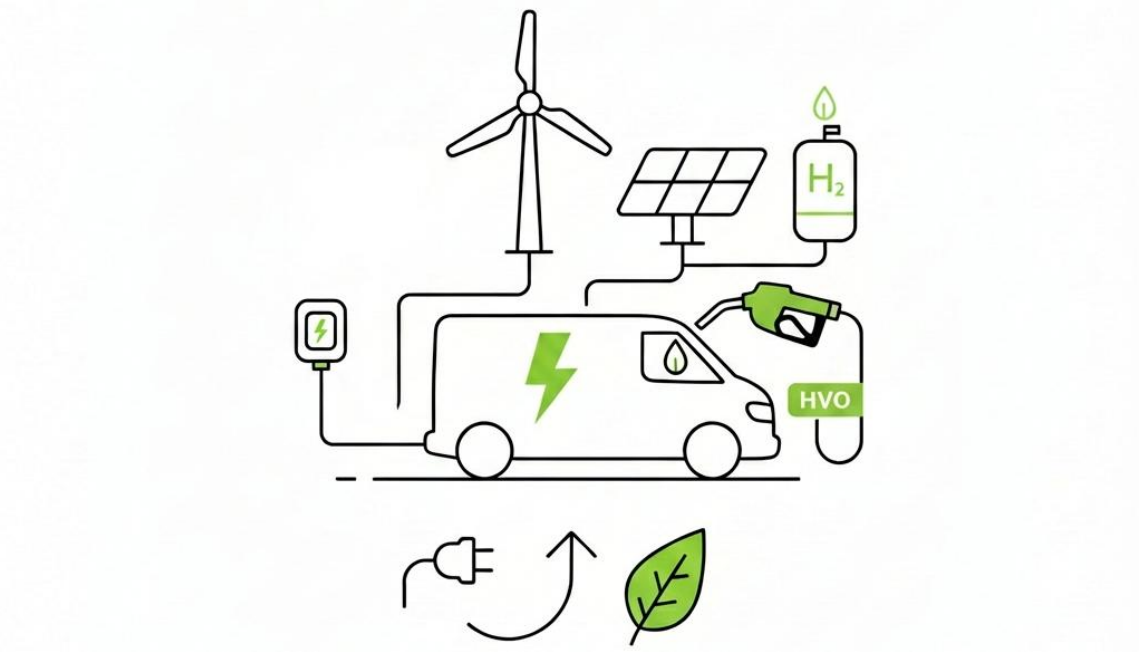
Decarbonisation and Driver Behaviour

Driving down emissions through data, behaviour change, and smarter fleet operations



Bob Ritchie
Transport Services Manager &
Angus Council Fleet Partnership Manager

Decarbonisation and Driver Behaviour

Tayside contracts

- Introduction to Tayside Contracts
- Transport Services and Fleet Composition
- Fleet Performance Packs: Key Components
- Behavioural Change through Data Transparency
- Key Metrics for Driver Behaviour
- Turning Data into Action: The ‘Turn It Off’ Idling Campaign

Tayside Contracts – Who We Are

Structure

Largest and longest serving shared service

100% owned by our 3 councils

Governance through joint committee

18 elected member, 6 from each council

People

2,559 people

3,300 posts

6 regional offices

Finance

£98m Annual turnover

94% income comes from 3 councils

Over £33m surplus returned to councils to reinvest into public services

Averaging £1m per year

Tayside Contracts – What We Do

Construction

Road Maintenance

Winter Maintenance

Street Lighting

Quarry

Signshop

Transport Services

Facilities

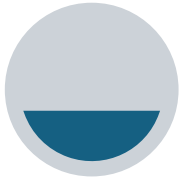
Catering

Cleaning

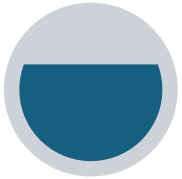
Janitorial

School Crossing Patrollers

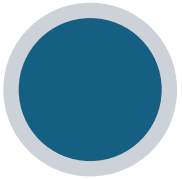
Tayside Contracts – How We Manage Climate Change



