



# Delivering a zero emission future





# Foreword by CEO Dwain McDonald

The Department for Transport launched its 'Road to Zero Strategy' in July 2019 outlining "how the government will support the transition to zero emission road transport". The environment and climate change are now more important than ever to our customers and our people so DPD entirely supports the objectives of the Road to Zero and has been embarking on its own journey to reduce carbon emissions for many years.

Addressing poor air quality is absolutely vital for people living in cities, who are experiencing health problems, as air quality deteriorates. It is equally crucial for future generations.

The decarbonisation of transport fleets is challenging, both operationally and financially. DPD has already made large financial commitments to purchase commercial electric vehicles and change operating models to help reduce emissions and congestion for the benefit of the society we live in.

But we cannot do this alone. We need stakeholders from across a range of industries to work together in a holistic way to create an infrastructure that makes large scale EV deployment feasible.

For many years DPD's 'Driving Change' CSR programme has been reducing carbon emissions and offsetting the remaining emissions through clean energy initiatives so that we offer carbon neutral delivery to our customers at no extra cost. Our skills and experience as a group of colleagues make us perfectly placed to have a positive impact on society.

Change is difficult and demanding, but emerging new technologies give the current generation

of leaders and decision-makers the tools to lead a large-scale cultural change – we cannot kick this problem any further down the road.

Our journey is only in its early stages and we've had bumps along the way. In this document we share lessons learned and discuss our flexible and innovative approach to the challenges faced. We share our thoughts on the future as DPD continues on its own road to zero, making eight key calls to action which we would be delighted to discuss with other stakeholders who share our vision for a country with zero emission road transport.

Dwain

**"we cannot kick this problem  
any further down the road"**

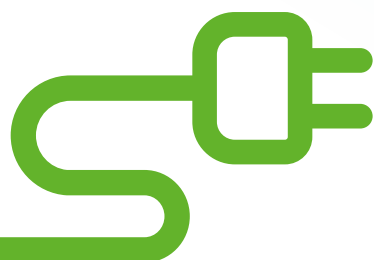




# Introduction

DPD is now the UK's No.1 domestic parcels carrier. Since 2012 the number of parcels DPD delivers each year has increased by 136%. We have achieved this by establishing ourselves as the go-to carrier for retailers who value a personalised home delivery experience. Our 13,000-strong team now delivers 250 million parcels a year for thousands of customers, including leading brands such as ASOS, M&S, John Lewis, Gousto, EE and Nike. Ten years ago, only 12% of our parcels were delivered to home addresses. Thanks to e-commerce retailers choosing DPD for our innovative technology and final-mile doorstep experience, that figure now stands at 53%.

In 2017 we launched our Smart Urban Delivery Strategy (SUDS) in a bid to become the UK's most responsible city centre delivery company, with a specialist depth of knowledge in the fields of noise pollution, emissions and road safety.





# Investing in DPD's EV Fleet

DPD expects to add around 100 electric vehicles to its 6,000-strong delivery fleet in 2019, a significant investment and commitment to larger scale EV fleet deployment. Following this investment the company will have 139 electric vehicles on fleet in 2019, and we have set an ambitious challenge to increase this to 500 by the end of 2020, giving us the largest EV fleet of all UK parcel carriers.

In 2019 DPD has deployed electric vehicles outside London for the first time, extending our commitment beyond the capital and across the UK. The success of DPD's electric vehicle vision will require manufacturers to make more vehicles more available more quickly in the UK market.

DPD has a range of different size electric vehicles on fleet, ranging from small micro-vehicles through to all-electric 7.5t vehicles. This carefully selected fleet mix enables the most efficient operation in city centres across the UK.

**139**  
vehicles

2019

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**500**  
vehicles

2020

**CALL TO ACTION**

DPD calls on mainstream vehicle manufacturers to increase the supply of commercially viable right, hand drive electric vehicles to the UK market.

EAV P1 Cargo	Paxster	Peugeot Partner Electric	Nissan E-NV200	Mercedes-Benz eVito	FUSO eCanter
10	26	5	86	10	2

Mercedes has long been our first choice supplier of diesel vehicles and DPD has so far welcomed 10 Mercedes 'all-electric' eVitos on to fleet this year. The eVito requires 140% more initial capital investment than its diesel equivalent and is being deployed into city centre locations to improve air quality. We expect EVs to remain on fleet for around five years,

however the company acknowledges that residual vehicle value is difficult to establish, as an extensive testing bank on total life and mileage is unavailable. In high-density city centre locations the vehicles often travel very short distances, this shows DPD's continuing commitment towards becoming the UK's leading city centre parcel delivery company.



