



ESSENTIAL FLEET MANAGER *Magazine*

ISSUE 4 2024

In this issue:

The Fleet Interview:
Police Scotland

Fleet electrification
and **sustainable**
conversions



Essential Fleet Manager - Issue 4 (2024)

The publication for fleet professionals that operate the vehicle fleets that support the UK's 'Essential Services' sector.

The 'Essential Services' sector includes: Local Authorities, Major Housing Associations, Central Government Departments & Agencies, NHS Trusts, Police, Fire, Specialist NHS Authorities, Educational Establishments, Power Generation, Gas Supply, Telecommunications, Water, Road Rail, Infrastructure Management, and Construction.

The magazine is available as a 'free' digital edition or can be delivered in 'printed format' for a paid subscription.

If you would like to feature your fleet operations in a future issue of Essential Fleet Manager - get in touch, we would love to work with you on highlighting your achievements.

Regards, **Debbie Cheadle** - Editor



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Centrad heeds caution as **confusion** around **DVS updates** rumbles on

Vehicle CCTV camera solution provider Centrad has warned operators of the dangers of aligning themselves with inexperienced suppliers as the deadline for the Direct Vision Standard (DVS) Progressive Safe System (PSS) update looms.

Set to come into force on 28th October later this year, the DVS update requires HGVs over 12 tonnes that do not meet the minimum requirement of three starts to install additional devices in order to alert drivers to vulnerable road users who enter into a vehicle's blind spot.

While the previous specification outlined during the first round of DVS requirements in 2019 mandated the installation of a 'safe system', which entailed a combination of supplementary safety equipment to be retrofitted onto each vehicle, under the

new guidance operators must implement and install new technologies to attain a safety permit that enables them to enter or operate in London.

However, in line with the new DVS updates, Centrad has revealed that there still remains much confusion amongst operators as a result of conflicting advice being relayed to them by suppliers, in particular what technology complies with the latest PSS mandate.

The guidance from TfL states that alongside Class V and VI mirrors or a CMS, audible warnings, side under-run protection and external signage, operators must now fit a Blind Spot Information System (BSIS) as well as a Moving Off Information System (MOIS) if their vehicles do not meet the mandated three-star requirement.

There are also bespoke specifications for both the BSIS and MOIS which also must be adhered to. For the BSIS, TfL states that it must ensure full coverage down the nearside of rigid vehicles to detect vulnerable road users and must not activate when in close proximity to roadside furniture or stationary vehicles. Similarly, the MOIS must be fitted to the front of a vehicle to warn the driver of the presence of a vulnerable road user and prevent collisions at the front blind spot zone when a vehicle moves off from rest.

The technical specifications for both MOIS and BSIS are based upon UNECE R151 and R159 and must adhere to TfL's operators guidance. Operators also need to adequately demonstrate that the equipment will not have an adverse effect on the other safety-critical systems required. ●

Emergency tests for HGV radar systems over London safety concerns

Emergency testing bays have been opened in Leeds and Tamworth to check whether radar systems used by thousands of heavy good vehicles (HGVs) that travel through London are safe.

Commercial Fleet Safety firm SM UK has taken this step-in response to growing concerns within the industry that the MOIS Radar Systems fitted are not compliant with the Direct Vision Standard (DVS) criteria all HGVs need to adhere to.

Steve MacDonald, Chairman of SM UK, said: *"Given the ground swell of concern we have experienced with operators asking if they are compliant, we have with immediate effect taken a proactive measure to open an emergency HGV bay within our workshop to test whether the radar system fitted meets the TfL DVS standard.*

"Getting the right kit fitted is paramount not just for the fleet operator but also to make sure vulnerable road users are not



hurt. At SM UK we have been advocates of commercial fleet safety for 25 years."

Emergency bays

SM UK is opening emergency bays with immediate effect to facilitate testing of any radar systems suspected of non-compliance. This initiative aims to provide commercial vehicle operators with a reliable and efficient means of verifying the compliance of their radar systems, ensuring they meet the required DVS standard.

Commercial vehicle operators are encouraged to take advantage of this opportunity to have their radar systems tested promptly. The emergency bay will be equipped with the necessary expertise to conduct thorough compliance checks,

allowing operators to take proactive steps towards ensuring the safety and legality of their vehicles on the road in London.

SM UK remains committed to promoting road safety and compliance within the industry and support Transport for London's initiative. By offering this emergency testing service, SM UK aims to support commercial vehicle operators in identifying non-compliant radar systems, thereby enhancing overall safety standards and minimising risks associated with DVS non-compliance.

Safety on the road is paramount, and SM UK urges all commercial vehicle operators to prioritise compliance with DVS regulations to protect drivers, pedestrians, and other road users. ●

Fully integrated AI-enhanced Progressive Safe System launched

Fleet solutions provider, Fleetclear has launched its own Progressive Safe System (PSS) ahead of the second phase of Transport for London's (TfL) Direct Vision Standard.

Fleetclear has earned a reputation for designing and manufacturing market leading and innovative vehicle safety systems and software that stand the test of time. The Fleetclear PSS system provides fleet operators with a simple, fully integrated, and compact solution, which ensures their entire fleet is fully DVS compliant. Enhanced with AI-based camera detection technology, the system comprises both a Blind Spot Information

System (BSIS) and a Moving Off Information System (MOIS) for full DVS compliance.

An AI control module uses 2 HD cameras for dynamic detection and driver alerts to prevent collisions. One AI camera provides complete coverage down the nearside of the vehicle, whilst avoiding road furniture and stationary traffic. This works in conjunction with a second front mounted Moving Off Information System (MOIS) camera to detect and alert the driver to the presence of a vulnerable road users within the front blind spot.

Chris Waller, Chief Technical Officer, Fleetclear: *"As with all our products and services the PSS system has been specifically designed to meet the needs of our customers to enhance the safety and compliance of their fleets. The deployment of the PSS*



system can be monitored, along with other safety technology, video, tracking and telematics via our web-based platform, Fleetclear Connect."

The ultimate tool for fleet managers, Fleetclear Connect is an intuitive interface that seamlessly connects and synchronises all safety technology and operational data together. ●



TTC helps Willmott Dixon halve driver offences and own-fault claims

Construction firm renews contract for end-to-end fleet compliance and driver training following highly successful three-year partnership

The UK's leading independent construction and property services company, Willmott Dixon Group, has announced a new three-year partnership with the training and compliance experts TTC.

Since the beginning of Willmott Dixon and TTC's collaboration in 2021, the number of driver-related own-fault insurance claims has fallen by 51%, while new offences committed by fleet drivers reduced 46%.

The reduction in incidents is set against an increase in both the number of drivers employed by Willmott Dixon and the total mileage they have driven, with the company managing more than 3,000 vehicles in its fleet, including grey fleet vehicles. Furthermore, 99% of Willmott Dixon drivers are now licence, MOT and insurance compliant.

"We were committed to initiating a company-wide culture of driver risk awareness, placing safety at the forefront of drivers' minds across our fleet. Simultaneously, we wanted to reduce our overall business carbon emissions by running a more sustainable fleet. However, we quickly realised we needed expert support to meet these ambitions," explains

Mark French, Chief Health, Safety and Environmental Officer for Willmott Dixon Group. "Embracing TTC's end-to-end fleet risk management expertise, which starts with conducting the necessary driver checks, through to monitoring driver behaviour and then delivering personalised training, has been instrumental in our success in educating our drivers and proactively switching to greener mobility options."

TTC's unique risk management platform, Continuum, delivers live driver data and visual dashboards, providing clear visibility and more accurate real-time insights into individual driving behaviour, as well as trends across the fleet. With data able to be interrogated more accurately and instantly, 'hot spots' are identified, and effective risk management strategies can be employed rapidly. Willmott Dixon is now not only proactively monitoring its drivers and predicting who needs some level of intervention, but also providing training for the benefit of the business and its drivers.

Mark French continued: *"Continuum allows us to identify when an individual may benefit from additional online training, such as addressing speeding concerns, but it also helps those who may benefit from getting*

more familiar with driving a commercial or electric vehicle. The elearning has proven extremely successful, and take up has been excellent throughout, on both optional and mandatory courses. By working hand-in-hand with our Fleet Compliance Manager, Sareen Dhillon, TTC has adapted both its risk management platform and its training programmes to meet our specific needs, creating a bespoke solution that is easy for us to navigate. Sareen Dhillon winning the Brake award for 2023 Road Risk Manager of the Year is a testament to the progress we have made together, and will continue to make in the coming years."

David Marsh, CEO of TTC added: *"Willmott Dixon has been inspirational in its commitment to improving driver safety and reducing the environmental impact of its fleet. Working closely together means we have been able to tailor our solutions to meet the requirements of their fleet and drivers, and adapt quickly when things change. Driver engagement has been high, thanks to a growing culture of driver risk awareness, and the great results we have seen so far in our partnership speak for themselves. We look forward to developing our partnership and our solutions together in future, reducing driver risk still further." ●*

Pictured above L-R: Mark French, Chief Health, Safety and Environmental Officer, Willmott Dixon Group and Jim Kirkwood, Deputy Chair, TTC.

To find out more visit: www.thettcgroup.com

F M G

THINKING AHEAD



PROVIDING YOUR PERFECT INCIDENT MANAGEMENT BUNDLE

From managing incidents and mitigating risk to complex vehicle recoveries and storage solutions, FMG has everything fleets need to keep their drivers safe, their vehicles moving and incident costs tightly controlled.

Sometimes we're front and centre, and other times we operate behind the scenes as a white-labelled service, in total managing over 600,000 cars, LCVs and HGVs on behalf of blue-chip company fleets and well-known brands, most of the UK's top ten vehicle leasing providers and the largest motor insurers and brokers. We are also the official vehicle recovery partner for National Highways and several UK Police Forces.

SELECT INDIVIDUAL SERVICES OR CREATE YOUR OWN BUNDLE

We've been managing vehicle incidents for nearly 40 years and we've harnessed our experience, expertise and market intel with state of the art technology to streamline every step of the end-to-end incident lifecycle, removing delay and controlling costs at every opportunity. The result is a simple, seamless, fast and efficient accident management service, and welcome peace of mind for fleet managers.

When incidents occur we can manage every aspect in-house at our Yorkshire-based headquarters, from a full end-to-end solution to a hand-picked selection of services, the choice is yours.

24/7 DRIVER AND VEHICLE SUPPORT

Our highly-skilled claims handlers are available 24/7 to provide all the support drivers need, from initial reporting to vehicle recovery and replacement vehicles, repair management, risk reduction services and a range of insurance solutions. We quickly get the driver moving again in a replacement vehicle, in line with their fleet manager's instructions, allowing their day to continue as planned.

All services are driven seamlessly by Ingenium, FMG's in-house designed and managed platform. It keeps tight control over every step in every process, all related costs and every customer's specific instruction.

A SUITE OF REPAIR OPTIONS TO MINIMISE DOWNTIME

We manage fast and efficient vehicle repairs through our UK-wide network of vehicle repairers, who provide a range of high-quality BS10125 certified or manufacturer approved repair options. From one-day, SMART or mobile repair at the driver's location to fast-fit and traditional bodyshop repairs, including EV and Tesla-approved, all our solutions are designed to keep vehicle downtime to a minimum whilst reducing repair and replacement vehicle costs too. In-house independent automotive engineers assess vehicle damage, every repair estimate and keep a close eye on repair progress and quality. They operate with delegated repair authority from major UK insurers to further reduce delay from the repair process.

A LONG-TERM BOOST TO SUSTAINABLE REPAIR

In the past year we've further strengthened our repair network to provide greater capacity and capability:

- Recruited 150 new repairer relationships to our quality-assured independent network. Together with our sister company FMG Repair Services, this brings our network total to over 500 repairers managing repairs for cars, LCVs and HGVs.
- Increased capacity within our existing UK-wide repairer network and recruited additional Network Managers to support our repairers.
- Ensured all repairers are fully equipped with the latest equipment, technology, skill and training to repair structural composite materials, hybrids and EVs.
- Introduced image capture technology to support efficient repair estimation.
- Increased our range of options to mitigate parts delay issues, including high-quality green (recycled) parts and non-OEM parts.

CONTROLLING THE TOTAL COST OF EACH CLAIM

When motor incidents occur, we keep tight control over all claims costs. Our insurance experts verify indemnity with underwriters, make liability decisions and identify potentially fraudulent claims, before managing the claim through to final settlement.

Third Party Services - In the event of an at-fault accident, we'll contact the other party within an hour of notification to gain control of their claim, offering a high quality vehicle repair service and a suitable replacement vehicle. We closely monitor every step of their claim to minimise our customer's cost exposure whilst ensuring the third party is not out-of-pocket at any stage following an incident which wasn't their fault.

Loss Recovery - When our customer is not at fault, our ULR experts are relentless in the fair and reasonable pursuit of their losses, successfully recovering over £2.3million per month.

TRANSPARENCY AT EVERY STAGE

Every step in the process is delivered with transparency, with fleet managers having 24/7 access to real-time repair updates, vehicle images, costs and all case details via FMG's incident management portal. Through our driver app, FMG Connect, drivers have the choice to view and share incident information and manage aspects of their incident themselves if they wish, and we're always just at the end of the phone for those who prefer to chat to a real person.

With nearly four decades of expertise, long-standing customer relationships and established and experienced teams, we've honed and streamlined every step of the incident management process to reduce the total cost of fleet incidents, minimise vehicle downtime and take outstanding care of the driver when they need it most.

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Information and collaboration - key to electrifying your fleet

Introduction

The requirement for fleets to electrify is gaining momentum. Not only are government policies and business carbon reduction ESG commitments driving this change, but organisations are also recognising the additional benefits of making the switch, such as reducing CO2 emissions and improving air quality.

During this transitional phase, each fleet will be at a different stage of electrification, especially those with mixed asset types. Some organisations may be just beginning to consider their first few electric vehicles (EVs), while others have already tested or fully embraced them and are now acquiring even more.

The Government's zero-emission vehicle (ZEV) mandate means that the UK has the most ambitious regulatory framework for the transition to electric vehicles (EVs) in the world. The plan aims for 80% of new cars and 70% of new vans sold in Great Britain to be zero-emission by 2030, increasing to 100% by 2035. The mandate sets minimum annual targets, starting with a requirement for 22% of new cars sold in 2024 to be zero-emission. This requirement will increase annually until it reaches 100% by 2035.

For passenger car fleets, the switch to electric is less complex than with commercial fleets. Essential Fleet Manager recently spoke with Jon Lawes, Managing Director of Novuna Vehicle Solutions to get a better insight as to what fleet and transport managers can achieve within the 'Essential Services' fleet sector in the short to medium term and what information they should consider.

Novuna Vehicle Solutions' end-to-end decarbonisation solution for businesses, from vehicle leasing and management to infrastructure, charge point management and energy storage, is supporting the adoption of EVs by some of the UK's largest and most complex fleets.

Novuna[®]
Vehicle Solutions



Jon Lawes, Managing Director, Novuna Vehicle Solutions

Interview

Q: To start the journey towards electrifying a fleet, it is important to focus on gathering information about an organisation's current fleet. What would you say are the most important factors to consider, focus on, and analyse in this initial review?

Understanding the business goals and how the current fleet operates, including shift patterns and usage, is critical. This provides a baseline for assessing how electric vehicles (EVs) can meet these needs. Driver behaviour has a substantial impact on fleet costs and emissions, so leaning on telematic technology and data insights is vital to build an accurate picture. For van fleets, transitioning to alternative fuels is more challenging due to a smaller product offering and limited commercial charging options.

Collecting vehicle trace and dwell data helps understand the specific operations of each vehicle—what they are used for, where they park, and for how long. We build a transition strategy tailored to businesses' needs and operations, identifying which vehicles are suitable for immediate transition versus those which will require operational changes and a longer-term transition. We also assess the charging infrastructure that is required to reach a sustainable fleet without compromising on operational delivery.

The transition to zero-emission mobility for business-critical fleets also hinges on ensuring those vehicles have the downtime and facility to charge; whether that's for charging vehicles overnight, during the day or at a moment's notice for emergency support.

Undertaking a comprehensive

feasibility assessment is vital to providing the correct charging infrastructure options considering that utilising the existing electrical headroom on a site isn't always a viable option and, in some cases, even dynamic load management isn't enough to overcome power limitations.

New power connections dedicated to EV chargers, via the local Distribution Network Operator (DNO) can guarantee maximum power availability at all times without impacting existing buildings, as well as providing a level of future proofing if more charge points are to be installed at a later date.

Battery storage solutions are also a possibility to support the demand requirements and can be combined with solar PV technology. Whilst there is a significant investment needed, it is feasible to offset this outlay over time.

There is no one-size-fits-all solution because every fleet and its operations are unique. Therefore, focusing on a strategy that utilises comprehensive fleet data ensures a more effective and efficient transition to electric vehicles.

Q: When calculating the Total Cost of Ownership (TCO) for electric vehicles (EVs), what are the key factors that may differ from traditional ICE-powered vehicles?

The decision for businesses to embark on their decarbonisation journey from ICE to EVs can seem like a daunting one with so many factors at play associated with acquiring and running a fleet of vehicles.

At Novuna Vehicle Solutions, we help many businesses to do just that across the 110,000+ strong fleet of vehicles we lease and manage in the

UK, providing clarity around total cost of ownership (TCO) using intelligent modelling based on driver need and usage.

TCO disparities between ICE and EV fleets are being exacerbated by higher fuel prices, impacting cost per mile calculations, making ICE fleets less desirable during the overall vehicle lifecycle. Conversely, taxes, grants, incentives and environmental charges are all also big ticks for zero-emission vehicles.

Furthermore, last mile delivery costs are notably becoming more prohibitive as pollution-reducing schemes penalising ICE vehicles are enforced in cities across the UK. Clean Air Zone penalty charges are inevitably accelerating the economic as well as environmental argument for commercial vehicle electrification.