Climate Change Plan



Climate Change Action Group



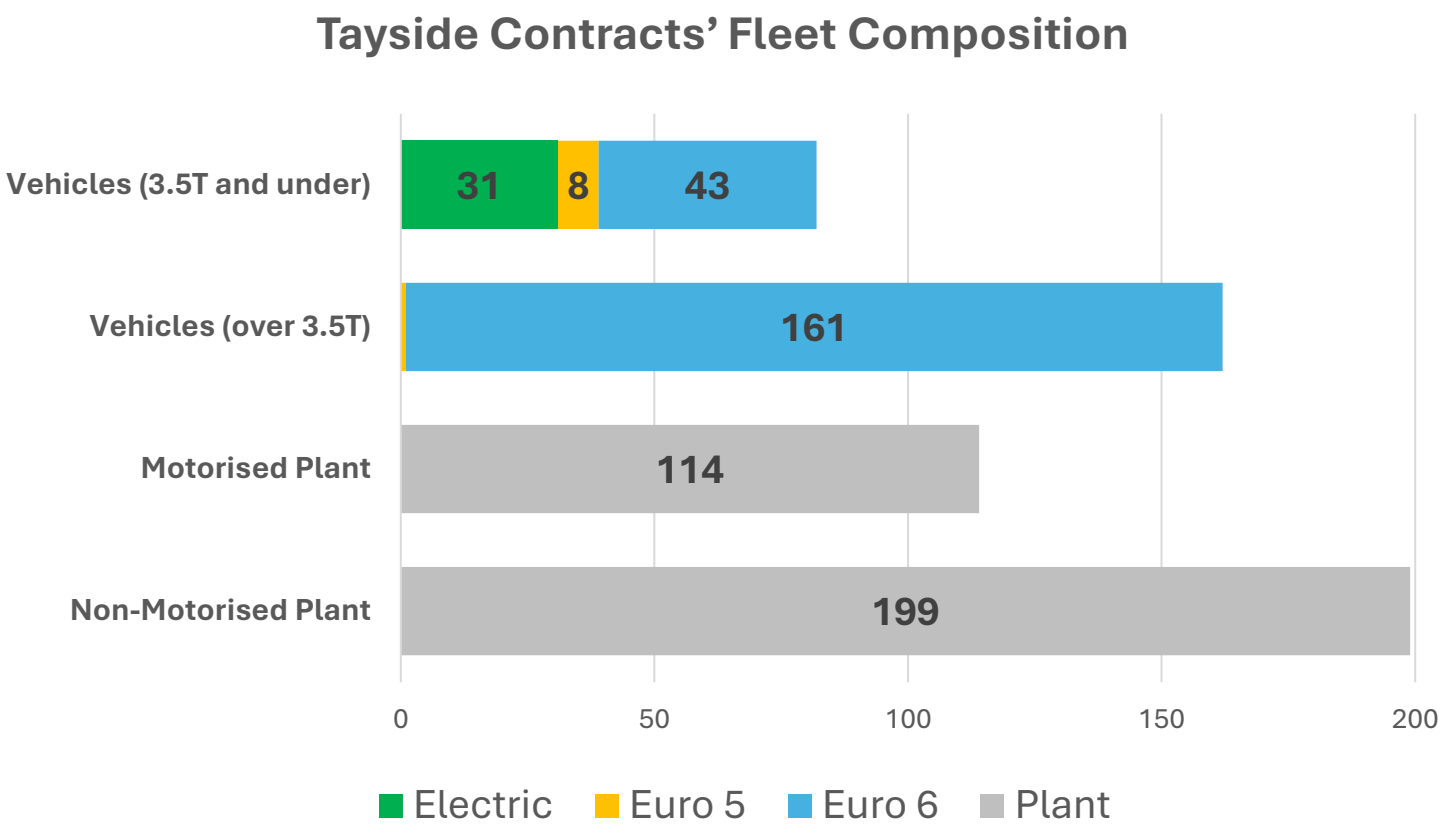
Standardised Approach

Tayside Contracts Transport Services

Tayside Contracts' Transport Services operates and manages a large and diverse range of vehicles and plant.

With four modern and well-equipped workshops strategically positioned across Tayside, we can efficiently service and maintain our fleet as well as that of Angus Council through a partnership agreement. Our services are also available to private clients, and we offer maintenance and repairs on cars, light and heavy goods vehicles, and plant.

Fleet Composition



Our fleet is becoming cleaner and more efficient each year.

Most of our vehicles now meet Euro 6 standards, helping cut down harmful emissions.

We've also been adding more electric vehicles, showing real progress towards a greener and more sustainable fleet.

The chart to the side shows how our mix of EVs and Euro 6 vehicles continues to grow compared to older engine types.

Using the Data for the Transport Decarbonisation Plan

Objective

Support Tayside Contracts' Climate Change Plan (approved 2021) through the Transport theme of Mitigation, Adaptation, Engagement, and Monitoring.