# EAV P1 Cargo Bike

DPD has been working with EAV, a British start-up company for nearly two years, perfecting the design and operational approach for an electric-assisted cargo bike. A number of operators have deployed cargo bikes and DPD looked at the market but could not find a suitable product for large scale deployment, with the robustness and security required to last for years on our fleet. As a result an alternative approach was required that saw the partnership established between DPD and EAV.

The e-cargo bike is expected to deliver increased productivity in the final mile as the vehicle can access cycle lanes being developed around UK cities. In order to maximise productivity, the rear loading space has been designed to specifically hold DPD tote containers, facilitating quick mid-route reloading of the vehicle. The comfort of the driver also played an important part in our procurement choices, as we don't want our drivers to spend eight hours cycling unprotected in inclement weather. It was therefore essential that a screen and

cover be provided to protect the driver.

DPD is also acutely aware of limited regulation in the cargo bike area. As a responsible operator we are working with EAV and our in-house training team to develop a specific training programme for cargo bike riders - we already undertake extensive training for new EV drivers. Cargo bikes in general have an electric-assisted top speed of 15mph, and have a load capacity of up to 200kg. The combination of weight and speed, with unregulated braking and manufacturing

## CALL TO ACTION

**DPD calls for a cohesive industry discussion with the DfT to establish appropriate regulation and best practice guidance to ensure the safe and responsible operation of e-cargo bikes.**

requirements could result in serious injury to pedestrians, riders and other road users. We therefore believe that more stringent regulations on the use, training and safety of these vehicles are required.

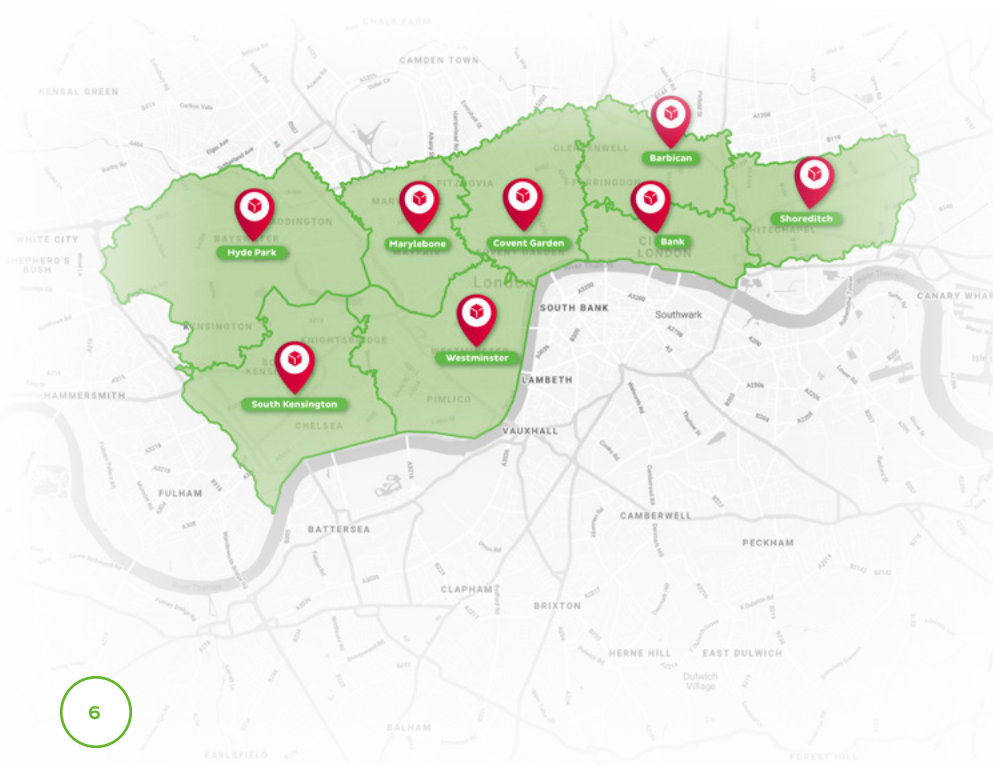
The deployment of the EAV P1 and Paxster micro vehicles in city centres is enabled by new micro-distribution depots. The riders of these vehicles will not drive them on main arterial roads from many miles away. They are designed for last mile delivery in high-density locations where they can operate on quieter, safer roads delivering high quantities of small parcels emission free.