Whilst EVs can still seem more expensive than their ICE counterparts based on the list price, taking a more holistic approach with TCO modelling which captures all the direct and indirect costs associated with leasing and running an electric fleet illustrates that EVs are cheaper than their ICE counterparts over the vehicle lifetime. As the ZEV mandate ramps up EV sales targets for manufacturers over time, we will also expect to see a bearing on prices, widening existing TCO disparities further.

Q: Given that the initial costs of electric vehicles (EVs) are widely reported as higher than those of the vehicles they will replace, is leasing or financing new vehicles the most cost-effective option?

Every fleet is different but the benefits

of leasing will generally outweigh any perceived cons. The fixed cost solution of the leasing model without the barrier of upfront costs enables businesses to transition to electric vehicles and negate most of the uncertainty and all of the risks associated with residual values at the end of the term, delivering effective fleet budgeting in uncertain times.

While tax implications vary, leasing typically allows for monthly payments to be fully deductible as a business expense. Commercial EVs require maintenance by trained Service, Maintenance, and Repair (SMR) engineers, who are more easily accessed through a leasing partner actively building a network of commercial EV repairers. This ensures that vehicles are maintained by professionals familiar with EV technology, reducing downtime and repair costs. Finally, many businesses find that they can make their money work much harder for them elsewhere, by investing in people or technology and retaining the ability to fund future innovation and growth.

Q: What are the best options available for charging infrastructure for fleets with back-to-base vehicle operations?

On-site depot charging infrastructure is preferred for larger fleets but will need a sufficient grid connection to support the required power output levels and vehicle numbers. This potentially requires costly grid upgrades.

Customers may know they need workplace charging but not necessarily how many charge points are needed, of what size and of what capacity. That's

where corporate fleets can benefit from external partners, like Novuna, to provide a complete solution tailored to their specific needs.

The electrification infrastructure gap in the UK remains a serious issue more broadly. Policies like the ZEV mandate are welcome, but EV adoption also requires a conducive EV ecosystem with widely available public fast-charging, sufficient grid capacity and subsidies to incentivise purchase.

Q: When developing a business case for transitioning to electric fleets, is it essential to involve all stakeholders in the initial planning stage?

Achieving broad stakeholder buy-in is crucial to any business transformation, and preparing them for change and successfully engaging them in the broader decarbonisation strategy will be crucial.

With the 2035 deadline looming ever closer and fleets under pressure to meet their business sustainability goals and reduce their carbon footprint, the net-zero transition has become a C-suite issue while it will also impact drivers on the ground, so it's important to bring all stakeholders along on the fleet transition journey.

External partners can help businesses create a tailored strategy and fill in any gaps in expertise right from the initial assessment stages, as well as providing tools and technology to support and educate along the way.

Cont'd on page 10



Cont'd from page 9

Q: When it comes to running a successful electrified fleet operation, how important is it to obtain driver engagement?

We often underestimate the impact of driver behaviour on the total costs of a fleet, yet arguably it has the single largest influence on CO2 emissions. Particularly during the transition stage, teaching, incentivising and monitoring for efficient driving will be essential.

We are committed to supporting our customers by educating their employees and drivers on the advantages of electrification. By assisting company car users with the transition to electric vehicles through our dedicated EV Hub and organising customized EV van handovers for commercial fleet drivers, we are leading the effort to maximize our customers' transition to electric mobility.

Fleet managers can also lean on new tools and technology to educate and drive engagement. For example, the 'My Novuna Charging' app is helping fleets maximise operational efficiency with monitoring in real-time.

Q: How can fleet managers minimise the impact on their fleet operations during the transitional phase?

To minimise any BAU impacts, fleet managers should phase the transition to EVs, starting with those where a like for like EV alternative is feasible and available immediately. As mentioned previously, using a vehicle's business targets, timescales and current fleet data is essential to writing that transition strategy, which won't be overnight.

With public charging infrastructure failing to keep pace with EV adoption, the catalyst for many commercial fleets to switch to zero emission mobility relies on robust workplace and depot charging infrastructure in order for them to have the confidence and conviction to invest in a greener fleet.

However, as an interim measure before charging infrastructure installation is complete, there are now also mobile charge point products in the market which offer a fast and flexible way of implementing EV charging and could be especially suitable for site locations that are leased or require planning permission to achieve a long-term solution.



Q: How important is it to work collaboratively with suppliers?

For fleets making the switch, the technology is unfamiliar and the choices from suppliers are endless - within charging infrastructure alone, fleet managers must contend with more than 650 different charge point operators and types of charging hardware available in the UK.

This is leading to a demand for a one supplier approach, providing the funding and management of everything from the charging infrastructure and renewable energy solutions to vehicles and data analytics, in a bid to optimise efficiencies.

As a trusted total assets solutions mobility partner, Novuna Vehicle Solutions is supporting fleets at every step of their transition journey with an end-to-end decarbonisation solution to give peace of mind by delivering the best technology and solutions, tailored to the customers' needs.

From initial site assessments and hardware, to electricians, installation, testing, charge point management systems and apps to help fleet managers optimise their fleet operations, it's important to work with a provider with the expertise to

project manage the entire electrification journey in conjunction with third parties.

Q: How does SMR differ in the management of EVs?

With far fewer moving parts than ICE vehicles, EVs are considerably cheaper to maintain and service. However, EVs do have complex electrical systems and battery technology that calls for specialist knowledge and skills to correctly service and maintain. The major consideration is a process of safe isolation and deactivation of the battery pack, and concerns around high-voltage systems call for rigorous training.

Meanwhile, servicing, repairing, and maintaining the battery or high-voltage systems sometimes involves plugging in the car's computer and analysing data, rather than getting under the bonnet. This is a significant shift in skill requirements and one of the big challenges facing the EV transition. At Novuna we've built a Trusted Approver Network, giving our customers confidence that our network of approved technicians is trained and capable to cope with the transition to maintaining vehicles across all alternative fuel asset types from electric through to hydrogen. ●

To find out more visit: www.novunavehiclesolutions.co.uk



"The next generation of emergency vehicles, which support zero-emission goals, is coming through and it is important that workshop managers are prepared.

Our Management Development Programme empowers workshop managers and equips them with the right tools and knowledge to oversee this pivotal transition and uphold the highest standards of operational excellence."

Alistair McCrindle, Operations Director for Autotech Training. ●

Workshops gear up for the future of emergency vehicles

Emergency Service vehicles operate as a lifeline to communities across the UK. However, the workshops tasked with repairing and maintaining these fleets are all facing familiar hurdles encountered by their private sector counterparts – a severe shortage of skilled technicians, the integration of new technologies, and notably the rise of electric and hydrogen vehicles.

Recent statistics reveal a notable shift towards sustainability across the UK's emergency services. Police forces now boast a collective fleet of 430 electric vehicles operational nationwide, supported by 808 charging stations. In a pioneering move back in 2022, the London Fire Brigade led the charge by introducing the first electric fire engine, marking a significant step towards greener emergency response vehicles. Meanwhile, the introduction of electric ambulances signals another progressive initiative underway in the UK. The first electric ambulance to respond to emergency 999 calls in London went out on its maiden voyage on New Year's Eve 2024, joining the ranks of the London Ambulance Services' fleet of 160 zero-emission capable vehicles.

The deployment of these fleets highlights a commitment to eco-friendly solutions despite the unique challenges posed by

these heavy, specialised vehicles.

For the network of workshops, strategically placed to ensure rapid response times and optimal functionality of the UK's 48,000 police vehicles, 9,500 fire service vehicles, and 8,500 ambulance vehicles, the transition towards EVs represents a significant shift.

While offering environmental benefits and potential cost savings, they require a distinct skill set for maintenance and repair, and the significance of this change must be recognised.

Alongside an emphasis on upskilling vehicle technicians working within emergency service workshops to help maintain growing fleets of energy-efficient and digitally enabled emergency vehicles, there is a critical need to equip workshop managers with the requisite skill set to navigate the evolving automotive landscape effectively.

For instance, the unique components and maintenance requirements of electric vehicles demand a workforce equipped with advanced skills in electrical engineering, battery technology, and software diagnostics. Bridging this skills gap is crucial to ensure a smooth transition to an electric future, particularly within the emergency services.

Managers must not only equip themselves with the technical know-how

of EVs but also possess the proficiency to effectively steer their teams through this seismic transition.

The Institute of the Motor Industry (IMI) predicts a potential shortfall of 4,500 EV qualified TechSafe® technicians by 2029, escalating to 16,000 by 2032. While this reflects the entire aftermarket, emergency services are acutely feeling this skills gap as electric vehicles are increasingly incorporated into fleets.

Alongside training, there is also a requirement for Continuous Professional Development, to ensure qualified technicians remain compliant and up-to-date with the latest advancements in EV and ADAS technology.

The demand for workshop managers to integrate new technologies and maintain a skilled workforce capable of meeting the demands of a rapidly evolving industry is undoubtedly intensifying. To meet this need, Autotech Training, a leading provider of automotive training solutions, including IMI-accredited Levels 1-4 Electric/Hybrid Vehicle training has spearheaded a Management Development Programme. The two-day course is designed to prepare emergency service workshop managers for the future, as the transition towards EVs, hydrogen vehicles and other advanced digital technologies continues. ●

To find out more visit: <https://autotechtraining.co.uk/>

The Fleet Interview: Police Scotland



With Billy Andrew, EV Fleet Programme Manager



Volkswagen ID.4 outside Scottish Police College

Introduction

Fleets supporting essential services not only need to meet operational needs and day-to-day challenges of efficiency, safety, and compliance but also commit to strategies that aim for a low or zero-emission future. When these pressures apply to an emergency service, the challenges are even greater. In their fleet strategy published five years ago, Police Scotland stated that they were committed to becoming the UK's first ultra-low emission emergency service fleet.

Essential Fleet Manager was eager to learn how Police Scotland had balanced the operational needs of an emergency service with the ambitions published in the fleet strategy. Therefore, we were delighted to sit down with Billy Andrew, who has over thirty-five years of experience in police vehicle and fleet management and is currently overseeing the transition to a low emission future.

Interview

Q: At the beginning of the process five years ago, what was the breakdown of Police Scotland's fleet in terms of types of assets, numbers and fuel types?

Our total vehicle numbers were just under 3500, this was predominately

diesel c. 95%. We operate a diverse fleet of marked and unmarked vehicles including motorcycles, LCVs, HGVs, pickups, 4x4s and cars.

Q: How did you approach engagement across all Police Scotland departments and relevant third parties to prepare the way for electrification?

Our 10-year Fleet Strategy published in 2019, laid out what we proposed to accomplish if we received the corporate and financial support to transition the fleet to 100% ULEV by 2030. Early engagement with all internal and external stakeholders was and has been paramount to our success to date.

Explaining and educating are key to winning over officers and staff. Our Force Executive was clear, that this had to be one area we focused on and we continue to do so.

Q: What were the main priorities identified immediately following that engagement and how did you decide which parts of the fleet could be transitioned to Electric Vehicles (EVs) in the short term?

In 2018, we installed 29 EV chargers across several of our offices. We realised that to achieve our 2030 goals, we would need chargers at approximately 200 additional offices. In 2020, we put out a tender and awarded a turn-key solution in late 2021. We divided the offices into three phases:

Phase 1 with 50 sites, Phase 2 with 50 sites, and Phase 3 with 100 sites. We prioritised our largest offices in terms of vehicles and staff numbers. As Phase 1 progressed (now completed), we began replacing our unmarked cars. We found this to be straight forward because they could utilise public chargers as well as our 'private network.'

Q: With global supply chain issues combined with volatile EV residual values, how did Police Scotland manage the procurement process, to ensure that strategic objectives could be met with financial efficiency?

After finalising our capital allowance for new vehicles, we proceeded to place orders with four different manufacturers for our electric vehicles. The lead times were reasonable. All our vehicles are purchased through national frameworks established by Blue Light Commercials and the National Association of Police Fleet Managers (NAPFM). Our primary focus has always been on Whole Life Costing (WLC), which takes into account projected residual values, although this is not considered a key factor in our decision-making.

Q: How is Police Scotland combining its charging infrastructure with the public charging network to meet the needs of EVs in all parts of Scotland?

I am currently in the process of contacting Charge Point Operators (CPOs) to

integrate their charging networks. Each of our EVs comes with a single RFID card that allows access to multiple networks across the UK. Some of the networks we are working with include BP Chargevision/Pulse, Charge Place Scotland, Scottish Fire & Rescue, Scottish Ambulance, First Bus, FOR EV, and INEOS. We also have several co-location sites with the NHS and shared chargers. In total, these provide access to around 12,000+ chargers. I am constantly working to increase this number. This is an area that is undergoing considerable change. It's likely that in the next 12 months, roaming will be introduced, making it easier to access additional networks.

Q: A shortage of automotive technicians is causing immense challenges for many fleet operators. How is Police Scotland addressing those challenges throughout its workshops and those of outsourced partners?

We recognised the need several years ago and decided to put all our Vehicle Technicians (c.60) through the IMI Level 3 courses on BEV and Hybrid electric. We monitor and pay competitive salaries on par with the manufacturer dealerships. We don't have an issue with staff retention.

Q: Now that the first EV response vehicles are on the fleet, with more to follow in the next few months, what is the current breakdown of fleet assets?

Our total number of BEVs on the fleet is just over 800 vehicles with around another 250 ULEVs, mostly unmarked. After nearly 18 months of evaluation and testing, we are introducing our first 25 marked response cars. These are Volkswagen ID4s and this will be followed by a similar number of Vauxhall Vivaro cell vans. Our total fleet size still sits at just under 3500 vehicles.

Q: Overall, which priorities have informed your vehicle procurement choices?

It's challenging to prioritise the purchase of police vehicles, especially electric ones, due to several important considerations: range, performance, weight capacity, safety, whole-life costing, and charge speeds, among others.

Q: With technology developing at pace, how difficult is it to make the right choices and, as far as possible, future-proof your fleet operations?

I'd like to break this down into at least two parts. The first part will focus on the EV charging hardware and the back-office functions for those. The second



Volkswagen ID.4 at Edinburgh Airport

part will look at the products from vehicle manufacturers.

a) It's important to read, absorb, and ask the right questions about new chargers from various manufacturing competitors to understand the direction the market is likely to take. Make sure that any chargers purchased have the latest market technology built in, allowing the newest software to be installed and updated remotely as new developments take place.

b) Vehicle manufacturers are continually developing new products to bring to the market, aiming to anticipate what the industry is looking for. As each manufacturer's range increases and the markets mature, I do not doubt that the right vehicles will appear, allowing us to evaluate and eventually make a purchase.

Q: How has The Scottish Government provided valuable support for your fleet strategy and can they, along with the UK government do more?

If the UK Government is serious about trying to increase the number of people purchasing EVs that must rely on the public charger networks, I think removing the VAT content would go some way to balancing up the cost of EV ownership, against those that can charge at home.

Scottish Government (SG) has provided Police Scotland with additional monetary resources to allow us to start our phased EV infrastructure project. They also had the insight some 20 years ago to fund the Charge Place Scotland infrastructure. Governments can always do more, one of SG's main focuses now is collaboration between many public bodies on sharing and building new EV charging infrastructure. Each Blue Light service in Scotland is committed to trying to make this happen. ●

Chargers at Drumchapel Police Station



Visit: www.scotland.police.uk



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Lindsay Wallace, Executive Director, Sales & Innovations Europe, FOR EV.

Experts in our field, our team at FOR EV makes fleet electrification simple, rewarding and risk-free.

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To save you money.

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- £8,900 per average van
- £31,150 per average HGV

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To help achieve your net zero ambitions.

Our state-of-the-art software supports your ESG reporting needs, and we'll only ever use 100% accredited renewable energy, helping your operation become more environmentally sustainable.

A best-in-class experience.

Customer service remains at the heart of everything we do. Our industry-leading technology is scalable and adaptable, offering a future-proofed solution. And we're on-hand 24/7, all year round, to provide peace of mind and offer our support whenever you need it. Our fleet customers can also enjoy open access to our growing public charging network across Scotland.

To meet your unique business needs.

We value long-term relationships and understand every customer is different. No matter how big or small your fleet is, our flexible approach allows us to work closely with you to fully understand your business needs and provide the best possible EV charging solution.

We're proud to support Network Rail Scotland.

We recently delivered a landmark project to support Network Rail Scotland's fleet transition to electric, based on their current and future vehicle needs. Working with utilities contractor

Energy Assets, we installed their new charging hub in just nine weeks and will be operating and maintaining their infrastructure for years to come. The hub offers a blend of AC and DC charging, using industry-leading technology, and its weatherproof body and special coating allows it to cope with anything the changeable UK climate can throw at it. The project included a full route analysis to provide the optimum mix of charge points, as well as a guaranteed minimum uptime of 98% and technology updates to keep everything running smoothly. We also delivered a programme of EV education and training for the organisation's staff. This will lead to a streamlined transition and increased awareness while addressing any concerns staff may have, such as range anxiety.

"Providing the infrastructure in our operational depots, to enable our road fleet's transition to zero emission, is a challenge. We decided to look at things differently in Scotland, drawing in expertise and funding from outside of Network Rail to deliver charging infrastructure quicker and cheaper than it would otherwise have been. FOR EV and Energy Assets have demonstrated excellence throughout and provided expert guidance on the technology as we make the changes necessary to decarbonise our road fleet."

Wendi Wheeler, Principal Environment & Social Value Manager at Network Rail Scotland

We work with fleets of all types and sizes, from cars and vans, to HGVs and boats. Whatever the nature of your project, we always aim to deliver maximum impact while limiting any disruption to your business operation. ●

Ready to take the next step in your EV fleet transition?

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Martin Edgecox, national fleet manager - Highways Agency and Gemma Wotherspoon - Toyota GB.

National Highways on the road to net zero with the Toyota bZ4X electric SUV

National Highways is spearheading the electrification of its vehicle fleet with the Toyota bZ4X. The company, responsible for operating, maintaining and improving England's motorways and major A-roads, has ordered 51 of the battery electric SUVs as daily transport for its team of inspectors.