How data drives the plan

Establishes baseline KPIs (fuel consumption, idling, CO_2 output).

Quantifying emissions **drivers can control** (idling, throttle behaviour, speed)

Supports the **replacement strategy** for older Euro 4/5 HGVs with Euro 6 models.

Feeds directly into **annual reporting** for the Joint Committee.

Results so far

Fuel performance improved **5.4 %** (12.8 → 13.5 MPG).

Average CO_2 per mile reduced **10 %** (1.0 → 0.9 kg).

11,778 kg CO_2 saved — equivalent to 535 mature trees absorbing CO_2 for a year.

Fleet Performance Packs: The Foundation of Change

If you don’t measure, you don’t know if you’ve improved!

Purpose

Central to monitoring, analysing, and driving improvement across the fleet.

Integrate data from telematics, fuel use, mileage, utilisation, and emissions.

Key Points

Provide factual, consistent performance information to operational managers

Identifies high-impact individuals, teams, and sites for targeted intervention.

Underpin the Transport Decarbonisation Plan and behavioural campaigns

Impact

Improved accuracy and reliability of performance data.

Enhanced accountability through evidence-based decision-making.

Supports early interventions before inefficient behaviour becomes embedded.

Fleet Performance Packs: Key Components

Utilisation Summary

- Utilisation by month
- High impact vehicle types utilisation vs last year vs budgeted utilisation
- Constant low performers

Detailed 12 Months Rolling Utilisation

- High impact vehicle types
- Rolling 12 month's utilisation per vehicle

Compliance – Unknown Divers

- % of journeys without fobbing and identifying
- Measure by year and month
- Non-compliance miles
- Worst 20 vehicles for % unidentified journeys

Traffic Accidents Summary

- Total accidents by month and driver liable/ not liable
- Accidents by departments and operating location
- Accidents with claims to insurer
- Accidents per 100K miles (current vs prior year)
- Vehicle Accident Frequency Rate - Accidents per 100 vehicles

Maintenance PIs

- Labour hours per weighted vehicle vs latest APSE average
- Labour, parts and subcontractor costs
- Tyres spend
- Percentage Fair Wear and Tear vs Non-Fair Wear and Tear

Operator Compliance Risk Score

- Latest score
- Number of OCRS events and points

MOT pass rate

- Pass rate by workshop

Fleet Performance Packs: Key Components

Fuel Summary

- MPG compared to last year
- Total fuel, miles and spend

Detailed Low fuel performers

- MPG below threshold
- Compliance Score
- Constant low performers

Detailed High fuel performers

- MPG above threshold
- Compliance Score
- Constantly above average

Top Level Idling Data per depot and year

- Idling hours
- Idling cost

EVs measures

- MPGe
- kWh Used
- EV CO_2 (kg), EV miles

Environmental Performance

- CO_2/mile per Fiscal Year
- Euro Standards related emissions (Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Particulate Matter)
- Carbon Footprint – Rolling 12 months
- Percentage of Electric & Low Carbon Vehicles on the Fleet
- Percentage of LEZ compliant vehicles on the Fleet
- Top 5 vehicle types by CO_2 emissions

Driver Behaviour summary

- Harsh events per 100 miles
- Driver score per month and area
- Top and bottom 10 drivers for each area
- Details of events – harsh acceleration, harsh braking, harsh cornering, speeding idling, % idling of total run, total miles
- Idling hours League
- Comparison of Depot's average Driver Score vs Company's average

Behavioural Change through Data Transparency

Fleet Performance Packs Report

Idling hours and cost by depot.

MPG performance by area and vehicle type.

Comparative trend charts for mileage and idling per quarter.

Engagement Outcomes

Supervisors recognise top-performing drivers.