## DPD Westminster – An Industry Leading Solution

2018 saw the opening of DPD Westminster, an all-electric micro-depot that not only makes final mile outbound deliveries using all-electric vehicles but also trunks inbound parcels from our London City depot on all-electric Fuso eCanter 7.5t vehicles. The depot was opened in October 2018 by Deputy Lord Mayor for Environment & Energy Shirley Rodriguez, TfL Director Alex Williams and Westminster Cllr. Tim Mitchell, six months ahead of London introducing its Ultra Low Emission Zone (ULEZ).



DPD Westminster was the first of our series of micro-distribution depots (micro-depots) in London and is part of a larger plan to expand the micro-depot model across the capital and the rest of the UK. DPD intends to open up to eight micro-depots to serve London and the second one was also opened in 2018. It is located in railway arches in Shoreditch and builds on the success of the Westminster model by operating and using building space not traditionally associated with logistics.



Our new 5,000ft<sup>2</sup> Westminster site acts as a satellite for our 63,000ft<sup>2</sup> London City depot (in Southwark) which, until the new site opened, was operating 15 3.5t diesel vehicles in central London every day, averaging 614 miles to deliver 3,024 parcels.

Of these 614 miles, 180 were unproductive stem mileage driving from DPD London City to the final mile delivery area. Therefore, before Westminster opened, we averaged 0.203 miles per parcel using 3.5t diesel vehicles. The whole operation produced 45 tonnes of CO<sub>2</sub> per annum (113.94 grams of CO<sub>2</sub> per parcel).

The diesel vehicles have been replaced by two electric 7.5t Mitsubishi Fuso eCanters running daily trunk routes between London City and Westminster where the parcels are then sorted on to final mile electric vehicles. Previously these parcels were delivered via diesel vehicles

straight from DPD London City. There are just ten of the Fuso eCarter vehicles in the whole of the UK and DPD has two of them.

DPD Westminster delivers to the SW1 postcode area, and its location in this high-density area allows for high driver productivity and means some vehicles travel less than five miles a day.

Thanks to the vehicles at our new micro-depot, our 'miles per parcel' figure has reduced by a massive 49.2% to 0.103 miles per parcel and zero CO<sub>2</sub> per parcel. This more efficient operation now produces zero tonnes of CO<sub>2</sub> per month versus 45 tonnes of CO<sub>2</sub> per annum before the site opened.



## Obstacles on the Road to Zero

The numbers of ultra-low emission vehicles on UK roads is currently at record levels. However, there remains a significant issue around both the current availability of all-electric 3.5t vehicles and those coming to market. It is well known that the 3.5t vehicle is the preferred choice of parcel delivery companies. If the Government's ambition for all new vans to be zero emission by 2040 is to be achieved, these vehicles must come to market sooner to allow new logistics operations to be defined, negotiated and established.

DPD is experiencing challenges with vehicle manufacturers preferring to produce left hand drive all-electric vehicles to cater for larger European markets. The UK and Ireland are the only EU countries to use right hand drive vehicles and data from the European Automobiles Manufacturers Association showed that in 2015 the UK and Ireland accounted for 14% of registered vans on the road. This data clearly shows the size of potential in European

left hand drive markets when compared to the UK and Ireland and is a problem that could be further exacerbated by the uncertainty of Brexit.

There has been an increase in the number of 3.5t vehicles being converted from diesel to all-electric, however this process has considerable drawbacks and merely maintains a demand for diesel vehicles at their point of manufacture. After-market companies can only convert

the vehicles in small batches; therefore the volume that can be supplied each year is low compared to the diesel uptake of parcel companies. Because the vehicles are produced in small quantities they have a very high, unsustainable price point that isn't economically viable. Warranties become a grey area between the manufacturer and the conversion company, thus affecting customer confidence.



# Fleet Deployment Challenges

Historically final mile delivery vehicles have been sourced from a small number of principal vehicle manufacturers. There has been a recent shift towards start-up companies developing small and micro-vehicles for final mile delivery. DPD has seen a significant increase in the number of these companies approaching us over recent years.

One of these is the Norwegian enterprise Paxster and DPD is proud to be the first UK operator to import this vehicle which is already in use across Scandinavia, Europe and New

support with deployment, damaging the case for bringing these vehicles on to our fleet.