Andy Butterfield, National Highways' Operations Customer Service Director, said: "Modernising our fleet with 51 state-of-the-art bZ4X will not only reduce our

emissions but also ensure that journeys are smooth and reliable.

"We operate more than 1,300 vehicles, so introducing new EVs helps accelerate our journey to net zero."

National Highways aims to achieve net zero for its emissions by 2030, with a commitment that its non-traffic officer vehicles will be 100 per cent electric by 2027, and its traffic officer fleet following by 2030.

"This is a huge step towards that commitment. We will continue to invest in green and electric vehicles as the technology becomes available, meeting the Government's Road to Zero strategy," he added.

The new Toyotas, supplied through the fleet team at Steven Egell Toyota, will be used daily by Operational Highways



Inspectors to assess the UK's strategic road network, identifying and reporting defects for repair and restoration.

Neil Broad, General Manager One Toyota Fleet Services said: "In choosing which vehicles to use, National Highways priority was not simply to adopt electric power. It also needed to be certain that the vehicles would be reliable, day in and day out. That's where bZ4X fits the bill perfectly, benefiting both from Toyota's leadership in electrified technologies and its proven reputation for delivering quality, durability and reliability."

Built from the ground up as an all-electric SUV, the bZ4X is a game-changing model that benefits from the technical expertise founded on Toyota's world-leading experience in electrified vehicle technology. It delivers cutting-edge design coupled with smooth and refined performance with the availability of all-wheel drive and Toyota's X-MODE system, it is also the first EV model in its class to offer authentic off-road performance. ●





100% Electric Accessible Vehicle vital for Lutterworth Community Transport

A Charity in Leicestershire has employed an innovative Wheelchair-Accessible Electric Vehicle in a bid to tackle social isolation in rural communities.

Lutterworth Community Transport, a service of Lutterworth Volunteer Centre, provide a volunteer-driven social car and community minibus scheme for people who are vulnerable, disabled, elderly or rurally isolated in the Lutterworth and Broughton Astley districts, a catchment area of around 5% of the total Leicestershire population.

"The aim of our Charity is to prevent loneliness caused by rural and social isolation. Many people cannot access mainstream public transport due to lack of availability, or lack of ability to walk to a bus stop, and then inability to get on and off the vehicle. We offer a door-to-door service using a range of adapted vehicles to meet this need," explains Graeme Thomson of Lutterworth Community Transport.

As a significant number of people served by the organisation suffer from mobility impairments, or depend on a wheelchair for their personal mobility, they often find it difficult to enter and exit a standard car or van. The charity identified the requirement for a versatile, accessible vehicle which could meet the needs of their disabled patrons, whilst also being environmentally friendly and economical to operate without the need for a 3.5 tonne C1-class license - and approached Wheelchair Accessible Vehicle specialists Brotherwood seeking a solution.



Mr Thomson went on to say: *"We already have a WAV converted by Brotherwood that we are very happy with. Over time we have taken on more and more wheelchair transport and realised that we needed a second one to meet demand. This led us to reviewing how the new vehicle would be used in addition to the wheelchair option. Many of our clients are frail and find it difficult to climb into the back of an ordinary car, and we also transport more than one person at a time."*

Brotherwood offered a Wheelchair Accessible Vehicle (WAV) conversion for the electric Vauxhall Vivaro – a medium-sized battery-electric vehicle with space for up to 5 passengers alongside a driver, plus a specially-engineered lowered floor section which enables a wheelchair user to travel without transferring out of their wheelchair. With a short rear access ramp and remote-controlled winch, volunteers can easily help wheelchair users into the vehicle without effort – and ensure that they travel safely with the support of a safety-tested 4-point restraint system, which holds the wheelchair securely in place for a stable ride. As an electric vehicle, the travelling experience

is smooth and quiet – ideal for passengers with sensory processing issues.

Further adaptations were also sought to make access easier for ambulant passengers, with the addition of an automatic fold-out side step and electric turn-out front passenger seat ensuring that the transport service can cater for individuals of all abilities.

Mr Thompson concluded by saying: *"We chose to go for a larger vehicle, hence the Vauxhall Vivaro, which means that there is more room to manoeuvre once the passenger is in the vehicle. As the van is higher than a normal car, we then incorporated an automatic step to compensate. For those that still cannot access the rear but do not need to travel in a wheelchair we invested in the 'BEV Turny' chair at the front that enables a person to transfer from a walker or chair outside the vehicle and then be lifted inside."*

"We now have an incredibly versatile vehicle that caters for multiple needs that is used daily on our shuttle run to transport passengers with dementia to the Academy for Dementia Research and Education, also based in Lutterworth."



About Brotherwood

Brotherwood works with healthcare professionals to deliver mobility solutions for wheelchair users and is the UK's leading Wheelchair Accessible Vehicle (WAV) specialist, providing new and refurbished vehicles for sale or hire.

As a certified CPD Member, Brotherwood also offers healthcare professionals free training sessions.

Brotherwood is a member of WAVCA and an approved supplier to the Motability scheme. ●

For more information contact Brotherwood today on 0330 1747 555 or visit www.Brotherwood.com

Green Plan outlines target to cut carbon emissions as electric vehicles trialled



The first of three fully-electric vehicles being trialled by South East Coast Ambulance Service (SECAmb) are now out on the roads.

The Mercedes-Benz e-Vitos are being trialled as part of NHS England's Zero Emission Electric Vehicle (ZEEV) Pathfinder project.

The Single Responder Vehicles (SRVs) will initially be based out of three Trust sites where heavy-duty vehicle chargers are installed – Polegate, Thanet and Gatwick. The chargers will be able to charge the vehicles in as little as 30 minutes.

SECAmb has been working closely with staff, volunteers and partners to achieve ambitious plans to reduce its carbon emissions.

The Trust aims to reduce its emissions by 50 per cent by 2032 and achieve net zero by 2040.

The challenges are outlined in the SECAmb's Green Plan which was developed following detailed work with teams across the organisation alongside its system partners.

The plan, supports SECAmb's Green Strategy and mirrors the NHS-wide aim to become the first healthcare system to reach net zero carbon emissions.

SECAmb's Green Plan can be split into three main categories – fleet, estates and medicine.

As part of its plan to half its carbon emissions by 2032, SECAmb's fleet, which is responsible for around 63 per cent of total emissions, will be transitioning to ultra-low emission and zero emission electric vehicles.

The Trust's estate makes up approximately 15 per cent of total carbon emissions. SECAmb will continue to deliver energy saving measures including moving to solar photovoltaic and battery storage, retrofit double glazing, roof insulation and more efficient LED lighting.

SECAmb will also explore greener alternatives to delivering medical equipment and gases with its medicine activity accounting for some 10 per cent of total carbon emissions.

SECAmb is committed to ensuring its staff and volunteers play a key role in the implementation of the plan in the coming years and is pleased a Green Champion Network has been established. The network will help ensure that colleagues are fully engaged in taking forward the plan's objectives.

"There is clearly a lot of passion among colleagues across SECAmb to contribute to the Trust doing everything it can to reduce its carbon emissions and increase its sustainability."

"We hope that the network will continue to grow so that colleagues contribute to changes that will improve the efficiency of our service and in turn benefit patient care."

Ben Leeves, Paramedic and chair of SECAmb's Green Champion staff network.

"The trial of the new all electric single responder vehicles is just one way in which we are exploring how we can reduce our emissions."

"As an organisation with a significant carbon footprint, we are committed to working closely with colleagues across our organisation, including our Green Network and our system partners to significantly reduce it."

"We will work to prioritise innovation, where possible, which also improves patient care and community wellbeing while also tackling climate change and other sustainability issues."

David Ruiz-Celada, SECAmb Executive Director of Strategic Planning and Transformation. ●

TRL Re-launches ECO Stars Fleet Recognition Scheme

The scheme, now under TRL ownership, offers guidance on efficient & cleaner operations for HGVs, buses, coaches, vans, and taxis. It will evolve to support wider sustainability objectives.

TRL has relaunched the ECO Stars Fleet Recognition Scheme following its recent acquisition, creating a cornerstone for a portfolio of services that help local authorities and vehicle fleet operators meet decarbonisation, clean air and sustainability goals.

Originally conceived by the Barnsley Metropolitan Borough Council, ECO Stars was a pioneering scheme that provided emissions assessments and recommendations for fleet operators to reduce fuel consumption and lower their emissions in day-to-day operations. The scheme is free to fleet operators and the sponsoring local authority, depending on their location, recovers costs from the Scottish and Welsh Governments, as well as Defra. TRL has managed the scheme since its inception in 2009, with many members gaining accolades for their enhanced fleet efficiency and reduced environmental impacts. The scheme has doubled in size in the last five years, which illustrates how the industry is embracing the need to change.

"With the acquisition of ECO Stars, TRL now has the opportunity to develop the scheme by offering new services that will benefit the members even further," says Matt Sercombe, Strategic Business Service Director at TRL. "The essence of the scheme aligns seamlessly with TRL's mission to deliver safer, cleaner, and more efficient transportation solutions. The UK's net-zero and sustainability goals are very real for vehicle fleet operators, who are under increasing pressure to demonstrate progress, even for very small fleets. We have in mind

a set to enable Fleet Sustainability Solutions that assures profitability and commercial advantage for fleets that invest in minor operational changes" he concludes.

Building upon ECO Stars' established legacy, TRL's vision for the scheme, which relaunches today, will expand its remit with a package of services based on net-zero emissions targets and taking into account a broader range of sustainability objectives (which might, for example, take into account accessibility of a taxi service, the recycling of scooter batteries, or the disposal of rental bikes). Applying lessons learned from its research into alternative transport and mobility modes, TRL also intends to extend the application of the recognition scheme to include fleets of micro-mobility solutions such as electric cargo bikes, electric scooters, and autonomous delivery pods. The essence of the scheme has always been

on tailoring the membership according to local or regional needs. This will remain. However, TRL can now make use of its expertise and resources to work differently with local authorities. For instance, TRL can analyse their local air quality and traffic data to advise on a more holistic approach to traffic management, providing insights and recommendations on routes, scheduling, and congestion management strategies at hot spots, which will also improve operational efficiency for the local fleet operators.

"The value of the ECO Stars scheme is incontrovertible," says Ann Connolly, Scottish Framework Manager, "and the transition of ownership heralds an exciting new phase. TRL has a very collaborative working style, and I am very much looking forward to working with them to develop and launch new ECO Stars services"●



About TRL

TRL is a team of expert scientists, engineers and specialists working together with our clients and partners to create the future of transport. We publish software that helps the world's largest cities, and many smaller towns too, reduce pollution, carbon footprint and congestion with advanced traffic management, better road design and good asset management.

We conduct leading edge research into infrastructure, vehicles and human behaviours which enables safer, cleaner, more efficient transport.

We work with universities and other partners to invest in basic and applied research that will underpin future needs.

We have built, with partners from government and industry, the Smart Mobility Living Lab: the world's first physical and virtual testbed in a global megacity (London) that lets companies test new mobility products and services safely on live public roads.

Established in 1933 as the UK government's Road Research Laboratory, the renamed TRL was privatised in 1996 and today has more than 1000 clients in many countries.

For more information about ECO Stars visit: www.ecostars-uk.com

Electric Vehicle Reimbursement



The transition to electric is ongoing for fleets as more and more businesses look to prioritise sustainability. With the extension to 2035 for all new cars and vans being zero emissions, the uptake is expected to be more gradual than rapid. Range is improving, the development of the UK charging infrastructure divides opinion, businesses are struggling to electrify their van fleet; these aren't exactly new topics for any of us. They're all important, but for us at The Miles Consultancy (TMC), a big strength is the ability to support organisations with fair and accurate reimbursement for those drivers who are in electric vehicles.

It's important to note that it all starts with seamless mileage capture, working to ensure business mileage records are accurate, in line with policy and therefore allowing for the correct reimbursement or deduction for the driver.



Paul Jackson, CEO and Founder at The Miles Consultancy

Paul Jackson, CEO and Founder at The Miles Consultancy, has seen a change in recent years with the way mileage capture is received by businesses.

"In the United States, it's a given that you'd have a formal solution for business mileage capture. In the UK, more and more

businesses are recognising that a specialist solution is needed and it's becoming the norm. They know they need to do it.

"It's the basis of everything: fair and accurate reimbursement, comprehensive reporting and thanks to our audits, HMRC compliant records. Supporting businesses in ensuring that their employees aren't over-claiming is vitally important, otherwise you're unknowingly over-paying and your reporting is all wrong."

To facilitate reimbursement for EV drivers, there are a few things that are needed. The employee's tariff, the kWhs used for charging and any extra charging activity at a workplace or public station by means of a charge card. There are options to retrieve this data both with and without driver intervention, depending on circumstance. When it comes to electric vehicle reimbursement specifically, what are the options?

The simple option is to reimburse your EV drivers per mile using the government's advisory electric rate, currently at 9 pence per mile. The problem with this? It's not always fair. We share the thoughts of the Association of Fleet Professionals (AFP) here and believe that there is no one-size-fits-all approach suitable to cover all electric vehicle types due to the variation in running costs and the differing driver profiles, not to mention the endless list of cost variables. Our data shows that it puts some drivers charging at home out of pocket and when public charging is introduced to the process at higher rates, some becomes many.

The good thing about TMC's data is that it also provides businesses with a viable alternative to the government rate. Our analysts calculate the real world cost per mile for every electric vehicle in the market when charged at home, namely TMC EV Rates and these rates can be used to reimburse EV drivers. They are based on the published WLTP figures with an adjustment to account for real world conditions and uses the UK national average tariff or a blended rate to incorporate public charging. The data shows a Tesla Model Y to be at 7.5p but an Audi Q8 e-Tron to be at 11.7p, for example. No under-paying, no over-paying, just accurate reimbursement solely at vehicle level.

A third option is actual cost, arguably the fairest option, by aggregating all costs incurred per month and combining with the captured trip data to identify the business and private proportions. This uses the driver tariff information and public workplace charging activity declared by the employee and sometimes, requires minimal driver intervention by taking feeds from OCPP enabled charge points. There is the option to credit an employee's energy supplier directly to avoid the 'bill shock' or provide payroll files to the business with individual reimbursement or deduction statements for the drivers.

EV reimbursement can seem complex, but there are solutions out there for fleets to simplify the process and end up with happy employees as well as a happy employer. ●

To find out more, visit: <https://themilesconsultancy.com/>



Simon Staton
Client Management Director,
Venson

Fully charged or plugging the gap to electric?

As the world begins to transition towards Alternative Fuelled Vehicles (AFV's) such as hybrid and electric and move away from conventional Internal Combustion Engine (ICE) vehicles, it's understood that there will be hesitancy, perhaps resistance to change and financial concerns over the emerging and fast-moving technology says Simon Staton, Client Management Director, Venson. Our bespoke approach enables businesses to have a partner working hand in hand with them as they look to transition towards a greener fleet.

This can be starting simply, moving from ICE to hybrid and then full Battery EV (BEV) or going straight to BEV or staying with hybrid. There is no one size fits all approach, the key is to identify which fleet vehicles lend themselves to what technology. This will in part be driven by the operational requirements of the vehicle. And of course, cost is a key consideration for all organisations, especially with fleet spend typically being the second highest after staff costs.

So where to start with the transition

to a greener fleet? Here are just some examples of how businesses we've worked with have started their journey.

A social housing provider wanted to transition to a greener and more sustainable fleet, but had concerns over costs, charging infrastructure, and vehicle range. Our initial approach was to work through each concern, starting with comparing Whole Life Costs of diesel and electric vehicles. The process debunked the myth that alternative-fuelled vehicles are more costly to run and concluded overwhelmingly that Whole Life Cost savings of 15% could be made through the lease of an alternative-fuelled vehicle. Introductions were made to an electric charge point installer and maintainer, as well as arranging meetings with similar businesses who had already started their own electric journey. Through relationships with vehicle manufacturers, demonstration vehicles were secured so that the organisation could take the opportunity to get a real

world understanding of how a change to a cleaner and more sustainable vehicle fleet would work in day-to-day operations.

Cost considerations as we know are key, but also is vehicle choice. A range of makes and models can sometimes be an integral element for fleet operators when defining their fleet policy. Venson completed an exercise with an organisation based in the north of England that focused on contract mileage and contract length. The analysis concluded that vehicles could be contracted over a longer term, reducing the vehicles Whole Life Cost by an average of 4 pence per mile. The usual vehicle selection was broadened which also led to identifying savings of more than £102,000 across a 5-year period for 37 vehicles.

Similarly looking at funding methods alongside the move to new technologies can also highlight benefits. Working with a retail organisation Venson produced cost comparisons between an outright purchase procurement method and contract hire. The result, demonstrable Whole Life Cost savings that could be made with a transition to a hybrid, or full battery electric vehicles, with both the organisation and employees benefiting.

Those who have made the switch are seeing the benefits that come with greener motoring. Beyond enabling companies to meet their own sustainability goals, zero-emission vehicles can offer Whole Life Cost savings with lower running costs and reduced maintenance requirements. ●



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Vehicle conversions, a sustainability guide

Managing fleet operations within the 'Essential Services' sector can be complex as it involves ensuring that your vehicle fleet is effectively supporting and delivering vital services. Additionally, there are numerous daily considerations such as compliance, driver safety, the safety of other road users and the wider general public, as well as managing incidents and minimising the impacts of vehicle-off-road (VOR) time.

Given the demanding nature of your role within fleet management, the need to prioritise and build sustainability into your fleet operations adds further responsibilities. Collaboration with suppliers is key, and so is the need

to involve all stakeholders to better comprehend operational requirements. Engaging and working with suppliers with a more *'hands-on approach'* will help you leverage the innovations that meet your operational needs and are also aligned with your sustainability goals.