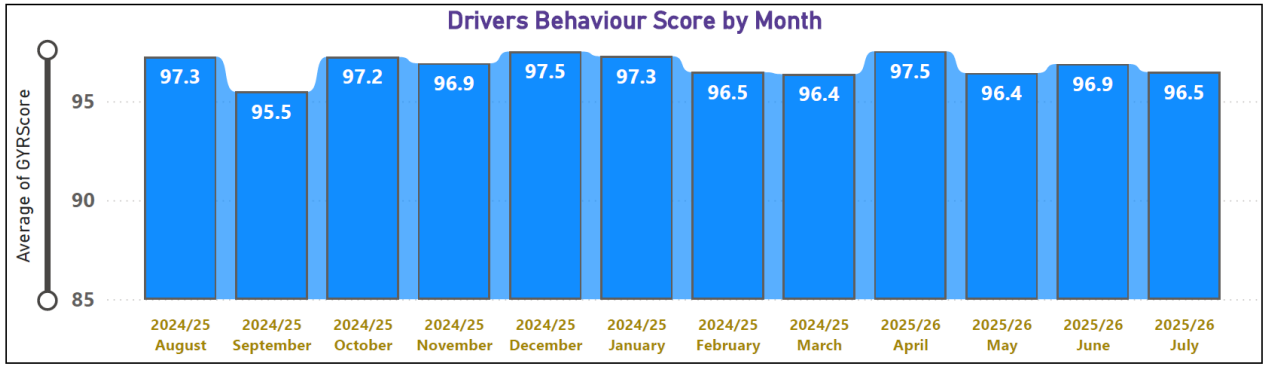
Poor practices addressed through feedback and training.

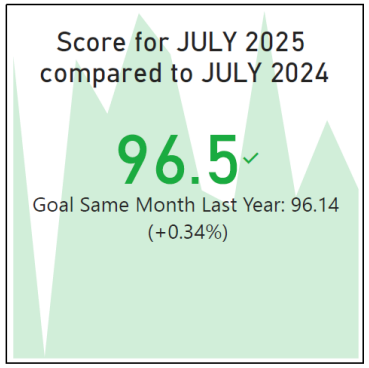
Fosters a culture of ownership and environmental responsibility.

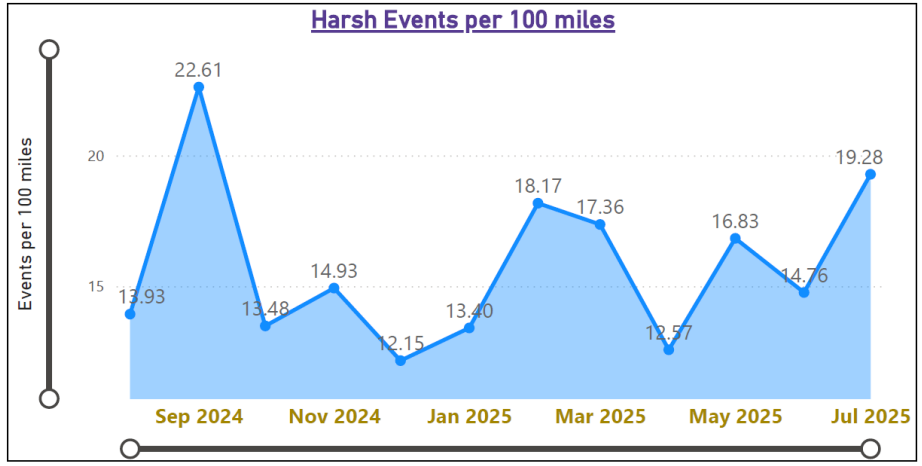
Key Metrics for Driver Behaviour

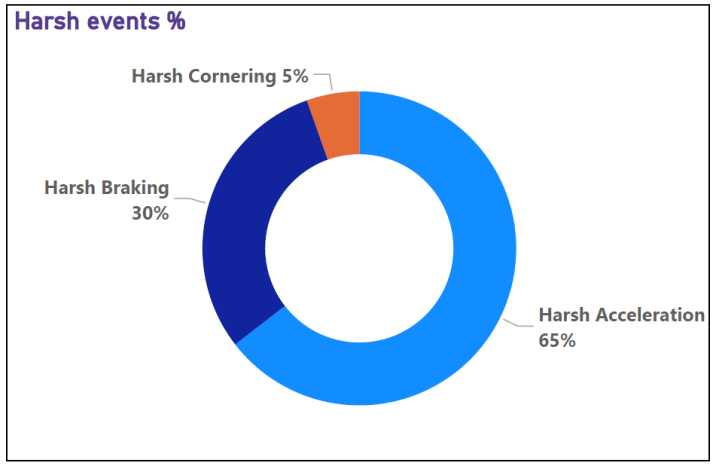
- Harsh acceleration events
- Harsh braking events
- Harsh cornering
- Over-revving
- Count of Idling events and idling time
- Excessive speed
- MPG variance between depots
- EV energy efficiency (kWh/mile)