Regulators often find it difficult to keep up with innovation and these new vehicle types challenge the norm. As such they present issues for regulators and government agencies. The registration of the DPD Paxsters was an incredibly complex process. It took a considerable amount of internal resource before the

**CALL TO ACTION**  
DPD calls on the Office for Low Emission Vehicles (OLEV) to open the plug-in grant schemes to a wider range of vehicles, increasing its flexibility and support for organisations like DPD who are seeking methods to support delivery of the road to zero strategy

**CALL TO ACTION**  
DPD calls on the government to streamline and remove bureaucracy from the registration process of new to market alternative fuel vehicles to improve fleet uptake

vehicles were approved for UK roads. If the Government is going to achieve its 'Road to zero' ambition it must find a way to speed up the registration process of small batch vehicles for use in the UK.

Zealand. The DPD Paxster is an all-electric vehicle classified at European level as a light quadricycle, it therefore does not qualify for any funding normally afforded to cars, vans and cargo bikes. Despite DPD deploying the vehicle to help support and achieve the government's Road to Zero vision and our electric Paxsters supporting a reduction in diesel vans in our business, DPD has received no financial help or







# It's not just vans - Alternative Fuel HGV Trials

DPD has not just focused on final mile emissions but has also been testing HGV vehicles using alternative fuels as a possible long-term alternative to diesel. If the deployment of alternative fuel vans is difficult, the challenge in the HGV market is off the scale. DPD currently operate 987 HGVs across the UK.

Two different alternative fuel (CNG and LNG) HGVs have been tested by DPD and assessed against a comparable diesel vehicle. The vehicles were driven by a range of drivers and generated a reduction in CO2 and fuel cost; this is however offset against a significant increase in capital outlay and on-going operating cost. The trial vehicles were not available in DPD's preferred 'double-deck' configuration, thus reducing the number of parcels carried by each vehicle. The vehicles were able to travel up to around 300 miles before needing to refuel.

As a result of the trial, DPD is considering utility infrastructure changes to enhance the viability of these products in the future. More manufacturers are producing gas fuel vehicles, therefore we expect increased availability in the coming years. CNG and LNG have a lower impact on payload and volume when compared with current electric technology.





# Congestion and Air Quality Policy: London

The TfL Freight and Servicing (F&S) Action Plan was launched on 11 March 2019 by Heidi Alexander (Deputy Mayor for Transport) and Lilli Matson (Director of Transport Strategy, TfL) alongside Justin Pegg (COO, DPD) and John Cameron (Regional Manager, DPD). TfL chose to launch the supporting action plan to the Mayor's Transport Strategy at DPD's all-electric Westminster micro-depot. In broad terms DPD supports the F&S Action Plan, clearly air quality needs addressing and the current generation of decision makers have the power to accelerate the decarbonisation of logistics vehicles.

DPD has been engaged throughout the formulation of the F&S Action Plan and the comments we have passed back to TfL have been integrated to help ensure the plan is challenging but realistic. Overall consultation with stakeholders was positive and we feel that the plan is viable and deliverable for operators in the future. DPD believes the challenges for TfL exist in three main areas:

1. The plan contains a number of high level objectives and actions but these require fleshing out and further detail to be added to understand how they can be delivered.
2. In recent years, TfL's Freight Team has undergone a series of restructures that has seen a depletion of its expertise and a dispersal across multiple departments. This means a range of TfL departments need to play a role in the consistent delivery of the plan, under challenging revenue and resourcing conditions.
3. TfL now needs to engage with London boroughs who also play a role in delivering the plan while considering this in conjunction with localised transport planning and initiatives.





We welcome the fact that logistics land and property have been included in the plan. However, this is directly outside of TfL's gift – with the exception of letting of its own property portfolio – and London boroughs require active engagement. All too often we see warehouse and distribution property being pushed out of city centres, affecting productivity and increasing van mileage. This is because longer stem mileage (distance between the depot and first delivery stop) decreases the number of parcels a van and driver can deliver each day, therefore increasing the number of vans required.

DPD sees the draft London Plan as a positive start to protect warehouse and distribution land through the concept of 'no net loss' of this land during redevelopment, protection in incidents of 'agent of change' and ideas for intensification. Logistics facilities must be considered during planning applications for large residential redevelopment schemes.

The push in planning policy towards the reduction in private car parking spaces and the Mayor's transport strategy objective of reducing private car usage significantly increase the number of parcels delivered to residential areas. Previously the consumer would have collected items

from retail locations that are now being delivered to residential addresses, therefore van freight is increasing. A growing example of this is food shopping delivery, research from the Institute of Grocery Distribution shows online to be the largest growth area over the next five years, with a predicted increase of 52%. It is therefore essential for planning authorities to consider logistics property alongside residential developments and how new buildings handle servicing and delivery. DPD Westminster is a showcase for the compatibility of EV deployment in city centre operations close to residential locations. DPD has received zero complaints from local residents – thanks to our careful deployment and management of EVs at Westminster and Shoreditch.