As daunting as it may seem, all vehicle assets will need to be replaced at some point. This will happen regardless of any focus on sustainability. The replacement process, and especially the specification of conversions, should be seen as a significant opportunity to commit to a sustainable future within your fleet operation.

What are the important factors to

consider when aiming for the best outcomes from this opportunity? In this article, we will explore the crucial significance of engaging and working with vehicle conversion specialists, as well as what to keep in mind when trying to meet operational requirements while also implementing sustainable solutions.

Pre-specification engagement with stakeholders

In your fleet department, it's crucial to engage with end-user departments. One effective way to improve communication is to organise a working group involving all stakeholders in your vehicle replacement and procurement process. Taking the consultation approach will help determine operational requirements, time scales, funding methods, budgets, and the specifics of the necessary conversion. After this process, what additional level of review is needed to ensure that the highest level of sustainability is achieved?

Funding choice and supplier control

The first crucial decision in any vehicle replacement program is funding. Essentially, it comes down to choosing between outright purchase and leasing. Without examining all the financial pros and cons of each option, there are important factors to consider regarding how this decision will impact your engagement with suppliers.

When you choose to make an outright purchase, you will have the advantage of directly engaging with all suppliers. This means you can carefully examine the practices, solutions, and sustainability credentials of conversion specialists, and be the first to know of any issues that may arise during the process. You will also have the opportunity to thoroughly investigate the sustainability claims of equipment and component partner suppliers of the converter.

If you are leasing a vehicle, you are the client of the leasing provider. Though this means you are not as closely involved with the vehicle converter, you can still assess the capabilities of the partners of the leasing provider, albeit in a less hands-on manner.

When choosing a main converter, it's important to consider factors such as their location and how they manage their supply chain. For instance, if your converter operates from a single site and manufactures a large proportion of the fit-out on that site, it contributes greatly to the sustainability of the whole

process. It's also important to establish the geographical origin of the materials, components, and equipment supplied to the converter if possible. Generally, the shorter the route, the more sustainable it is. By considering these factors, you can have confidence in the sustainability of the process.

Basic sustainability checklist

With the requirement for fleet operators to reduce their overall emissions, there is now an increasing requirement for electric Light Commercial Vehicles (eLCVs). Advancements in the base vehicles as well as the innovations of converters and their partner suppliers, means even the most challenging operational tasks can be carried out by vehicles of this kind.

When converting an eLCV, it's important to note that essential requirements for sustainability will also benefit traditional ICE-powered vehicles. Below are some useful pointers and things to look out for when building sustainability into any vehicle. Specific mention will be made if these are essential for eLCVs.

Lightweight materials: With eLCV conversions lightweight materials help compensate for the extra weight of the batteries. Using lightweight materials not only contributes to range optimisation in eLCVs but also to fuel efficiency in ICE vehicles.

The use of recycled materials: During any vehicle conversion, the converter will inevitably use plastic products, there will also be plastics used in the manufacture of the base vehicle, but it is important to enquire if any materials that might be produced more sustainably, are available as an option.

Recyclable materials: Recycling is more sustainable than sending products to landfill. Therefore, when specifying certain elements within your conversion needs, it is important to ask about the recyclability of the materials. For instance, can vehicle graphics and other end-of-life materials be recycled? Many suppliers have developed their products to meet recyclability requirements and provide great alternatives to traditional disposal methods.

Re-use: How extensively can the fixtures and fittings from a converted vehicle be reused in a new vehicle? Are the lightweight materials durable enough for re-use? Let's take flooring as an example. When installing flooring in an eLCV, it's important not to drill in a way that could potentially damage the batteries. This

means that if the flooring isn't drilled into, it can be easily removed without causing damage to the original vehicle. Certain fixtures can also be re-installed in the replacement vehicle. Ask your supplier about how this may work.

Beyond the basics

All of the suggestions and guidance mentioned above will help ensure those LCV-based conversions, most often described as 'mobile workshops,' meet many sustainability requirements. However, there are also conversions that include a variety of onboard facilities or the ability of the vehicle to power external tools and equipment.

These additional demands will significantly increase the power consumption of the vehicle. Finding sustainable solutions for these complex demands may seem challenging, but there are specialised expert suppliers who have made significant progress. For example, they have developed auxiliary power systems that enable the operation of onboard facilities in a Welfare Van without draining the standard vehicle battery. These systems can also power exterior equipment and tools that traditionally require engine idling.

Within this issue of Essential Fleet Manager, you can read articles about how specialist suppliers are now also working with converters to install solar panel systems that further support the onboard power demands of vehicles.

The main driving force behind all on-board power solutions innovations is to eliminate the need for engine idling, thereby reducing emissions and creating a healthier working environment for operatives. It's important to note that advanced systems like these will also enable eLCVs to perform these functions without affecting the battery charge and range of the vehicle. For instance, welfare vans, which are frequently used in remote areas without charging infrastructure, can now be replaced with eLCVs, providing all their benefits without compromising operational needs.

In conclusion, every 'Essential Service' fleet operation in the UK will be impacted by the need to adopt a more sustainable approach within the procurement of their fleet vehicles and the impact those vehicles have on their operatives, the environment and the wider public. Embracing sustainability whilst delivering a cost-effective fleet operation is never going to be an easy task, but by working with key specialist suppliers it is certainly more achievable. ●



Southern Water set to replace a large number of its vehicles as part of its efforts to be more sustainable

The company plans to replace a third of its engineering vehicle fleet, which amounts to over 300 vehicles, most of which will be equipped with solar panels.

These solar panels, located on top of the vans, will allow drivers and employees to charge their essential equipment while on the move, reducing the need for trips to company sites. The new fleet will be operational across the south-east and will be used by various teams, including those focused on technical, operational, and customer services.

These vehicles will house a string of new features including safety sensors for weighing the vehicle, tyres suitable for all seasons, and 70 mph speed limiters.

In an announcement about the initiative, fleet manager at Southern Water, Martin Lock, shared his thoughts. "Vans such as the Vauxhall Combo, Vivaro and Movano, plus Ford 4 x 4 Ranger pickup will replace some of our older vehicles and include the new livery.

"There are some exciting new features that include solar panels on the van's roofs to power on board batteries, reversing cameras and on board weighing."

Southern Water's new fleet will also consist of more than 30 new 4x4 automatic trucks, intended for use at remote sites and for off-road operations. ●

BRI-STOR

SYSTEMS

Part of The **HEX** Group

Supplier Insight: **Bri-Stor Systems** with **Andrew Goodwin**, Sales and Marketing Director

Building **sustainability** into **van specifications**

What is the history of Bri-Stor Systems and what makes you successful?

Bri-Stor Systems is a family-owned business that recently celebrated 40 years of trading. We provide a holistic conversion service that transforms vans into practical, hard-working tools and with the entire manufacturing process contained under one roof we are able to control both supply and quality of materials. Based in Staffordshire, Bri-Stor Systems is one of six divisions that form The HEX Group – which all work together to create our own internal supply chain. Our conversion kits are complimented by a range of value-adding services, commencing with the design and visualisation process where our engineering team works to understand end-user needs in the field. To ensure our customers know exactly what they're getting, we have a dedicated prototype team where we hand-build the 'first off', including electrical loom configuration and third-party products such as power systems and welfare items. Scaled to handle volume, we proactively manage the entire build programme, bringing together products from multiple providers and ensuring regular communication with manufacturers, finance companies and dealers. To complete the picture, we provide in-house graphic design, print and application as well as complimentary services such as damage repair, de-fleet refurbishment, recycling and new starter kit installation.



Bri-Stor Systems has invested heavily in solar energy at its Staffordshire factory

How does Bri-Stor Systems approach sustainability as a business?

Sustainability is at the heart of our business and like many of our customers we have a clear roadmap to becoming carbon neutral. We have already made big strides towards reducing emissions, with zero waste to landfill and significant investment in renewable power, including some 1,800 solar panels on the factory roof and ambitious plans to go further. Our new range of Elite Plus conversion solutions is more sustainable by design, with up to 30% less energy used in construction and fewer welded joints, with the added benefit of lightweight construction. Our supply partners have an important role to play in our sustainability offering to customers and here we actively seek out third party solutions that offer environmental benefits, providing consultative support to help incorporate green technologies such as non-slip floors comprising recycled materials or connecting solar panels on EV's to maintain battery health.

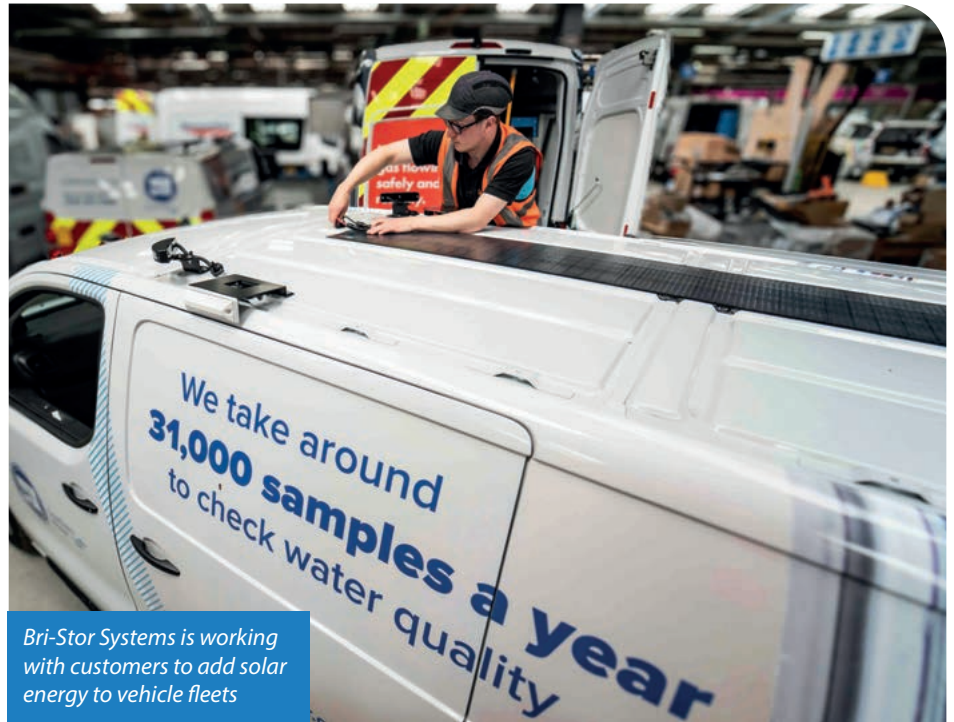
While sustainability is often discussed in terms of green energy

and environmental impacts, we prefer to see the bigger picture. People are arguably the most important aspect of sustaining a healthy business and with over 500 colleagues across The HEX Group, our investment in them is as important as any investment in our facilities or products. With this in mind, we continue to invest in our thriving apprenticeship programme, which welcomes over 20 apprentices each year. Investing in young people and providing a wide range of career paths is a key sustainability factor and they certainly bring a level of energy and enthusiasm that feels very renewable.

How is the drive towards sustainability impacting customer behaviour in the conversion market?

We have already converted hundreds of fully electric vehicles and supported the operational roll-out for some of the UK's largest fleet operators. Our customers are keen to embrace green technology however they are all at different points in the transition to electric vehicles and continue to face challenges in wider adoption across their fleets. Given the nature of the work they do, onboard equipment and tooling carried

and the productivity required each day from technicians, there has been some reluctance to change too quickly due to range and charging infrastructure limitations. As we all move towards a low carbon future, we're seeing fleet operators take a more holistic approach to vehicle conversions, embracing innovations that offer additional sustainability benefits. From in-vehicle charging and powering of external impact tools, through to re-using storage and racking components and recycling vinyl graphics, there is growing interest in what more can be done to de-carbonise fleets and progress the environmental qualities of the converted vehicle as a whole. This is even true of energy-demanding jobs such as compressing air to achieve certain flow rates, and for these and similar applications there is a real drive to consider sustainable power alternatives.



Bri-Stor Systems is working with customers to add solar energy to vehicle fleets



Powering equipment inside a mobile tyre van is now possible using renewable energy

What elements of the conversion are particularly challenging from a sustainability perspective?

Onboard equipment such as compressors, tyre machines and welding equipment have historically proved challenging to power sustainably due to high-energy demands and usage frequency. These items are typically powered by running the vehicle engine or via a separate generator, both of which inefficiently consume fuel, emit high levels of CO₂ and noxious gasses and add to noise pollution. Lithium battery and storage systems have rapidly evolved and now provide viable alternatives to these traditional systems. The tyre industry - where mobile fitters change a high volume of tyres on a daily basis - is a perfect example of a sector in need of innovation. To help with this challenge we have been working with an industry-leading mobile tyre provider to develop a system capable of eliminating engine idling, testing extensively in the field over a two-year period. Lithium batteries are charged as the vehicle drives between jobs with the added benefit of shoreline charging and remote monitoring of battery health. The system is capable of powering tyre-changing equipment for two vehicle life-cycles covering 8-10 years, with the investment more than paid for by a significant reduction in fuel cost. In other applications, we are working with a major water company to deploy lithium and solar on every vehicle to enable sustainable charging of power tools and welfare equipment and will shortly be commencing trials of an upscaled lithium solution that can replace towable generators used in the construction sector. Vehicle graphics has also presented a sustainability challenge. The good news is that we now have livery solutions for our customers that are carbon neutral with waste that is capable of being recycled into secondary-life products.

Cont'd on page 26

Cont'd from page 24

To what extent are conversion systems recycled today?

Deploying a conversion kit for a secondary life seems like a good idea, not simply because of the environmental upside of manufacturing less material, but because of the potential whole life cost benefit. It makes sense to take these high-quality, durable storage systems and fit them to the next vehicle, rather than the conversion offering little or no residual value at the point of remarketing. We have trialled this extensively with a major fleet operator with good overall results, although there are several factors to consider that contribute to this not being as efficient as first appears, such as the requirement to make new floors, electrical looms and vehicle graphics, plus the labour and cost associated with de-installation and refurbishment. That said, we believe there is scope to drive efficiency in the process and offer a solution that addresses a relatively unexplored aspect of recycling and in doing so, contribute to the circular economy. Our new Elite Plus range of conversion solutions is more modular in design and with OEMs sharing more platforms, there should be scope to improve sustainability in this area. Our facilities are geared to support the logistics associated with this process and add value at the point of de-fleet.



Bri-Stor Systems' new Elite Plus racking is lighter and modular, shown here on a Severn Trent Water EV

How does Bri-Stor Systems support sustainability in relation to the investment customers make in tooling and equipping vehicles?

We offer a variety of services that support the vehicle de-fleet process where there are opportunities for recycling of both high-value equipment and low-value tooling. Our Neptune warehouse and logistics team support one particular major fleet operator in refurbishing and reusing a variety of items, for example, small hand tools and power tools that are checked, tested and upcycled for inclusion in new vehicle kits. This service extends to the refurbishment of higher value items ready for a secondary life, such as compact trailers that are used by the roadside recovery sector. When trailers reach the end of their usable life, we remove serviceable parts and manage the spares inventory ongoing. As more customers deploy lithium battery units to provide sustainable power in the vehicle load area or to power external equipment, there will be a requirement to assess battery health at the end of life and determine the appropriate route for recycling or redeployment.

Vehicle graphics seem to be increasingly used to promote a company's brand and message, but is the industry and the materials it produces, truly sustainable?

With the diverse and colourful range of vehicle livery on our roads today, it's rather ironic that a beige coloured vehicle wrap started the trend in Germany, back in the 1970's, in response to a government edict that all taxi's be easy to recognise. With advancements in digital design and printing the vehicle graphics industry has grown rapidly since the turn of the century, although the environmental impact of vinyl manufacturing has not really been understood or sustainable options made available, until now. The fleet sector has a very low awareness of the provenance of vinyl or of the waste generated, either at the point of new vehicle commissioning or on disposal. As part of our ongoing sustainability project, we have tackled this head on, working with an innovative UK-

based manufacturer to offer a suite of vinyl materials that are carbon neutral at source, whilst offering exceptional durability and quality in life. Through our HEX Graphics division, we have invested in facilities to segregate and compact both paper and vinyl waste material, with specialist recycling partners turning this into useful secondary life products such as the Mipad – a high-quality notebook made from recycled graphic paper. Several large fleet operators have adopted these sustainable vinyl materials and are now making their own contribution to the circular economy. ●



Compacted vinyl and release paper waste in dry storage prior to entering the circular economy

For more information visit www.bri-stor.co.uk or email andrew.goodwin@bri-stor.co.uk



Wates Group adds 60 Volkswagen Vans to its property services fleet

Wates Property Services, part of the Wates Group, specialising in property maintenance and zero-carbon retrofit services, has added 30 all-electric ID. Buzz Cargo vans and 30 Transporter vans to its fleet of maintenance vehicles.

Wates selected the ID. Buzz Cargo to help reduce its fleet emissions footprint, with an electric range of 254 miles that makes sustainable mobility simple, while allowing access to properties in the Ultra-Low Emissions Zone.