DRIVERS BEHAVIOUR - YEARLY SUMMARY

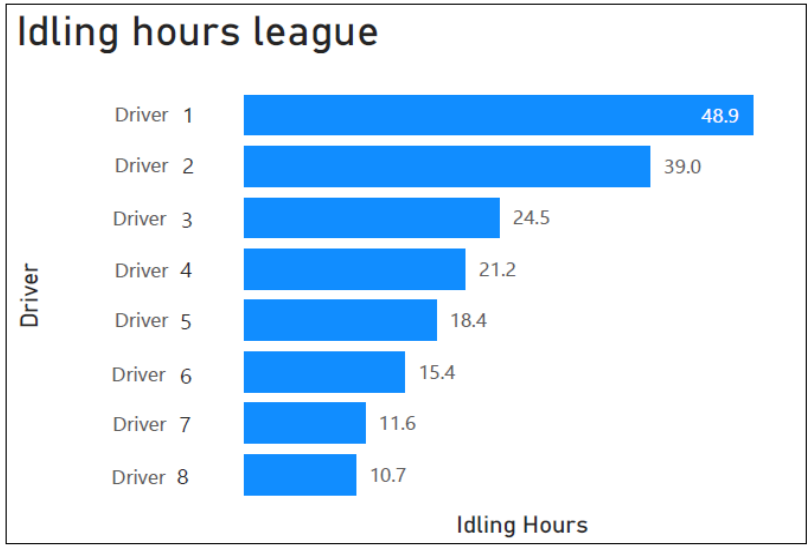


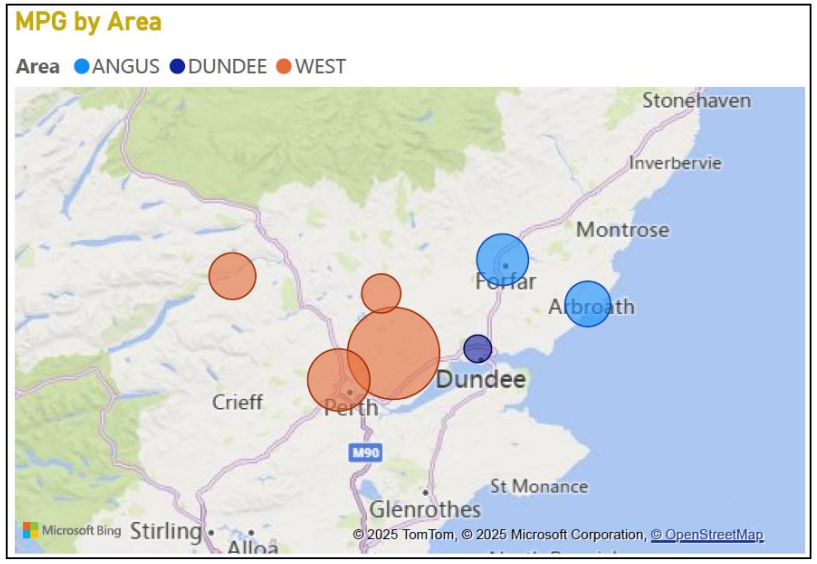






Examples of Poor vs Good Driver Behaviour





Poor Driver Behaviour

- Harsh acceleration → higher fuel burn
- Harsh braking → anticipatory driving lacking
- Excess speed → disproportionate fuel penalty
- Idling → no movement, but full emissions
- Carrying unnecessary equipment/weight
- Incorrect tyre pressures
- Avoiding EV charging → unnecessary use of diesel equivalents

Good Driver Behaviour

- Smooth acceleration and braking
- Using momentum effectively
- Minimising idling through planning
- Using EV mode appropriately
- Respecting speed limits
- Completing daily vehicle checks → reduces breakdowns and waste

Turning Data into Action: The ‘Turn It Off’ Idling Campaign

Through the amalgamation and analysis of performance data, we identified that idling represents a quick win for both the organisation and the environment.

Rationale

Telematics revealed over **35,000 hours** of unnecessary idling each year.

Idling = wasted fuel, unnecessary cost, and local air pollution.

Approach

Data-driven identification of problem areas.

Organisation-wide communication: *Target magazine*, digital depot signage, video messages, and social media.

