage, payload, routes, utilisation**

Assess and Analyse

- Model electrification feasibility
- Match operational demand with vehicle capability and charging requirements.

- **Routes, energy, charging, infrastructure.**

Prioritise and Report

- Identify where to act first
- Identify suitable vehicles, routes and sites for early transition and future investment

- **Priorities opportunities, infrastructure, cost forecasting**

Wider Considerations

- **Estates**
  - Current and expected power demand
  - Available infrastructure
  - Longer term estates strategies and planning

- **People and Operations**
  - Vehicle weight and licencing implications
  - Mandatory break periods
  - New ways of working and operational changes



NHS GG&C electric truck and fleet cars

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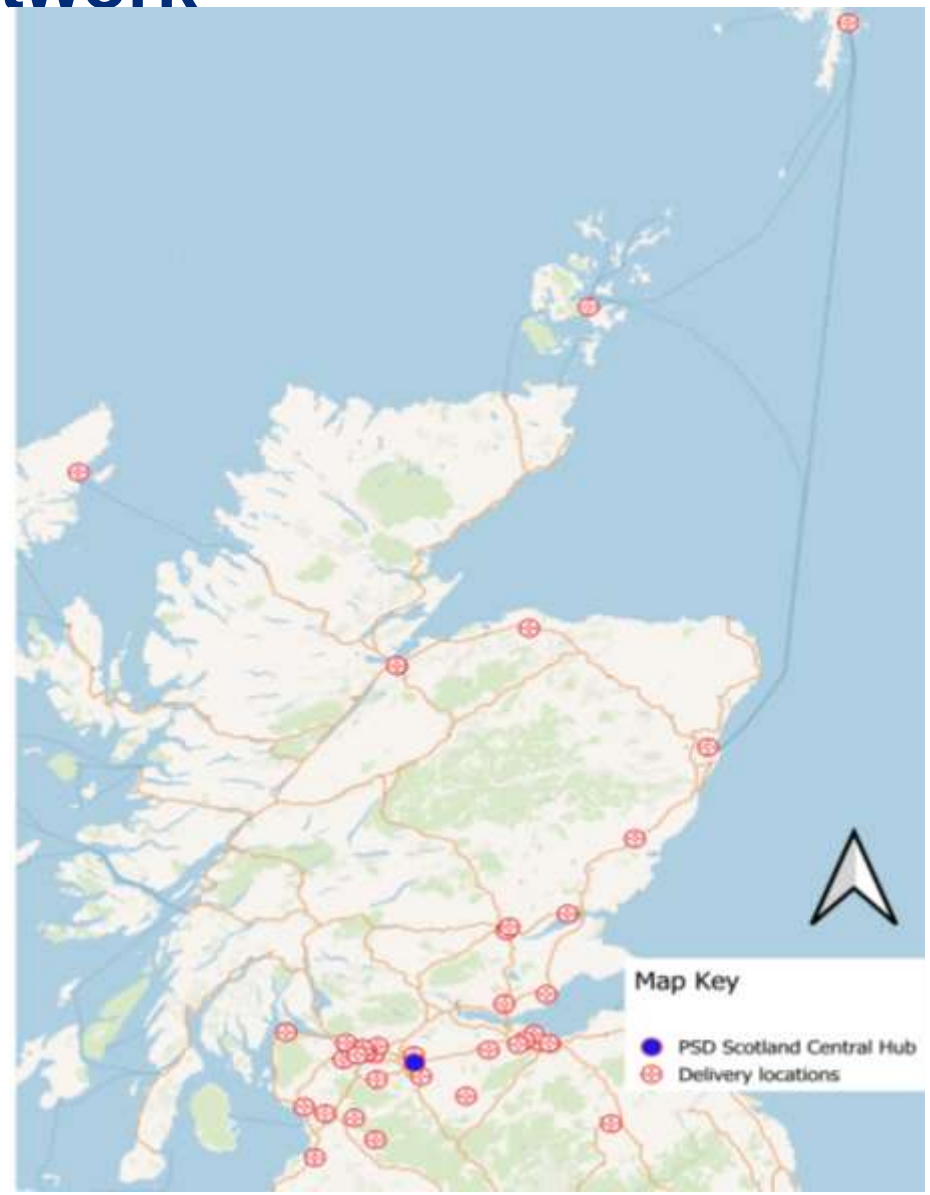
Case Study:
Public Services Delivery (PSD) Scotland