The all-electric van offers a payload volume of 3.9m³ and a maximum loading

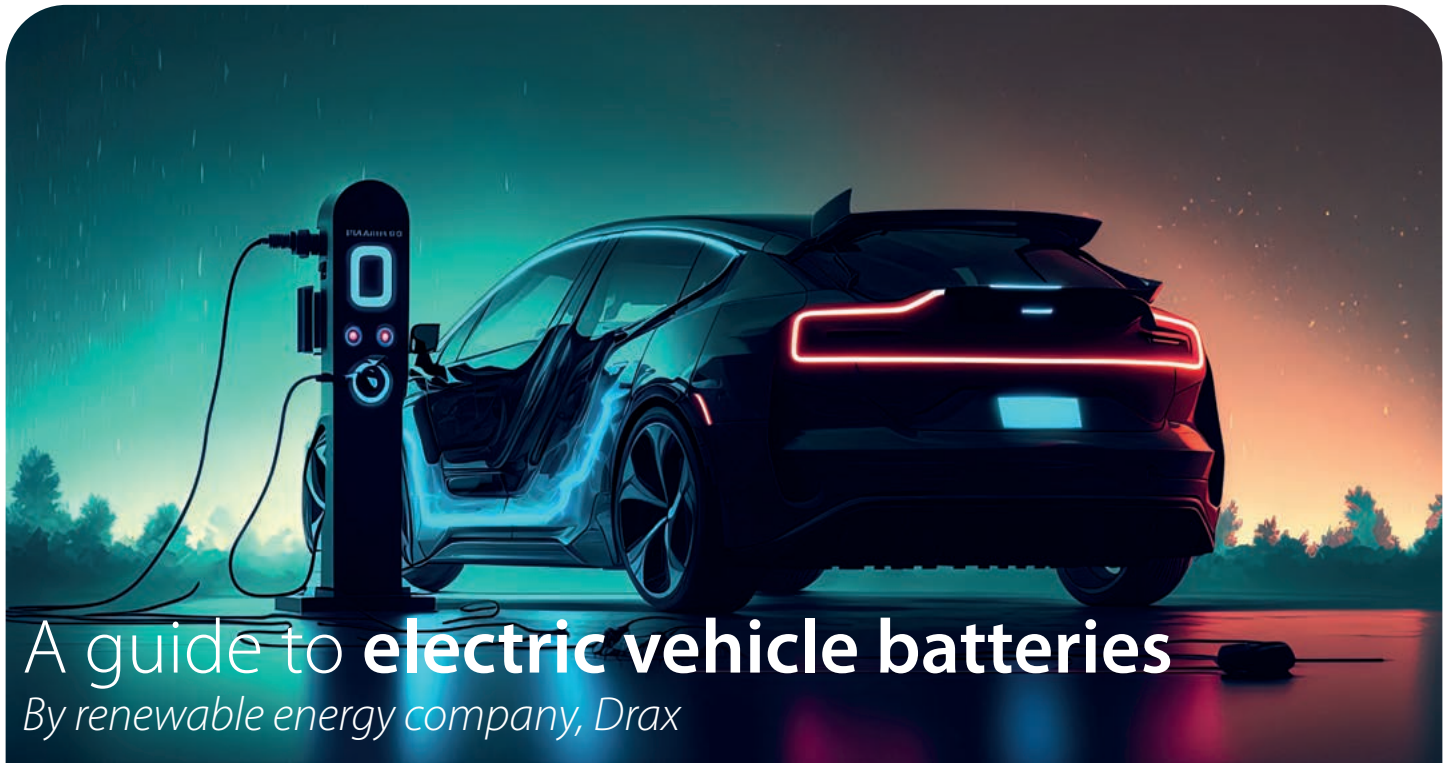
width of 1.7m, height of 1.3m and length of 2.2m, providing business-ready practicality for Wates and their customers.

Wates also required a fleet of larger vehicles that combine class-leading payload, space and flexibility for larger jobs. The award-winning Transporter offers a 1,185kg payload, setting the benchmark for effective and reliable vans that get the job done.

Craig Cavanagh, National Fleet Manager at Volkswagen Commercial Vehicles, said: "Wates Property Services selected our ID. Buzz Cargo and Transporter panel van due to their outstanding abilities as a work tool,

paired with great comfort and flexibility for the drivers as they support their network of properties. We're confident that the vehicles will exceed the expectations of the finance team, with low-running costs making it the perfect partner for the whole business."

David Morgan, Executive Managing Director of Wates Property Services, said: "Since 2021, we have introduced 55 fully electric vehicles, replacing some of our older diesel vans. Our latest investment into electrifying our fleet highlights our commitment to reducing our carbon footprint in our operations and the work we do on behalf of our customers to support a thriving planet."●



A guide to electric vehicle batteries

By renewable energy company, Drax

What are EV batteries made of, how do they work, how long do they last, and what can we do with them after their useful lives?

The power in an electric vehicle (EV) comes from something not very different to the battery in your mobile phone. Both are lithium-ion battery packs. But while your phone only has one power pack, the batteries in an EV are made up of thousands of individual lithium-ion cells.

What are lithium-ion cells made from?

They're made from a number of substances including cobalt, lithium, manganese and nickel.

Why choose lithium-ion batteries for EVs?

Lithium-ion cells are now an economic battery technology, making them a suitable choice for EVs. They have fallen in price dramatically over the last 30 years, and are predicted to continue to get cheaper still.

How does the battery generate electricity?

In a lithium-ion cell, lithium ions flow from one part of the battery (the anode) through a liquid called the electrolyte to another part of the battery (the cathode). This forces electrons to flow through an outside circuit. (During charging this process happens in reverse.)

The electricity that is generated is then turned into mechanical energy in the EV's electric motor. This occurs because of the interaction between the motor's

magnetic field and the electric current flowing through the motor's wire winding. This then generates force which turns the motor's drive shaft.

A charging cycle is one full charge and discharge of a battery.

Each completed charging cycle very gradually reduces the amount of power the batteries can store. This means that after every charging cycle, an EV can drive for very slightly less distance on a single charge. It also means it will take very slightly less time to charge the battery. This process normally takes many years.

What's the lifetime of an EV battery?

Individual batteries are different, but there's general agreement that EV batteries have a lifetime of between 10 and 20 years. That's much longer than the typical manufacturer's warranty. Manufacturers create 'excess capacity', to allow the batteries to continue effective charging cycles even as they age.

Is there any way to increase the lifetime of EV batteries?

Batteries are 'buffered', so they can't use absolutely all of the charge they contain. This effectively reduces the number of complete charging cycles they go through, so they can last longer. EVs are also fitted with special equipment designed to keep batteries cool, which can help extend their life, too.

Does battery size affect range?

The larger the size – measured in Kilowatt hours (kWh) – of an EV's battery,

the greater its charging capacity, and the longer its range on a single charge. And of course, the vast majority of EV journeys are for very much shorter distances than their total range. This is still true for fleet drivers, as our telemetry shows.

What happens to EV batteries after their working lifetime?

Batteries are reused in other functions – storing power for use in the electricity network for instance, or in people's homes. This demand is expected to continue to grow. When batteries can't be used to store power, they're recycled. Currently, around 50% of the materials used in batteries can be re-used in this way. However, manufacturers are already working on ways to make battery recycling more effective.

How sustainable are EV batteries?

Batteries are made from lithium ion. There are emissions associated with the mining of this material, and with the production of the battery itself. However, the batteries have long lifecycles, and the most efficient models take just two to three years of driving to save the amount of carbon emitted in producing their batteries.

Since batteries can also be used in domestic settings beyond its life in a car. Some estimates place this secondary lifespan at between 10 and 15 years, which means they can continue to payback emissions for longer. ●

Autotech Training unveils Autolearn to support CPD and ongoing learning

In a direct bid to support the continuous upskilling of vehicle technicians in an era of rapid automotive technological advancements, Autotech Training has launched Autolearn, a dynamic Learner Management System (LMS).

The online learning platform, powered by Autotech Training, is set to revolutionise how vehicle technicians engage in Continued Professional Development (CPD), ensuring compliance and proficiency in repairing and maintaining EVs and ADAS-enabled vehicles.

Supporting mandatory IMI TechSafe™ recognised CPD routes, Autolearn will offer modular, bite-sized e-learning courses adaptable to meet the busy schedules of learners.

The introduction of Autolearn comes at a critical point when the industry is facing

stringent compliance demands.

An estimated 8,000 individuals will need to undertake essential CPD training before next April to remain IMI TechSafe™ registered and compliant. Vehicle technicians who have achieved an EV certification are required to complete a total of 18 hours of CPD over three years, while those who have embarked upon ADAS training must pursue 10 hours to maintain compliance.

Facilitating accessible and flexible learning experiences, Autolearn's user-friendly interface and meticulously crafted modules ensure learners can meet these requirements efficiently.

"With the automotive landscape shifting towards highly sophisticated technologies, it's imperative for vehicle technicians to continuously adapt and upskill," comments Alistair McCrindle, Autotech Training's

Director of Operations. *"Autolearn is not just a platform; it's a commitment to lifelong learning and industry excellence. It signifies our dedication to equipping technicians with the skills set to manage vehicles today while helping them remain compliant."*

Beyond individual training needs, Autolearn is poised for growth, with future plans to offer white-label capabilities, allowing companies to deliver custom training courses through Autotech Training's platform.

The learning platform underpins Autotech Training's mission to empower vehicle technicians and uphold the highest industry standards. By launching Autolearn, Autotech Training not only reinforces its position at the forefront of automotive training but also fosters a culture of ongoing professional development crucial to the sector's success. ●



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Enabling Low-Emission Fleets with Retrofit Electrification



BEDEO, a trailblazing innovator at the forefront of the electric mobility sector, has released a whitepaper exposing major government and policy gaps in the UK EV retrofit market, despite retrofit technology being a proven accelerator for EV adoption and accessibility.

The whitepaper, titled *'Accelerating the Transition, Supporting our Businesses: Enabling Low-Emission Fleets with Retrofit Electrification'*, underscores the critical need for introducing incentives for those looking to retrofit, and for retrofitters to be tighter regulated and scrutinised on safety and quality standards.

Retrofitting is already popular and well subsidised in other European countries such as France, it's a process that converts used ICE vehicles to run on electric power, and a proven accelerator in the adoption of EVs. Not only is retrofitting a vehicle to run on electric power proven

to extend the life of that vehicle, it also increases its residual value, making it a competitive alternative to buying a new electric van. Additionally, this approach reduces the total cost of ownership as well as the financial burden of buying a brand-new EV while minimising environmental impact; especially for vehicles in this category with major built-ons in the back of the vehicle, such as refrigeration units, minibus conversions and many other rear fit-out applications. Despite these benefits, the retrofit market is perceived to be lacking in the UK, in a landscape ripe for potential that presents a promising opportunity, ready for smart incentives and enhanced regulation, as emphasised in BEDEO's whitepaper.

The whitepaper further highlights the UK's climate issues, as the UK is making *'worryingly slow'* progress towards net-zero, according to the Climate Change Committee, showing no real signs of improvement. BEDEO's paper notes that

with an average vehicle age of 8.4 years, many ICE vehicles registered in the UK by 2035 (zero emissions mandate) will still be emitting greenhouse gases in the 2040s. BEDEO emphasises the need for support for light commercial vehicles (LCVs), too, which heavily rely on diesel, and travel further than the average passenger car. As of March 2020, the stats show that 4.1 million vans in Great Britain covered 55.5 billion miles annually, with lifetimes over 200,000 miles. This means that ICE vans, produced until 2035 or beyond, will, too, continue to emit harmful greenhouse gases beyond 2040, unless they are converted to run on electric power one way or another – with retrofitting emerging as a cost-effective and quicker solution to help meet these crucial deadlines.

BEDEO, founded by Osman Boyner in 2009, has been championing the electrification of UK fleets since the company's UK market introduction in



BEDEO

By embracing retrofit solutions, the UK can mitigate the environmental impact of diesel vans and passenger cars, improve air quality, and accelerate progress towards a greener, more sustainable future.

2012. He said, "There's still a lot of work to do for the adoption of EVs. When we came to the UK in 2012, it was due to the UK government's pioneering vision and incentivisation of electrifying fleets (and passenger cars), but that seems to have fallen by the wayside.

"The UK was one of the first countries to offer the plug-in car grant, which is now no longer in use; plus the plug-in van grant, which is due to close in 2025 and has significantly reduced from £8,000 (and even up to £16,000 for the N2 category) to £5,000 from 2012 to now! The government also got muddled up by its 2030 to 2035 ban on ICEs and lost a lot of support from SMEs, especially when the cost for them to adopt a new EV (car and van) is nearly 20 per cent more than a diesel equivalent. We just have to look at our capital city, London, for a real-world case study in the reduction in EV incentives. Through Transport for London,

it was one of the first cities in the world to establish Congestion Charge exemptions for electric vehicles. That exemption is being abolished in 2025. The falling incentives and government u-turns are causing a lot of confused drivers to wonder if they should switch to electric or not to power their next vehicle, and that's where retrofit can help lessen the burden.

"Retrofit is going to be important in the UK's quest for not only a circular economy, but also to adopt electrification, and I'm surprised the UK government aren't doing more to support it – when you look at how popular Vinted and eBay are for fashion – why can't we do that with cars and vans? Why do we have to just buy new?"

While currently still small-scale in the UK, companies like BEDEO are putting retrofit on the map, with BEDEO spearheading retrofitting's introduction through its OEM-grade Reborn Electric programmes.

These programmes use revolutionary in-wheel motors, from Protean Electric to enable the electric powertrain conversion, as well as proven, turn-key batteries and chargers, trusted by Stellantis and other large suppliers, from BEDEO direct. In its recently launched whitepaper, the Company highlighted that not only is the UK government not investing in financial incentives for owners looking to retrofit their used cars – yet they do for buying brand new EVs – they are also not regulating the industry in terms of safety or best-practice in quality standards.

Osman Boyner, Founder and CEO of BEDEO, continued and warned, "At BEDEO and Protean Electric, we have been undergoing our own extensive testing and validation of our retrofit solutions before offering them to fleets and private customers. The retrofit market is a bit of a 'wild west' at the moment – anyone could take a used EV platform, add it to a vehicle and offer it for sale. They do not have to undergo any testing or validation, and if it's for a classic vehicle, no MOT would be needed, either.

"Electric retrofit deserves to have its own regulation, terms and conditions to meet before converting a vehicle and putting it on the road, for the sake of other drivers and occupants of the vehicles. As such, I don't think electric retrofit is taken as seriously here in the UK, hence it being swept to the side in terms of not only safety but also subsidies. Retrofit is a missing link in the electrification roadmap, but to accelerate growth, the government needs to support and regulate it correctly."

The whitepaper concludes with a call to action for policymakers, industry stakeholders, and fleet operators in the UK to prioritise investment in retrofit technologies. By embracing retrofit solutions, the UK can mitigate the environmental impact of diesel vans and passenger cars, improve air quality, and accelerate progress towards a greener, more sustainable future. BEDEO will be submitting this whitepaper and other evidence for the government's Registering historic, classic, rebuilt vehicles and vehicles converted to electric: call for evidence as officials review policies and processes relating to DVLA registrations for conversions. ●

<https://bedeo.tech/wp-content/uploads/2024/05/Accelerating-the-Transition-Supporting-our-Businesses.pdf>

Prioritising driver mental wellbeing to reduce fleet risk

In the UK, one in four people experience a mental health problem each year, and one in six report a common mental health problem – such as anxiety and depression – each week.

When we look at the fleet industry, professional drivers have been identified as a high-risk group when it comes to poor mental health. In fact, one in five drivers describe their mental health as poor.

In Mental Health Awareness Week last month, leasing company, Volkswagen Financial Services (VWFS) Fleet shone a light on the potential impact of poor driver mental health on fleet safety – sharing its top tips to help fleet operators drive positive change.

The impact of driver burnout

Studies have shown that a high level of stress can increase driver errors and traffic violations, with there also being a strong correlation between this and aggressive driving styles. These behaviours all increase the chances of road collisions.

"If our minds are preoccupied when driving, our reaction times can be delayed, and our concentration can lapse," says Paul Starkey, Product Manager for Commercial Vehicles at VWFS Fleet. *"It's essential that fleet operators take their drivers' mental wellbeing seriously to minimise road risk."*

Stress can come from a range of sources. For example, a study in France illustrates the effect of personal issues on driver safety, finding that the risk of being involved in an at-fault collision was four times higher for people going through a divorce.

But the role itself can be a root cause of stress for fleet drivers, adds Paul. He says: *"Having to spend many days or weeks alone, away from family, stuck in traffic jams and dealing with tight delivery deadlines can also*

harm a driver's mental health."

Duty of care

According to data from the Department for Transport (DfT), over 25% of accidents on the UK roads involve people driving for work purposes. In response to this, UK health and safety initiatives have focused on strengthening the laws related to driving at work, aiming to provide robust protection for both employees and employers.

"All employers have a legal duty to prevent work-related stress and support good mental health by conducting regular risk assessments and acting on the results," shares Paul.

"Identifying stress as early as possible should be an important part of managing risk among your fleet drivers. Aside from providing the relevant training, communication protocols and risk assessments, fleet operators can also implement other initiatives. This could include offering mental health support, stress management resources, and counselling services."

Supporting drivers' mental health

To help fleets put safety in the driving seat, VWFS Fleet shares its top tips to help

prioritise driver safety and wellbeing:

1) Fatigue management

DfT statistics show fatigue has a role in 20% of collisions on major roads.

The first port of call is to ensure drivers' schedules are in line with working time regulations. But, as per Health and Safety Executive guidance, support needs to go beyond managing shift times, as this doesn't take into account undiagnosed sleep disorders, poor sleep habits and commuting times, which may not allow for sufficient rest between shifts.

Fleet operators can implement flexible policies for those suffering from fatigue, share tips on how to get better rest, as well as highlight the appropriate actions for drivers who are feeling fatigued on shift.

2) Check in on a regular basis

"Making sure drivers feel empowered and encouraged to share when they're struggling is key," explains Paul. *"Regular check ins and promoting openness about mental health can help to drive a culture of information-sharing amongst fleet drivers."*

Alongside this, it's important fleet operators are also clearly communicating



Picture for illustration purposes only

to drivers who they can go to if they need a confidential conversation. Businesses can also consider having qualified Mental Health First Aiders throughout their fleet team, as well as implementing an Employee Assistance Programme to allow more tailored support for those who need it.

3) Promote positive stress management techniques

Given its significant impact on road safety, fleet operators also need to put measures in place to support drivers in managing stress.

This can be as simple as promoting positive stress management techniques, including sharing deep breathing and mindfulness exercises, as well as encouraging a healthy, balanced diet alongside a good exercise routine.

4) Monitor telematics data

Telematics data can be an incredibly powerful tool in helping fleet operators

to identify and act on driver mental wellbeing concerns.