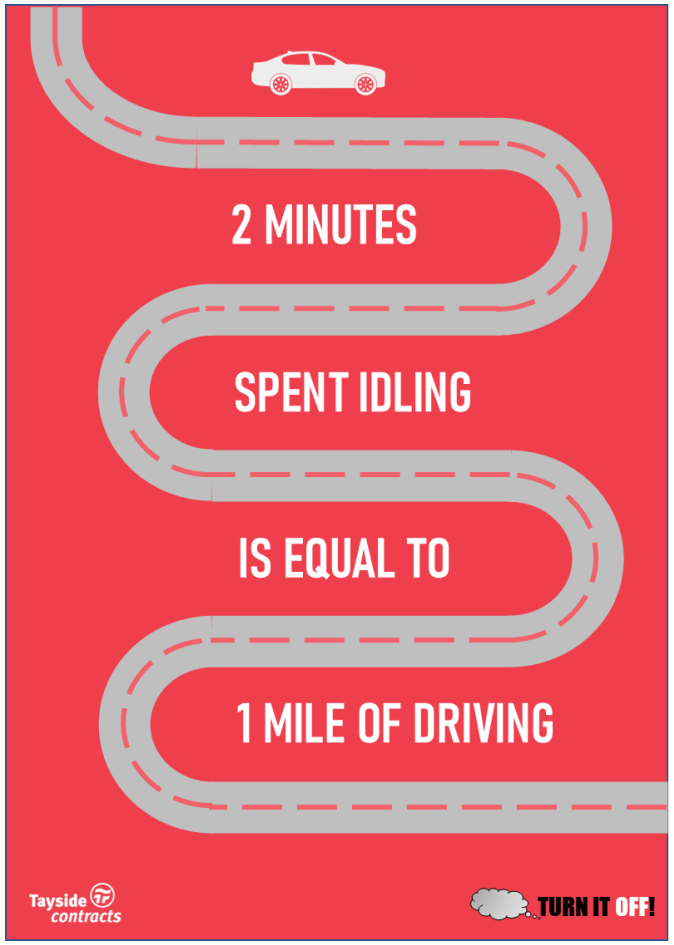
Two-way engagement between drivers and managers.

Campaign Highlights

5 reasons to turn engines off: saves fuel, improves safety, reduces noise, easy to do, and strengthens corporate reputation.

Achieved **28 % reduction in idling** (target 20 %), equal to **6,629 hours saved** and **£16K fuel saving**.

Examples of The 'Turn It Off' Idling Campaign



DID YOU KNOW?

2,700,000 *CO_2 emitted (kg)*

Every litre of fuel that is needlessly burned by idling vehicles contributes to the 2.7 million kg of CO_2 that Tayside Contracts fleet emits every year.

1,400,000 *Spend*

Tayside Contracts spent £1.4 million on fuel during the 2022/23 year?

1,000,000 *Litres of fuel*

That's equivalent to 1 million litres of fuel!

100,000 *Idling CO_2 (kg)*

With your help we can prevent 100,000 kg of CO_2 from being emitted into the atmosphere during idling.

40,000 *Idling fuel (L)*

40,000 litres of fuel are unnecessarily burned during idling every year?

35,000 *Hours of idling*

Tayside Contracts fleet spends 35,000 hours needlessly idling every year?

12.8 *Average MPG*

On average, Tayside Contracts' road-going fleet gets 12.8 miles per gallon. By turning off the engine when the vehicle is parked and not in use, you can help to improve fuel efficiency and reduce emissions.

EV Transition and Mechanic Training

Transitioning to EVs requires new driver behaviours — smoother acceleration, regenerative braking, and efficient route planning. Training ensures staff adapt confidently and safely.

Strategic Aim

Ensure the fleet is future-ready through technical competence in EV maintenance.

Programme

Partnership with Dundee & Angus College, funded via the *Green Fund*.

All 34 mechanics achieved Level 2 or 3 EV maintenance qualification. Level 4 is due to commence in early 2026.

Enables in-house maintenance of both Tayside Contracts and partner-council EV fleets.

Fleet Progress

30 EV vans in operation

EVs now 39 % of sub-3.5 t fleet.

Benefits Achieved

To the Organisation

Lower CO_2 emissions, reduced costs and fuel reduction from improved habits.

Fewer harsh events → reduced maintenance costs

Better driving → fewer accidents

To Employees

Recognition of positive driver behaviour.

Improved skills and environmental awareness.

To Communities

Cleaner air and quieter environments.

Demonstration of sustainable public-sector leadership.

Future Direction

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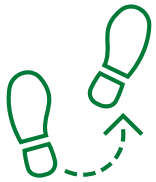
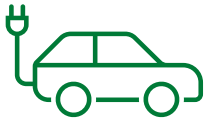
Next Steps



Continue annual MPG and idling reduction targets.

Driver coaching programmes informed by telematics.

Expand EV fleet and charging infrastructure



Maintain collaboration with education partners for emerging green technologies.

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Thank you