Transforming a Critical Service HGV fleet to Meet Legislative and Policy Requirements

14 Vehicles. One National Critical Supply Network

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PSD Scotland's Delivery Network

14 HGVs

Delivering essential medical supplies across Scotland

2.5m

kilometres/year

Supporting a national network of delivery locations

~2,184

tonnes of CO_2e/year

CO_2

From fleet operations (2024/25)

~⅓

of PSDS operational emissions

Making HGVs a significant decarbonisation opportunity

Can PSD Scotland electrify its HGV fleet?

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1. Financial (£)
Are eHGVs a viable option?

•- Total cost of ownership
- Capital investment required
•- Value for money

2. Environmental
What are the wider benefits of eHGVs?

- Carbon emission reduction
- Carbon valuations
- Wider economic value

3. Operational
Can eHGVs meet service requirements?

- Routes and distances
- Range and payload requirements
- Utilisation and service reliability

4. Infrastructure
•Can the infrastructure support eHGVs?

- Charging availability and type
- Grid capacity
- Depot works and costs

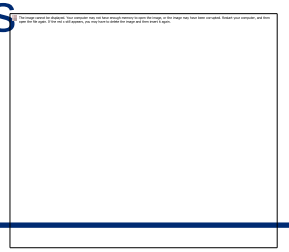
Key Component Driving Analysis

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Fleet Size and Specification

- Analysis based on replacing 14 x 44 tonne HGVs



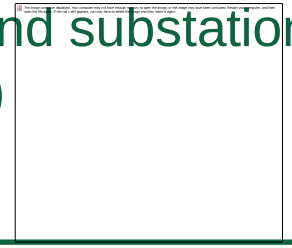
Purchase Price

- Diesel HGV - £180,000
- Electric HGV - £300,000
- Grants available for eHGVs for £120,000



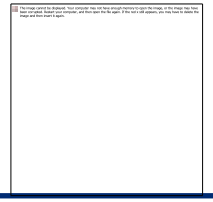
Charging Infrastructure

- ~£800,000 for fast eHGV charging point (excluding civil and substation costs)



Fleet Life Expectancy (years)

- eHGVs – 5 to 8 years
- Diesel HGVs – 4 to 5 years



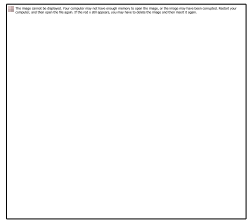
Fuel/Electricity Costs

- **Electricity** – Blended day and night tariffs
- **Diesel** – Based on current market rate (June 2026)



Vehicle Range

- ~240-390 kilometres for eHGVs on a full charge



Strategic priorities

Component assessment outcomes

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What drives additional costs?



Higher vehicle acquisition costs

Higher eHGV purchase costs compared to current



Charging infrastructure

Charging equipment



Enabling infrastructure

Depot works and grid connectivity costs



Working in silos

We are not in this alone

What helps offsets this gap?



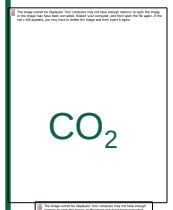
Lower energy costs

Lower modelled energy costs



Lower maintenance costs

Lower modelled maintenance costs



Avoided carbon emissions

Reduces emissions and delivers wider benefits (considered in the economic analysis)



Wider environmental and societal value

Cleaner air, health benefits



Shared charging reduces costs

TRADE-OFF

Dedicated Charging (Higher Investment)