“Telematics technology can identify any trends or behavioural changes in fleet drivers,” shares Paul. “It can highlight increases in instances of speeding or harsh braking or acceleration, for example, which can be potential indicators of a stressed driver.”

5) Post-collision care

If a driver has been involved in a road collision, it’s important to ensure the process you have in place for managing this and the driver’s return to the road considers their mental wellbeing and driving confidence.

“Sometimes, fleet drivers can feel pressure to get back on the road quickly after a collision, once the vehicle is in a road-worthy condition,” adds Paul. “However, it’s important that fleet operators are assessing how mentally-ready drivers are, before they get back behind the wheel.

Following a collision, drivers should be given access to emotional support as required, and fleet operators should consider whether there’s a need for additional training to address a lack of confidence or increased driver anxiety following the incident.

“Again, a culture of openness and information sharing is key here – drivers need to feel confident to say when they’re not comfortable,” says Paul.

Stress can manifest itself in different ways for different people. With drivers being on the road, it can be all too easy to miss the warning signs. But fleet drivers are a high-risk group when it comes to stress and poor mental health.

“Fleet operators need to consider the different factors that can impact a driver’s mental wellbeing and create a culture where drivers feel safe and comfortable when they are struggling. It could easily save a life,” concludes Paul.●

To find out more visit: www.vwfsfleet.co.uk

Suffolk Fire & Rescue Service unveils £3.5 million investment in new equipment

A 32m turntable ladder vehicle, a specialist rescue tender, six new fire engines, a driver trainer vehicle plus a fleet of electric pool cars are among the new fleet for Suffolk Fire and Rescue Service (SFRS) that will be on the road soon continuing to keep the county safe.

The vehicles were designed jointly by SFRS and fire engine manufacturers Emergency One of Scotland as part of a planned replacement programme.

Suffolk Chief Fire Officer Jon Lacey said: "These new vehicles are equipped with the latest technology and give our staff the best tools to do the job of keeping the residents of Suffolk safe.

"Our fire engines are replaced after 15 years, in line with national best practice, and when we do replace them it is done so with equipment of the highest quality that meets the firefighting needs of the county and provides the best value for money the taxpayer."

"We are also supporting the Suffolk Climate Emergency Plan by transitioning to electric vehicles for our officer and pool cars, a move which will support our aim for carbon neutrality by 2030."

Councillor Craig Rivett, Suffolk County Council Cabinet Member for Public Health and Public Protection, said: "This is a significant investment in firefighting on behalf of the people of Suffolk.

"These vehicles and equipment will ensure our firefighters can continue to perform their duties in protecting and working with the community to the very high standard we are accustomed to.

"I look forward to seeing these vehicles and this equipment being used for many years to come."

The new vehicles and equipment consist of:

- **Turntable Ladder** – this replaces an aging Multistar platform and will be based at Bury St Edmunds. It is one of two specialist high reach vehicles in the county. It has a lighter chassis



One of the two Enhanced Rescue Tenders for specialist rescues. They will be based at Newmarket and Princes Street, Ipswich. Picture: SFR

and a 32-metre extending ladder.

- **Driver Training vehicle** – New legislation has seen emergency response driver training standards increase with a requirement for more training time. This new vehicle offers a bespoke training tool which can double-up as a water carrier in times of increased summer firefighting and which will complement two existing water carriers within SFRS. It will be based in Ipswich but used all over the county.
- **Enhanced Rescue Tenders** – these two vehicles are designed to meet the needs of specialist rescue, particularly on our roads. They will be based at Newmarket and Princes Street in Ipswich. They also can be used as standard firefighting appliances. Built with the latest Euro VI engines they produce lower emissions and carry a range of battery-operated equipment that has replaced aging petrol generator powered tools. They have a built-in solar panel to support the vehicle charging.
- **Type B Fire Engines** – these six vehicles feature air-conditioned cabs, enhanced scene and safety lighting, low emission Euro VI engines, and dedicated decontamination sinks, alongside a range of other



The electric vehicles play a big part in the SFRS support for Suffolk County Council's Climate Emergency Plan. Picture: SFR

equipment. They will be based at fire stations in Ipswich East, Princes Street Ipswich, Bury St Edmunds, Lowestoft South, Elmswell, and Halesworth.

- **Officer Response and Pool Cars** – Following the Climate Emergency declaration in 2019 SFRS has supported the Suffolk Climate Emergency Plan developed by Suffolk County Council (SCC). This has included the transition to electric vehicles which includes 15 VW ID4 Blue light officer cars and six Nissan Leaf Pools cars. This transition will support the SFRS aim for carbon neutrality by 2030, and with the addition of four electric vans later this year will see 28% of the SFRS small fleet transitioned to EV. This has been supported by SCC decarbonisation-funding for a strategic charging network across our fire stations. ●

Executive Agency of MoD reduces mileage by 372,000 and saves more than 100 tonnes of CO2e

Enterprise Mobility has partnered with the Defence Science and Technology Laboratory (Dstl), an Executive Agency of the Ministry of Defence, to enhance the sustainability of its business travel.

Nearly 100 Enterprise Car Club vehicles are now deployed on-site at three locations in Wiltshire and Hampshire.

Dstl now has, one of the largest on-site business car club fleets in the UK.

The on-site car club has significantly reduced the need for vehicle deliveries and collections. This has reduced business mileage by an estimated 372,000 miles and saved more than 100 tonnes of carbon dioxide equivalent (CO2e) supply chain emissions within a 12-month period (February 2022 to January 2023).

This emission saving is equivalent to flying from London Heathrow to Sydney, Australia more than 30 times.

The on-site car club programme means employees can opt for public transport for their daily commute. This helps to minimise traffic and noise pollution, while providing access to vehicles at work for essential business travel.

The Dstl workforce can also enrol in the Enterprise Car Club on-street network, granting access to more than 1,500 vehicles in 200 locations across the UK, including many residential neighbourhoods and regional transport hubs.

Alternatively, Dstl employees can rent vehicles for business travel through Enterprise Rent-A-Car's extensive branch network. This flexibility is particularly beneficial during peak periods. It also ensures that Dstl's workforce has access to vehicles at the office or at home, even in rural locations.

Dstl employees book their vehicles via the Enterprise Travel Direct (ETD) platform on their phones or desktops.



Dstl's car club fleet comprises an increasing number of electric vehicles, allowing employees to opt for zero-emission transportation options.

The dedicated car club vehicles are equipped with telematics to capture data on utilisation, mileage and emissions to help tailor Dstl's approach to business travel. For instance, by reviewing journey distances, Dstl can determine the number of vehicles that could transition to electric vehicles in the future.

As part of the bespoke package, Enterprise Mobility has assigned a dedicated professional responsible for on-site vehicle servicing and maintenance, which includes cleaning and minor repairs.

John Barber, Principal Estates Contract Manager at Dstl, comments: "We are incredibly proud of the collective effort and collaboration that has led to this remarkable outcome.

"The emission savings resulting from the expansion of our dedicated Enterprise Car Club programme exemplify the immense potential of business car clubs in driving positive environmental change.

"One of the key advantages to having the vehicles on site is that there is a lesser need to transport vehicles to and from the rental branches. This reduction in miles travelled

not only contributes to the improvement of local air quality, but also helps to ease traffic congestion, particularly during peak travel times within the areas where we operate. These benefits extend beyond our own operations, positively impacting our local communities and fostering a more sustainable transportation system."

Andrew Bland, Head of Business Rental Development for the UK and Ireland at Enterprise Mobility, adds: "There has been strong evidence of the potential of on-site car clubs in helping to reduce emissions from employee travel, and Dstl is an excellent and large-scale example.

On-site car clubs act as a catalyst for better employee travel habits. The evidence from this programme is that employees commute less by car, for example, because they know there's a vehicle at the office if they need one for a business trip.

"Dstl's commitment to being a responsible member of the community and aligning its supply chain with its social value priorities is at the forefront of its business travel approach – and it is also demonstrating the value of collective effort and collaboration to think differently about employee mobility.

"Any organisation with employees who drive personal cars for work, or that is running a pool car fleet, can potentially benefit from an on-site car club."●

Fleetclear Connect is 'game changer' for Preston City Council

Preston City Council has upgraded its new refuse collection fleet with the latest safety and tracking technology from fleet solution partner Fleetclear.

In a city that is dominated by 70% urban/suburban properties, with many legacy high-rise blocks and traditional terraced housing alongside new flat developments, there is a high proportion of difficult to access areas, narrow streets and cul-de-sacs for the council's refuse collection vehicles to navigate.

The installation of blind spot monitoring and tracking technology is a crucial step to ensure the safety of the public, vulnerable road users and crews in Preston, and reduce accidents especially when vehicles are performing reverse manoeuvres. The new fleet is equipped with a full package of safety technology from Fleetclear including:

- Cyclear, the ultimate safety solution for cyclists and vulnerable road users with an LED warning sign and audible speaker to alert cyclists when the vehicle is turning left.
- the RX Lite camera system, proven to be effective in harsh environments, for 360° round vehicle surveillance to eliminate all blind spots.

The council has also adopted Fleetclear Connect, a web-based fleet management solution that connects vehicle safety technology and software, combining it with tracking, telematics including fuel and carbon analysis, driver behaviour and compliance monitoring. The result is a simplified, all in one solution to manage vehicles and drivers.

Matt Sharp, Systems & Administration Manager – Neighbourhood Services, explains why Preston City Council has been such a long-standing Fleetclear customer:

"We've been using Fleetclear for over 8 years now and we've always been impressed by their products, customer service and responsive after sales support. The



Pictured: Matthew Sharp, Systems & Administration Manager – Neighbourhood Services, Preston City Council with some of the Fleetclear equipped vehicles

technicians are knowledgeable, useful, and accommodating. Nothing is too much trouble, and they always go the extra mile."

Fleetclear has a reputation for designing and supplying robust, future proofed products that rarely fail.

"The safety technology equipped to our vehicles continues to evolve and we like the fact that Fleetclear is dedicated to continually researching and developing its products and services. There are regular software updates and new features being added all the time. The new cloud-based system is a game changer and so easy to use.

"We can access the system from anywhere, perform searches and view specific footage from any vehicle at any point during rounds. The geo-fencing feature means that we can search by street or area. The system is a huge time-saver especially when resolving incidents or complaints from the public or crews. Previously, we had to download all the recorded footage first and then search through it. It could take days to find the relevant piece of footage. With Fleetclear Connect it usually only takes minutes."

For Preston City Council being able to track the whereabouts of every vehicle in its fleet is crucial.

Matt added: *"We are utilising the tracking features to ensure that vehicles are completing rounds and accomplishing the targeted number of collections, which is especially important when investigating missed bin reports. We can see if vehicles did attempt to make a collection and what*

transpired for a bin to have been missed, such as access issues or non-presentation of bins."

The Fleetclear Connect system has a customisable dashboard, which offers a host of other modules for monitoring and analysis. These include data and reports on fuel efficiency and associated carbon footprint, by driver, vehicle, or round; route optimisation features using historic and live traffic data, and incident alerts to reduce the risk of accidents; and extensive advanced driver behaviour monitoring features that score drivers for harsh braking and speeding alerts.

A particularly important feature of Fleetclear Connect is the system's ability to integrate with other software, equipment, and systems, such as weighing, tachograph and other back-office packages.

For Preston City Council the next step in the roll-out of the new system is to integrate its Bartec waste management collective software with Fleetclear Connect. This will enable the entire collections operation to be viewed on one system, via one dashboard, and provide an invaluable overview of how the service is performing, highlighting any areas for improvement.

Matt commented: *"By integrating round information and collection schedules we can close the loop and see how the whole operation works together, which will help us to further streamline our front-line services, improve safety standards, reduce costs and work more efficiently."* ●

New branded fleet for Reactive Maintenance team at CityGroup



CityGroup a leading facilities management company, has recently launched a new fleet of branded vans dedicated to its reactive maintenance team. This strategic move will enhance the company's operational efficiency, improve customer service, and reinforce its brand presence across its service areas.

The new fleet comprises state-of-the-art vans equipped with all the latest tools, equipment and technology required for a wide range of maintenance tasks. Each van is designed to function as a mobile workshop, ensuring the reactive maintenance teams respond promptly and effectively to any reactive service call.

"Our new vans are more than just vehicles; they are mobile service units that enable our technicians to address maintenance issues on the spot," said Jennifer Cole, COO of CityGroup. *"This upgrade is part of our commitment to providing top-notch service to our clients and ensuring minimal downtime for their operations."*

The vans have been fitted with cutting-edge features designed to streamline the work of the maintenance team. Key features include:

- **Integrated Tool Storage:** Customisable shelving units and storage compartments to keep tools and parts organised and easily accessible.
- **Onboard Diagnostics:** Equipment for quick and accurate diagnostics to identify and fix issues swiftly.
- **GPS Tracking:** Advanced GPS

systems to ensure efficient routing and timely arrival at service locations.

- **Eco-Friendly Engines:** Fuel-efficient and low-emission engines to reduce the environmental impact and operational costs.

CityGroup's new vans are not only functional but also serve as mobile advertisements for the company. The vans feature a striking new livery, prominently showcasing the CityGroup logo and contact information. This branding effort increases visibility and recognition as the vans travel through various cities and business districts.

"Our branded vans are a testament to our brand's reliability and professionalism," noted Ian Dearden, Senior Facilities Manager at CityGroup. *"They are a constant reminder of our community presence and dedication to quality service."*

With the new fleet, CityGroup aims to enhance the overall customer experience. The vans are stocked with commonly needed parts and supplies, parts and equipment reducing the need for multiple trips and ensuring that most issues can be resolved in one visit. This efficiency directly translates to faster response times and resolutions, minimising client disruptions.

"Our clients rely on us to keep their facilities running smoothly," added Jennifer Cole COO. *"The new fleet allows us to respond to their needs faster and more efficiently, which is critical in maintaining the high level of*

service they expect from CityGroup."

CityGroup has also invested in comprehensive training for its reactive maintenance team to ensure they are fully versed in the new van systems and equipped to use the onboard technology effectively. Safety remains a top priority, with the vans including enhanced safety features such as backup cameras, collision avoidance systems, and ergonomically designed interiors to reduce physical strain on technicians.

Introducing the new fleet is just one part of CityGroup's broader strategy to innovate and improve its service offerings. The company plans to continue investing in technology and infrastructure to maintain its position as a leader in the facilities management industry.

"We are committed to continuous improvement and efficiency innovation," said Jennifer. *"The new fleet is a significant step forward, but it's just the beginning. We will continue to push the boundaries to deliver exceptional service and value to our clients."*

CityGroup's new fleet of branded vans represents a bold step towards a more efficient, visible, and customer-focused future. As these vans hit the roads, they symbolize CityGroup's dedication to excellence and its unwavering commitment to meeting and exceeding the evolving needs of its clients. ●

North Devon Council commits to reducing carbon emissions

North Devon Council has announced its proactive steps towards reducing carbon emissions.

In alignment with its commitment to combat climate change, the council has resolved to replace selected vehicles with

electric alternatives, as part of its journey towards a greener future.

Furthermore, the council will embark on additional efforts to assess the feasibility and costs associated with installing more electric vehicle charging points in council-owned facilities.

Lead Member for Climate and Biodiversity, Councillor Ricky Knight, says: *"The decision to invest in electric vehicles underscores our commitment to tackling the climate emergency head-on.*

By embracing sustainable transportation solutions, we are not only reducing our carbon emissions but also setting a positive example for our community. This initiative aligns with our goal to achieve net-zero carbon emissions by 2030, demonstrating our dedication to creating a cleaner, greener future for North Devon."

The replacement of more council vehicles is under active consideration, reflecting the council's ongoing commitment to environmental sustainability. ●



Vodafone Automotive sees AI playing key role in keeping fleet drivers safe

Keeping driving teams safe on the roads, is one of the main things likely to keep a fleet manager awake at night.

Thinking about how to avoid their team being involved in accidents resulting in injuries or more serious harm, along with increased repair bills, motor insurance premiums, medical expenses and traffic offences – would all be top of the list to do just that.

Not to mention that accidents cost the EU economy alone around €130 billion yearly, along with the heavy impact on employee morale and company reputation, and worse, loss of customer trust.

Artificial Intelligence (AI) is being adopted by more and more fleet managers to help them to run their vehicles in an ethical, safe and greener way – all while protecting their cost-savings. With fleet industry growth predicted at more than 15% per year on average, more managers will be looking at these kinds of tech to help them protect their businesses – for example, supporting them with on-time goods delivery and driver safety.

Real-time fleet data using AI smart algorithms can really make a difference to

preventing harm on the roads – here's five of the most common use cases:

1. Keeping vehicles maintained proactively to reduce unexpected breakdowns, with advanced identification of vehicle failures
2. Analysis of driving behaviour including fatigue, speeding or distraction, with driver alerts to promote safer driving
3. Detection and avoidance of hazards or collisions, with alerts and automatic braking, or steering
4. Safer route planning through traffic congestion, adverse weather and road conditions
5. Supporting drivers to improve their driving experience by reducing reaction times and stress, with adaptive cruise control and lane keeping

This AI used to make fleet management safer is based on telematics, machine learning, computer vision, natural language processing and cloud computing technologies. Let's deep dive these and take a closer look:

AI can take a significant amount of

telematics sensor data in real-time and, understand more on vehicle and driver performance e.g. location (using GPS), speed (accelerometer) and vehicle health (engine sensors). Fleet managers can use the insight to spot issues and address safety, efficiency and productivity issues e.g. a telematics systems study found they can help to reduce fleet accidents by as much as 30%.

Large amount of data from fleets can then also be fed into and processed through, machines that learn from it (i.e. machine learning) and build ways of working models – based on known events – without having to be programmed – for events that haven't even happened yet. Automated processes then start to give companies a competitive edge e.g. predictive vehicle maintenance. Even better, when the automated historical data 'eyes and ears' predictions, can help to prevent accidents, keep employees safe and costs under control.

Another set of digital 'eyes' to improve fleet safety comes in the form of computer vision. This technology uses cameras, sensors, LiDAR (Light Detection and Ranging) and image processing

algorithms, to monitor and analyse visual information to increase overall fleet safety (e.g. road conditions, objects around the vehicle and driver alertness).

Moving over to sound, natural language processing enables AI systems to understand, interpret and respond to human language. This is helpful for analysing voice-based communication between drivers and fleet managers e.g. making phone calls, assessing traffic information or suggesting alternative routes. Alternatively, if risky driving is detected, fleet managers can alert their drivers using text-to-speech – all encouraging drivers to focus on the road with hands-free interaction – reducing the likelihood of their driver being involved in an accident.

Finally, cloud computing has the power and storage capacity to process millions of data points in real-time, needed for AI-driven fleet safety systems to work effectively. Plus, enabling predictive analytics based on historical data sets, so fleet managers can make informed decisions, identify risks in real-time and prevent accidents, or breakdowns before they happen.

Fleet managers should be thinking about implementing this technology as part of a wider business view. Developing a safety culture should be a top priority. At Vodafone, 'Drive Safely' is one of our 'Absolute Rules'. Safe driving practices are an integral part of our very company foundations, which shows that we take it very seriously and put it above everything. Clear guidelines and commitment is a way of working must for all.

Think seriously about investing in safety tech and consult with a trusted advisor on it. Get a good view of current market offerings, on products and services that can really support you to reduce risk (such as managing seatbelt wearing or alerting on driving distractions), by managing your fleet team and operations safely.

This kind of tech can then help you to check your drivers' behaviour (e.g. distraction, harsh cornering and braking, speeding, plus reduce risky driving behaviours on the road. You can use intelligent data to turn opinion into fact and create a stronger training and development conversation with your teams. That way you have insights as a basis for improving and rewarding the right driver behaviour – delivered through education and training programmes (e.g. on eco-driving, vehicle handling, hazard awareness and distracted driving etc).●

To find out more about Vodafone Automotive visit: <https://automotive.vodafone.com/uk/>

Fleet view of EV versus ICE maintenance emerging

Shaun Sadlier, Head of Arval Mobility Observatory

New research has provided a detailed picture to indicate how UK fleet managers view electric vehicle (EV) service, maintenance and repair (SMR) costs and downtime compared to internal combustion engine (ICE) cars and vans.

The 2024 Arval Mobility Observatory Fleet & Mobility Barometer shows that when it comes to general servicing, 25% believe that EVs are cheaper and bring reduced downtime compared to 14% for ICE.

Also, 57% say EVs are better for mechanical repair compared to 14% for ICE, and 28% favour EVs for body repairs compared to 20% for ICE.

However, the picture is similar for tyres – 19% EV against 18% ICE – while ICE wins parts availability, which is perceived to be better at 43% versus 17%.

Shaun Sadlier, Head of Arval Mobility Observatory in the UK, said: "Fleets are starting to build up a knowledge base about the SMR of EVs and this question – asked for the first time in our 2024 research – reflects their experiences compared to ICE cars and vans. It is important to underline that their responses are based on their impressions rather than actual SMR data.

"It is interesting to note the areas where fleets believe EVs and ICE vehicles are each scoring highly. EVs are clearly winning out in the mechanical repairs category, almost certainly a result of simply having fewer parts in their powertrains to wear or go wrong, and advantages are also perceived when it comes to general servicing, probably for similar reasons.

"However, ICE is felt to have a clear advantage when it comes to parts availability, the latter probably a result of the relative newness of EVs being operated at scale. Certainly, we are aware that parts availability for some newer cars and vans has been difficult over the last few years for all fuel types, due to market conditions.

"In the remaining categories, the picture is much more balanced, with no real clear advantage for either EV or ICE when it comes to tyres or body repairs.

"It should be remembered that few fleets have yet operated EVs through one complete replacement cycle yet, and it will be interesting to see the responses to this question develop in future versions of the Arval Mobility Observatory Barometer, with fleets gaining more experience of their operation over time and as more data becomes available."

The 2024 Arval Mobility Observatory Barometer questioned 8,605 businesses in 30 countries about their vehicle operations.●



Toyota Corolla ready for service with the UK's police

The Toyota Corolla is a proud new recruit to the UK's police, tailor-made and ready for duty as a reliable and durable top-quality patrol car that also offers the fuel and emissions efficiency benefits of hybrid power.

To mark Corolla's new role, Toyota Manufacturing UK (TMUK) recently hosted the equivalent of a passing-out parade for the car its Burnaston plant in Derbyshire, the production centre for all European Corolla models. More than 20 constabularies attended the 'blue light' event to learn more about the qualities that make Corolla a strong proposition for police fleets.

TMUK has worked closely with a number of police forces during the past two years to ensure the vehicle meets all the principal requirements for consideration when service fleets are being replaced or upgraded.

A dedicated team at Burnaston's Special Vehicle Operations Division carries out the conversion work, ensuring the finished vehicles meet Toyota's high-quality standards. Using TMUK's state-of-the-art production facilities and with the benefit of the technicians' expertise, the project has achieved significant economies of scale that help drive down costs. Production capacity is expected to expand to 15 vehicle conversions per week.

Key features of the police-specification vehicle include: –

- Enhanced safety: built-in satellite navigation, parking sensors and a dog guard for the load compartment.
- Roof-mounted lightbar, exterior and interior illumination
- Secondary battery equipment and control systems built to withstand impact forces
- Additional features include siren, radio system support and livery options

To ensure the finished vehicle is fit for the job, the Police Authority Specification Corolla was subjected to extensive testing, including the Metropolitan Police's own rigorous test programme, which it passed with flying colours. The vehicle is now available to police forces across the UK. Two versions of the Touring Sports hybrid model are offered: the 1.8-litre Active and the 2.0-litre Icon.

Richard Kenworthy, TMUK Managing Director, said: "We have worked with all divisions of Toyota in the UK and various constabularies, which has enabled us to build on their feedback and requirements. Ensuring that we applied standard Toyota practices for the work means we have been able to deliver a vehicle that meets the police forces' stringent requirements. The adoption of Corolla by the police is testament to the efforts our employees invest in every vehicle that comes off our production line. We are proud that our Corolla is now one of the vehicles of choice for the police." ●



For more information visit: www.toyota.co.uk



Nissan Townstar Crew Van a compact van with big flexibility

The all-new Townstar Crew Van is a flexible light commercial vehicle based on the popular van L2 Townstar.

The new model maximises space, and is the perfect partner for organisations of all sizes that need their vans to offer that little bit extra.

With the addition of this new variant of Townstar, Nissan is reinforcing its range to provide efficient mobility solutions. The line-up includes the all-new Interstar in the H-van segment and the established, mid-sized Primastar.

With Crew Van, customers have the ability to quickly and easily adjust configurations to make the most of the ample space. Users can fold the second-row seats up or down using one hand, transforming the van into a secure and comfortable five-seater in seconds.

Additionally, the integrated bulkhead means passengers are protected from any shifting loads in the cargo area, ensuring their ride is as smooth – and safe – as possible.

When more space is needed, customers can simply fold the second-row seats away to quickly enhance the overall capacity by 1m³ and instantly creating space for 3.1m³ of loading space – and this much-needed flexibility doesn't sacrifice on performance. The Townstar Crew Van also features one of the widest opening doors in its category (831mm), allowing easy access to the interior.



For those in need of carrying extra loads, the Crew Van also has a payload of up to 730kg and is equipped with an impressive towing capacity of 1,500kg with a braked trailer.

An all-electric version

As Nissan drives forward on its transition to electrification, the introduction of a fully-electric version of the all-new Townstar Crew Van brings another option for electric mobility for fleets.

With a 45kWh battery, the electric model provides an impressive range of up to 162mi (WLTP combined). There are a wide range of charging options, including the best-in-class 22kW AC mode and the rapid-charging 80kW option, that provides the ability to charge from 15% to 80% in just 37 minutes.. All of this electric power is available without compromising on performance, with the all-electric model offering the same spacious loading and passenger capacity as its petrol counterpart.

The Crew Van also comes fully equipped with the latest technology, including

Intelligent Speed Assistance with Traffic Sign Recognition, Lane Keeping Assistance, Blind Spot Detection and wireless CarPlay or Android Auto. Additionally, the standard rear camera and front, side and rear parking sensors. A further layer of security is provided with the Intelligent Emergency Braking System, providing drivers with extra safeguards against blind spots and unpredictable moments while on the road.

It also provides customers with seamless connectivity to the NissanConnect app. This gives drivers access to crucial information via their smartphone to plan their journeys with precision. The app can also provide live traffic updates and information on the state of battery charging on the electric version, plus the ability to remotely start the ventilation system to cool-down or heat-up before setting off.

The all-new Crew Van comes with Nissan's standard warranty of 5 years or 100,000 miles, and 8 years/ 100,000 miles for the EV battery warranty. ●

For more information visit: www.toyota.co.uk/fleet-business/lcv

New Renault Master

Fresh new look, cutting-edge technology, increased usability and enhanced efficiency, space and comfort



The design of the New Renault Master includes a distinctive front end with Renault's new logo and extra-large full-LED headlamps in the signature C-shaped array around the grille.

Customers have a choice of seven body colours as standard.

The proportions have been fine-tuned for each body type, with the rear being narrower to optimise aerodynamics while still providing a remarkably large rear opening and load area. The rear window is asymmetrical, and the rear lights have a distinctive C-shaped pattern like the ones at the front.

On the Inside

The New Renault Master's interior is similar to that of a passenger vehicle, with a spacious S-shaped dashboard facing the driver. The materials used have a premium feel, and a 10-inch screen is included as standard across the lineup. Dark upholstery enhances the contemporary, ultra-modern style.

The steering wheel is adjustable for height and reach and in automatic versions it is where the transmission controls are located - creating more

space in the centre console.

The total cabin storage space of 135 liters is a 25% increase over the previous generation, making this generation a market leader. The available space is spread across the dashboard, side cupholders, closed glove-box, cab-ceiling slot, and two storage tiers in the doors.

The back of the middle seat can be folded down into a desk, and there is a slot to store a laptop and USB-C ports to power devices. Every detail is designed for intensive everyday use, such as the non-abrasive and sturdy TEP-lined seat edges, which make it easier to get in and out of the van and are highly resistant to wear.

Diesel Powertrains

Regardless of the powertrain customers of the New Renault Master will drive the one of the most highly efficient vehicles in the category, which will help lower operating costs.

The New Renault Master is designed to go further, carry more and cost less.

Three diesel Blue dCi powertrains,

delivering 130, 150, or 170hp, consume substantially less fuel and emit less CO2. Depending on the version, the engines can be paired with a 6-speed manual gearbox or a highly efficient new 9-speed automatic gearbox.

100% Electric

The fully-electric New Renault Master is powered by a 105kW motor, delivering 300Nm of torque, and benefits from an 87 kWh battery that provides a WLTP range of up to 285 miles. The New Renault Master E-Tech boasts record-high payload capacity, range, and towing capability. Energy consumption is a WLTP standardised 21 kWh/100km with the large 87 kWh battery. A 130kW DC fast charge adds 142 miles of range in just 30 minutes, and a 22kW AC home charger tops up the battery from 10% to 100% in just under four hours.

Technology

The New Renault Master features a power-assisted dynamic braking control system to maintain braking effectiveness and pedal feel regardless of the van's weight. It also triggers the automatic emergency braking system sooner and

enhances regeneration for the electric versions. The Master also includes 20 driver assistance systems for maximum safety, such as lateral stability, automatic emergency braking, and trailer stability assist systems. It comes with Intelligent Speed Assist to help the driver stay within the speed limit. The OpenR Link multimedia system, with a 10-inch screen and wired and wireless Android Auto and Apple CarPlay connections, comes as standard with every model. This system is smart and scalable, with free over-the-air updates for more than 20 apps for five years.

OpenR Link with Converter Companion (optional)

The OpenR Link multimedia system with Google built-in capabilities also allows the creation of custom apps for converted vehicles.

At launch, three apps are available: one for fire brigades, one for mobile workshop conversions, and one for refrigerated vehicle conversions.

These apps, developed by conversion professionals, enable drivers of the New Renault Master to check and supervise their custom features directly on the 10-inch screen. The advantages include a better driver interface (clearer display and prominently displayed controls on the color screen), a simpler and safer system, displaying only necessary information, and automatic over-the-air updates without the need for a second dashboard screen.

My Renault: Remote Services to Stay Ahead

To enhance interaction and proactive measures, the My Renault app allows remote connection to the New Renault Master for various purposes:

- Locating the van on a map, making it flash its lights, or emitting a sound, especially if it is in a large car park
- Keeping track of its maintenance schedule
- Receiving a warning if the vehicle is unlocked

EV-Exclusive Connectivity

The pure-electric New Renault Master E-Tech 100% electric offers exclusive

functions that provide a user experience resembling that of a smartphone, simplifying the transition to electric mobility. It includes an Electric Route Planner to plan journeys, filter charging stations according to preferred payment method or power rating, set home and workplace as charging points, and schedule battery charges and air conditioning based on weekly schedule to optimize costs and maintain cockpit temperature

The My Renault app also provides electric vehicle-only remote services, making the New Renault Master a highly connected and high-tech vehicle, always ready to help:

- Displaying remaining range to track charging in real time
- Displaying charging stations nearby or at a selected location
- Scheduling remote charging, for example, during off-peak hours
- Setting preheating times for the cockpit without affecting range if the van is plugged in
- Displaying charge status and a charging date log

As it includes Mobilize Charge Pass, you can pay for charges without having to carry a large number of cards, across Europe's largest charging network (over 500,000 charging points in 25 countries, half of which charge at 22kW).

Passholders can also enjoy preferential rates at motorway-side Ionity stations (more than 2,600 charging points) if they take out an optional subscription.

Lastly, additional Mobilize services are available to make your life easier in an electric New Renault Master van:

Mobilize Power Solutions, which simplifies the switch to electric mobility with tailored, turn key charging solutions installed at the workplace or at employee homes. Supported by a back office management system, businesses can monitor energy consumption and costs, up time and user behaviour, report on energy optimisation and calculate the running costs of an electric fleet. What's more the Mobilize Business Pass gives business drivers access to over 30,000

public charge points across the UK, which is then reported and expensed back to the business.

Next-level LCV essentials

The New Renault Master will launch with a full line-up covering all professional requirements. It will comprise of a wide range of versions, ranging from 11 to 14.8 cubic metres, with a 40mm wider opening at the sliding side door and 100mm longer load. Its greater payload capacity, length, width and volume make it the ideal van and redefine convenience in its class.

There are numerous derivatives available across the chassis cab and platform cab ranges that offer a basis for conversion, where workshops can handle several alterations directly (adding tippers, deepening interiors, adding volume, etc.). This catalogue of factory-mounted kits also shortens turnaround times and simplifies transport logistics.

The shorter wheelbase and redesigned front axle provide unprecedented manoeuvrability, including an outstanding 1.5 metre shorter turning diameter. The New Renault Master takes handling in cities to new heights of convenience. Customers can even choose an L3 version for city driving (L2 is the base vehicle, L3 is available with front-wheel and rear-wheel drive).

As with all the electric vehicles in the range, the New Master E-Tech incorporates elements of Renault's human first program, designed to help emergency teams work on the vehicle in the event of an accident:

- A QR code for firefighters is integrated into the bodywork to guide them as quickly as possible in their response
- The fireman's access allows the high-voltage battery to be accessed by the emergency services to minimise any risk of fires starting
- The SD switch disconnects the battery so that work can be carried out on the vehicle in complete safety
- The battery is housed in a special, reinforced frame that protects it from all types of impact. ●



The all-new Ford E-Tourneo

Offering a range up to **202 miles** and **125kW DC charging**

Ford Pro is setting a new standard in the multi-activity vehicle segment with the all-new E-Tourneo Custom – combining a high-efficiency battery-electric drivetrain and a new platform engineered for maximum versatility and comfort.

The new model introduces a full suite of premium features including ultra-flexible track-mounted rear seating, hands-free power side doors, B&O audio system, panoramic glass roof and an innovative tilting steering wheel.

All next-generation Tourneo Custom vehicles are fully integrated with the Ford Pro platform of software and connected services including:

- a home charging solution designed for business users
- management tools from Ford Pro Telematics to simplify running multiple vehicles
- the complimentary FordPass app for owners with a single vehicle

- the FORDLive connected uptime system for cloud-connected servicing support

Customers can also choose an all-new Plug-In Hybrid (PHEV) version for applications where additional flexibility is required. In addition, EcoBlue diesel-powered models can be specified with a new high-efficiency eight-speed automatic gearbox and – for the first time – an intelligent all-wheel drive system.

Superior EV performance

E-Tourneo Custom features a 64kWh useable battery and a 160kW electric motor to deliver exceptional performance, refinement and a driving range of up to 202 miles (325 km). The multi-activity vehicle's all-electric powertrain also offers one-pedal drive capability for even greater energy efficiency, and a more relaxed and comfortable driving experience.

An onboard 11kW AC three-phase charger is capable of fully recharging the

battery in less than eight hours, and a 10-80 per cent recharge takes around 39 minutes using a 125kW DC fast charger. E-Tourneo Custom's charge profile frontloads the energy to enable quick top-ups; in lab testing, a 125kW DC fast charger added 50 miles (82km) of range in just 10 minutes.

E-Tourneo Custom offers a maximum towing capacity of 2,000kg.

Pro Power Onboard technology also enables customers to fully utilise the potential of E-Tourneo Custom and Tourneo Custom PHEV, delivering up to 2.3kW through sockets in the cabin – ideal for powering digital devices, when off-grid.

Designed for space and comfort – with flexible seating and luxury features

A stylish new interior design provides superior levels of craftsmanship and material quality, and the highly specified cabin is packed with premium features and technologies.