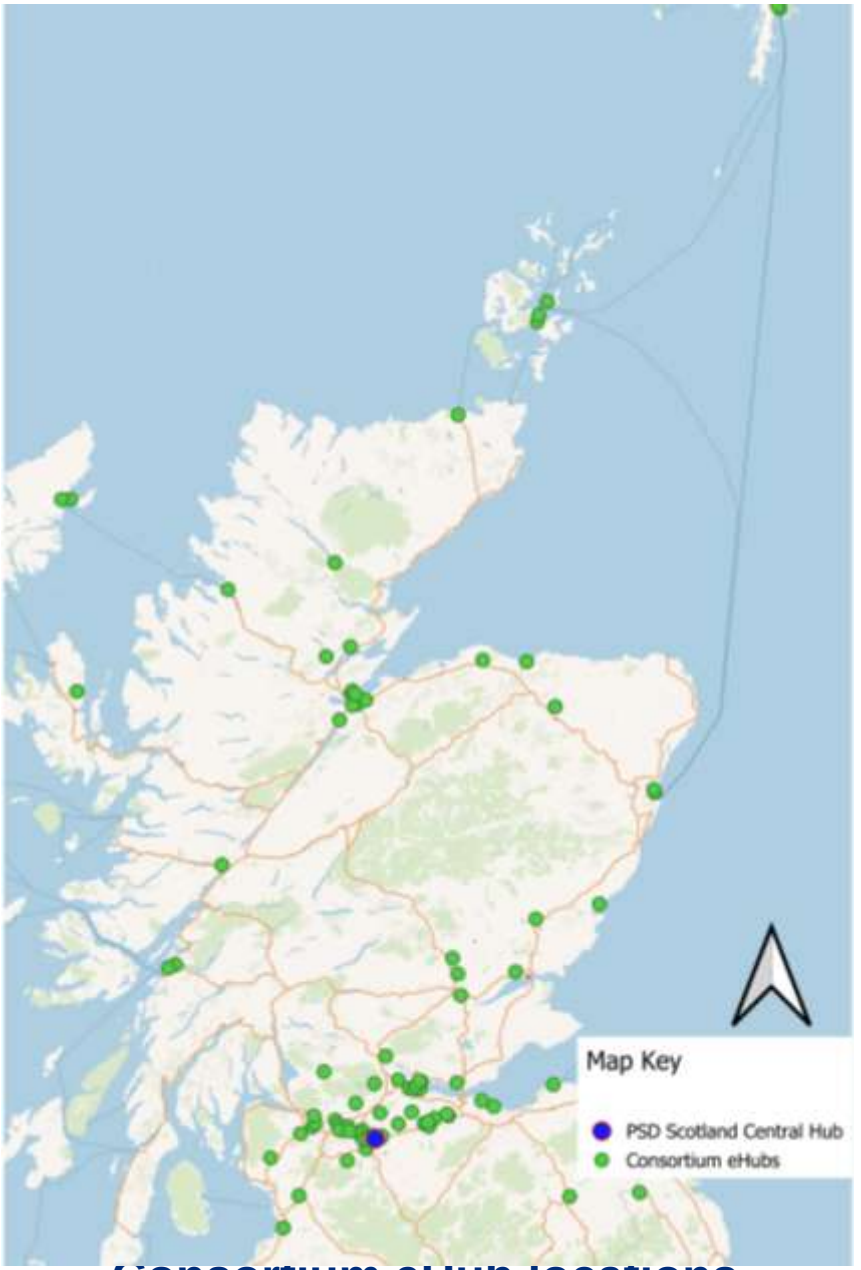
- ↑ Higher capital investment
- ↑ Greater direct control
- ↑ Greater charging certainty
- ↑ More operational reliance

Lower Infrastructure Costs

Higher Operational Risk

Shared Charging (Lower Investment)

- ↓ Lower capital Requirement
- ↓ Less direct control over infrastructure
- ↓ Access/priority cannot be guaranteed
- ↑ Greater scheduling dependency



Consortium eHub locations potentially accessible to PSD Scotland

A phased and evidence-led transition pathway to electrify PSDS' HGVs

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0 - 6 Months (Plan)

- Route and grid assessment (range, duty, cycles, payload, connectivity)
- Infrastructure design (depot and shared options)
- Procurement planning and funding strategy

12 – 24 Months (Pilot)

- Deploy a small number of eHGVs on selected and predictable routes.
- Implementation of strategic partnership networks.
- Monitor and refine operational functions.

24 Months + (Scale)

- Scale deployment across PSD network
- Integrate with wider fleet and infrastructure plans
- Continual supply chain monitoring

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This resource may be made available, in full or summary form, in alternative formats and community languages. Please contact us on **0131 275 6000** or email **altformats@nhs.scot** to discuss how we can best meet your requirements.

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