An optimised vehicle platform ensures generous cabin space whether specified with all-electric, PHEV or diesel powertrains. Standard and long wheelbase models each offer three rows of seating, with up to eight seats in E-Tourneo Custom and a maximum of nine seats in Tourneo Custom PHEV and EcoBlue diesel-powered models.

E-Tourneo Custom's enhanced interior specification starts with a flexible new trackmounted seating system in the second and third rows.

The new seats are lighter than those on the outgoing model and the second row features integrated seatbelts, so reconfiguring the cabin can be done more quickly and easily. Power-operated sliding side doors also feature hands-free operation, so that the doors can be opened using a kicking motion next to the front wheel, for example when the driver is carrying heavy items.

Owners can choose from a range of desirable model variants, including the Active, Sport series, and the range-topping Titanium X, which offers the most comprehensive specification of any Tourneo ever – with standard features ranging from stylish 19-inch alloy wheels and full matrix LED lighting to luxurious Sensico seat material. Each series can be specified with any available powertrain to suit a wide range of customer needs.

E-Tourneo Custom's enhanced feature content is combined with a significant improvement in capability and performance. The vehicle's all-new architecture delivers a lower floor height and a new integrated side step to make ingress and loading easier, supported by class-leading apertures for the sliding side door and rear liftgate.

The optimised platform has also enabled a reduced overall height of under two metres for many variants. This facilitates access to garages and multi-storey car parks, as well as contributing to optimised efficiency and refinement through improved aerodynamics.

E-Tourneo Custom features a comprehensive suite of Ford's latest advanced driver assistance systems, including a number of features available on the model for the first time. These include Intelligent Adaptive Cruise Control with Lane Centring, Reverse Brake Assist, Fully Active Park Assist and a 360-degree camera system that provides a comprehensive view around the vehicle for easier manoeuvres in the city. ●

For more information visit: www.fordco.uk



Mercedes-Benz Vans and Rightcharge collaboration signifies a mutual commitment to **supporting electric fleets**

Leading EV charging software company Rightcharge has joined forces with Mercedes-Benz Vans in the UK to help make it more affordable and accessible for businesses looking to operate and charge electric vehicles.

Rightcharge provides electric van drivers with a comprehensive end-to-end solution for charge point installations, ensuring a hassle-free experience from start to finish. Drivers can choose from a selection of charge points, access market-leading prices from a network of vetted and monitored installers, and pay for their installation seamlessly in one place.

Courtesy of Mercedes-Benz Vans and facilitated by Rightcharge, buyers of electric vehicles can benefit from contributions towards the costs of a charge point and the installations.

Current offers include £1,000 for customers purchasing a Mercedes-Benz eCitan via an authorised Mercedes-Benz Van dealer.

The agreement demonstrates a mutual commitment to supporting electric fleets.

Mercedes will introduce a wealth of new products, including new large and midsize vans, while Rightcharge is set to launch its own electric fuel card and fleet management solution.

As the UK aims to meet its 2035 legislative targets, mandating the majority of electric vehicles to be zero emission, this collaboration underscores the vital role that electric vehicles play in shaping a greener and more sustainable future.

Rightcharge CEO Charlie Cook said:

"We are thrilled to collaborate with a brand that is as loved and respected as Mercedes-Benz as we work closely together to simplify the transition to electric vans. Businesses and van drivers can now find the perfect charge point for their needs in just a few clicks. We're excited to further develop this relationship and create a more sustainable future for Britain."

Sarah Palfreyman, Sales Director of Mercedes-Benz Vans in the UK commented:

"This partnership further cements our commitment to supporting the UK's van community in transitioning to electric. We know that infrastructure is a vital part of EV ownership, so we're pleased to partner with Rightcharge to provide a solution that will keep our customers moving efficiently and sustainably." ●

Hydrogen Fuel Cell Hilux project reaches demonstration phase



A ground-breaking project to develop a hydrogen fuel cell Toyota Hilux pick-up has moved to its final phase, signalling another milestone in Toyota's progress towards a zero carbon future.

Since the unveiling of the first prototype vehicle in September 2023, Toyota and its consortium partners, supported by UK Government funding, have successfully progressed their joint development project to the stage of intensive prototype evaluation and demonstration.

This latest project landmark further demonstrates the broad scope of Toyota's multi-path strategy towards carbon neutrality, applying different powertrain technologies – hybrid electric, plug-in hybrid electric, battery electric, fuel cell electric and e-fuels – to suit different user needs and local infrastructure.

Ten fuel cell Hilux prototypes have been built at TMUK's Burnaston facility in Derbyshire. Five vehicles are undergoing rigorous field testing to assess safety, performance, functionality and durability, generating test drive data in real-world situations. A further five vehicles are engaged in customer and media demonstrations, including at the forthcoming Olympic and Paralympic Games Paris 2024. Through its engagement with customers, Toyota is laying the groundwork for a successful future hydrogen transport sector.

Know-how gained from the Hilux project will combine with Toyota's 30 years of hydrogen fuel cell research and

development to contribute the next generation of fuel cell technology. This will offer longer lifecycles, increased vehicle driving ranges and significantly reduced costs.

Toyota expects Europe to be one of the world's largest hydrogen fuel markets by 2030, with steady growth in mobility and power generation applications. As a result, in December 2023, Toyota Motor Europe (TME) announced the Hydrogen Factory Europe, reflecting the company's co-ordinated approach to the commercialisation of the technology, from development and production to sales and after sales.

The fuel cell Hilux prototype project is an important stepping stone to the further development of hydrogen technology and stimulate a wider roll-out of hydrogen eco-systems and infrastructure across Europe.

Vehicle profile

The hydrogen fuel cell prototype Toyota Hilux showcases how fuel cell technology can be integrated into a pick-up vehicle. It is based on a model which has a legendary reputation for quality, durability and reliability, demonstrated in the world's toughest terrains.

Since the original Hilux was introduced in 1968, the model has proved its formidable strength time and again, conquering the North Pole, Icelandic volcanoes and the Antarctic continent. Moreover, it has three victories in the Dakar Rally to its credit, one of the world's most challenging motorsport challenges. The fuel cell

prototype shares Hilux's uncompromising DNA, while looking towards a zero carbon future.

Externally, the fuel cell model has the same dimensions and rugged appearance as the latest Hilux generation. Using an extra-cab body style, it is 5,325mm long, 1,855mm wide and 1,810mm tall. But beneath the surface, Toyota's fuel cell technology marks it out as a trailblazer.

Power is delivered using core elements from the fuel cell system featured in the Toyota Mirai, technology that has proved its quality in almost a decade of commercial production since Toyota introduced the world's first mass-produced fuel cell saloon in 2015.

The fuel cell Hilux has an expected driving range of up to 373 miles/600km – further than might be achieved using a battery electric system. And thanks to hydrogen's light weight, a higher payload and towing capability can be achieved, compared to other zero emission alternatives.

Hydrogen is stored in three high-pressure fuel tanks, each containing 2.6kg to give a total capacity of 7.8kg. The tanks are mounted within the vehicle's ladder frame chassis. The polymer electrolyte fuel cell stack contains 330 cells and is mounted above the front axle.

The fuel cell Hilux is rear-wheel drive, via an e-motor on the rear axle delivering a maximum 134kW (180bhp, 182 DIN hp) and 300Nm of torque. When the vehicle is driven, the fuel cell produces no tailpipe emissions, only pure water.

A lithium-ion battery stores the electricity



produced on board by the fuel cell. This is located in the rear load deck, above the hydrogen tanks. This avoids any loss of cabin space.

Project overview

The hydrogen fuel cell Toyota Hilux prototype project began with a feasibility study in early 2022 and has moved at pace towards its concluding phase. The initial study, undertaken by TMUK and TME, enabled subsequent funding from the UK Government through the Advanced Propulsion Centre, a non-profit organisation which supports the development of cleaner technologies and

new mobility concepts.

An intense design and development programme ran from July 2022 to January 2023, also involving consortium partners Ricardo, ETL, D2H, Advanced Technologies and Thatcham Research, with additional support from Toyota Motor Corporation.

Parts manufacturing, including chassis frame welding, took place between February and May 2023, prior to prototype construction following Toyota Production System principles in a dedicated area within TMUK's Burnaston plant. Ricardo supported preparations for the prototype build, carrying out design

and development tasks and confirming the complete manufacturing process in parallel with teams at TMUK.

Construction took place in June and July 2023 and the first vehicle was completed in just three weeks. A further nine were assembled between July and December, ahead of a thorough evaluation phase that included test rig and track testing.

The 10 prototypes are now undergoing field testing alongside customer engagement activities. This will conclude the final phase of the demonstration project for the fuel cell Hilux. ●



For more information visit: www.toyota.co.uk

Go Further, Charge Faster, Ford Pro Boosts Segment-Leading E-Transit

New **89kWh battery** means E-Transit extended range goes up to **249miles** and features faster **AC** and **DC** charging



Ford Pro has revealed a new extended range option for the E-Transit, enhancing the capability of the top-selling large electric van in Europe, which last year outsold its nearest competitor by more than five to one.

The latest introduction builds on Ford Pro's 2024 Transit digital productivity upgrades and significantly broadens the potential customer base for E-Transit. The new model features an 89kWh useable battery capacity for a maximum driving range of up to 402km (249 miles), as well as faster AC and DC charging performance. Customers also benefit from extended two-year/unlimited distance service intervals – double the current one-year interval.

Like all E-Transit commercial vehicles, the extended range model is fully integrated with the Ford Pro platform of connected charging and software solutions to help customers optimise energy management, streamline servicing, and minimise downtime and cost of ownership.

The extended range E-Transit is designed to appeal especially to customers who operate in rural regions, colder climates, or on routes involving highway driving. The powertrain will also complement converted vehicles with additional weight and auxiliary power needs. Customers will be able to order the new

model later this year, with initial deliveries expected in 2025.

Enhanced electric performance

The extended range option for E-Transit increases useable battery capacity to 89kWh for a driving range of up to 402km (249 miles) – 28 per cent more than an equivalent standard range model. This enhanced capability is introduced to make the extended range E-Transit a compelling option for fleets that operate beyond city centres but still want to benefit from the accelerated productivity of electric, connected commercial vehicles.

A vapour-injected heat pump is standard on the extended range option to heat the cabin more efficiently in low temperatures. The system is similar to that on E-Transit Custom – the first-ever electric vehicle to use the technology – and is designed to improve energy efficiency and optimise range in colder weather.

Ford engineers have significantly enhanced E-Transit's charging performance for every extended range model. Maximum AC charge capability has been increased from 11kW to 22 kW, meaning a full overnight charge is targeted to take under six hours. DC fast charging capability has been increased from 115kW to 180kW, so that

a 10-minute charge can add up to 116km of driving range, and a 10-80 per cent charge takes approximately 28 minutes.

Ford Pro's end-to-end solutions for depot, home and public charging include hardware installation and maintenance, as well as intelligent software to help customers manage charging for optimum efficiency and uptime. Fleet managers can easily track charging performance and energy efficiency for each of their vehicles using Ford Pro Telematics software, as well as set charging windows to take advantage of cheaper energy tariffs, lock chargers to prevent unauthorised use, and pre-condition E-Transit's battery for maximum driving range.

In addition to optimising energy management, fleet managers can also oversee their entire fleet in one system with Ford Pro Telematics' dashboards and insights, which are compatible with mixed fleets including electric, plug-in hybrid and combustion-powered vehicles, as well as non-Ford models. Ford Pro tools can also help customers to quickly identify which vehicle use cases in their business could be replaced like-for-like with electric Transit models.

Ford Pro expects that the increased capability of E-Transit extended range will appeal to customers with a wide range of use cases and requirements, so the

company is offering a comprehensive choice of 19 model variants including L3 and L4 lengths, van, double-cab-in-van and single chassis cab body styles, with GVMs from 3,500kg to 4,250kg. Maximum payload is up to 1,460kg for vans and 1,814kg for chassis cab variants, with towing weight up to 750 kg for models with 3,500kg GVM. Pro Power Onboard is also available to deliver 2.3kW of exportable power from the vehicle battery to run tools, equipment and conversions.

The extended range E-Transit benefits from the same productivity-boosting digital features that Ford Pro announced across the 2024 Transit line-up:

- 5G modem as standard for superfast connectivity on-the-go
- Wireless software update capability for multiple vehicle modules
- Innovative new Vehicle Integration System for conversion control via the SYNC screen
- Alexa Built-in personal AI

In addition, both standard and extended range E-Transit models from the 2024 line-up benefit from a new two-year/unlimited distance service interval to help reduce service cost of ownership for businesses. This is a major upgrade over the current one-year/unlimited distance interval.

New E-Transit minibus model

Ford Pro is also enhancing the E-Transit line-up with a new factory-supported electric minibus conversion.

The new offering is designed to support customers such as schools and local authorities as they electrify their fleets and futureproof their operations in response to tightening regulations and the introduction of low-emission zones. The new model can seat up to 15 people and is based on an E-Transit L3 window van with 4,250kg GVM, converted by seating specialists ISRI. Customers can specify a single or double front passenger

seat, nine- or 12-seat rear layout and standard or high roof options. Air conditioning, rear cabin heating and a powered side step are all standard.

Available direct from Ford dealers, the new minibus model can be specified with standard or extended range batteries for the nine-seat rear layout, and standard range battery for the 12-seat rear layout.

Ford Pro Special Vehicles is also investigating providing the donor E-Transit window van through its 200-strong Ford Pro Converter network for more specialist conversions, such as wheelchair-accessible transport. ●



New factory-supported **E-Transit minibus model** also added to the **electric line-up**



For more information visit: www.ford.co.uk



Van market sustains growth but electric uptake must rise faster

The UK new light commercial vehicle market posted its 17th consecutive month of growth in May, as registrations rose by 1.9% to reach 25,853 units, according to new figures from the Society of Motor Manufacturers and Traders (SMMT).

The result was the strongest performance for the month since 2021, which recorded the best May market in history when business investment in commercial vehicles accelerated in the wake of the pandemic.

Volume growth was fuelled mainly by an 8.1% increase in uptake of vans weighing more than 2.0t up to 2.5t. Light vans weighing less than 2.0t recorded the largest proportional growth, of 55.7%, although the market segment is subject to volatility arising from low volumes. The 4x4 market, subject to the same small volume variations, recorded a decline of -15.0%, while pick-ups grew by 4.1%. As ever, large vans weighing more than 2.5t up to 3.5t comprised the vast majority of the market (65.9%), with a slight decline of -0.8%.

The overall market continues to be positive, with registrations

for all vehicle segments up in the year to date, and the transition to zero emission vehicle is also keeping up – but not at the pace required to meet mandated Vehicle Emission Trading Scheme targets. Battery electric van (BEV) rose 3.5% in May to achieve a 4.2% market share – almost unchanged from last year’s 4.1%. In addition, overall BEV uptake year to date has fallen -2.1%, delivering a 4.8% market share, down from 5.2%. The Vehicle Emissions Trading Scheme target for each individual brand is 10% this year.

Harnessing the sustained growth in LCV demand but converting more operators to go electric will be crucial to the delivery of net zero. With a choice of more than 25 zero emission models now available to suit a variety of use cases and compelling offers available, manufacturers are making massive investments in this transition. With Britain heading to the ballot box next month, however, all parties must plan to put in place measures to help UK businesses go zero emission, by sustaining existing fiscal incentives for electric and hydrogen vans, and ensuring the provision of van-specific charging infrastructure.

“The UK van market’s 17-month run of growth is playing a crucial part in renewing the fleet with the latest, cleanest vehicles. However, convincing businesses that now is the time to switch to zero emission operations remains a challenge. With an expanding choice for every use case now available, the next government must take steps to recharge the zero emission van market, an essential part of the net zero economy every party wants.”

Mike Hawes, SMMT Chief Executive



For more information visit: www.smmt.co.uk

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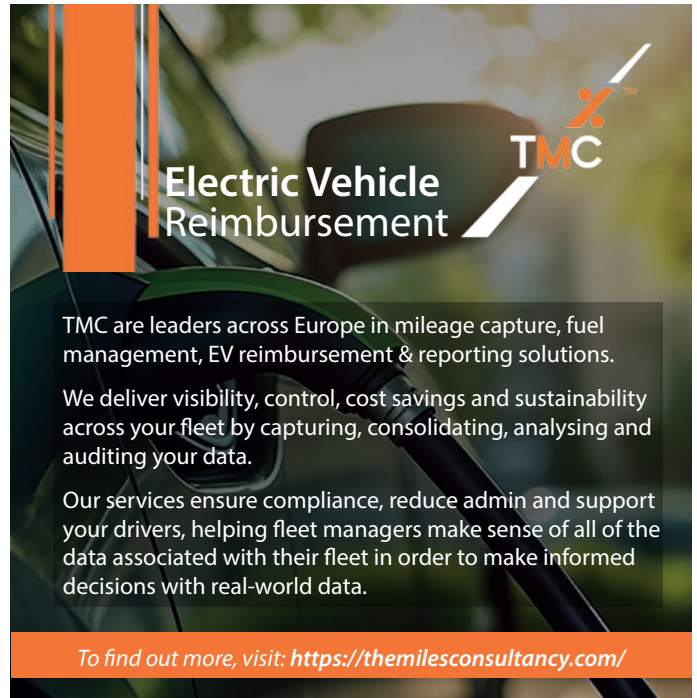
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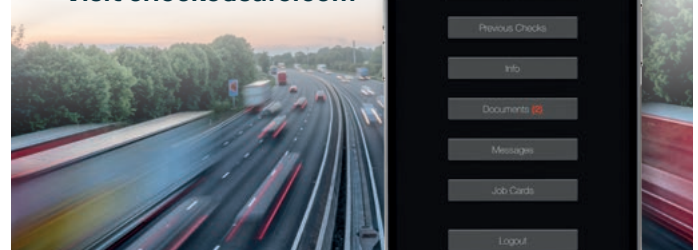


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