Property prices continue to increase, vacancy rates remain low and residential housing demand continues to grow the value of land in city centres. This increase continues to see the erosion of warehousing and pressure on property developers' yields. As the price of land increases, multi-level floor warehousing is becoming the only solution for industrial property developers to make feasible cases for redevelopment of city centre locations. The planning process needs to consider these demands and smooth the planning process where

possible for these complex sites.

#### CALL TO ACTION

**Local authorities, London Boroughs, TfL and other key stakeholders should engage final mile operators to help establish micro-distribution depots**

The success of the DPD micro distribution model lies in its close proximity to the final mile parcel delivery location. Its high delivery density and low mileage facilitates the operation of micro-vehicles and cargo bikes. Effective deployment of these vehicles and other initiatives such as portering need access to city centre locations to become feasible solutions.

DPD has been working with landlords, agents and developers to help convey the message that the typical logistics building is no more. Logistics operators still require large sites on the edge of cities as 'master depots' but small final mile locations are also needed. These small locations do not need high numbers of access doors or high bay arrangements, they are tightly controlled transshipping locations not for storage but for effective final mile operation.



More generally the type of properties DPD is trying to open are under-utilised and we can help owners and landlords commercialise space that is not currently used or generating revenue.

The increasing deployment of EVs in both commercial and residential settings will make a significant impact on air quality objectives but does not improve congestion in city centres. It is only through operational changes that reductions in van numbers and associated mileage can be achieved. DPD's Westminster and Shoreditch micro-depots are excellent examples of this, because reducing miles per parcel by 49% required a major operational change.

Within the F&S plan a range of small pilot schemes are discussed where innovative approaches to final mile deliveries are highlighted. These initiatives are undoubtedly a useful example of how new approaches can improve air quality and

congestion, however it is vital that these projects prove to be economically viable and commercially sustainable before they form a basis for policy decisions. If these projects cannot continue once public sector funding is withdrawn then scaling to major deployment is simply not feasible. It should be noted that DPD Westminster, although a TfL-owned building, receives no financial support or grant funding.

It is vital for fleet procurement and large fleet operation that the creation of zero, low and clean air zones is consistent across the UK. The recent launch of the 'City Fringe Ultra Low Emissions Streets' in Hackney has inadvertently created an HGV ban, as vehicles meeting the emissions standard are not available to

purchase. DPD supports any initiative that reduces carbon emissions and improves quality of life for people in the area but regulation must not accelerate faster than manufacturers can develop large scale production of vehicles to meet standards such as seen in Hackney. If regulation is introduced before vehicles are available, logistics operators will simply incur fines for non-compliance. The framework for low emissions, zero emissions and any other variant needs to be agreed in a format that is consistent and clearly communicated, such as the DEFRA Clean Air Zone (CAZ) framework.

**CALL TO ACTION**

**Policy makers must ensure that policy is reflective of the current technology available and does not regulate in a way that is undeliverable because of the speed of manufacturer vehicle development**



**CALL TO ACTION**

**Policy makers must make clean air, ULEV, and zero emission zone standards consistent and not create local policies creating uncertainty and unnecessary challenges for operators**



# Congestion and Air Quality Policy: The Rest of the UK

DPD is also looking very carefully at other UK cities as further Clean Air and Zero Emissions Zone initiatives are implemented. Clearly London has taken the lead with the implementation of the ULEZ but some of the other cities may prove to be more challenging operationally, particularly those with affected HGV routes.

With such a large number of cities it is impossible to discuss each and every one, the news from these cities is also very fast moving so DPD is tracking each city to ensure we can provide responses to the consultations and consider early operational plans as required.

DPD's position on all clean air zones is simple, we do not knock on people's doors attempting to stop any of these initiatives, we simply want

to work with these locations to ensure that the cities achieve their objectives through deliverable policies that allow freight and parcel delivery to continue to service the city. Whether that be through consultation responses, anonymised data sharing or simply discussion and sharing our experience and industry knowledge, we are keen to engage and open clear coherent lines of communication to ensure that everyone achieves their desired objectives.





# Summary

The current speed of change in transport policy across the UK is greater than ever before and DPD is responding to this to ensure high quality next day delivery services throughout the UK. The key to successful behavioural changes requires a holistic approach to planning and transport policy – i.e. operators, manufacturers, fuel/energy providers and local authorities working together to reduce noise, emissions and congestion for the benefit of current and future generations.

## DPD's 8 calls to action

DPD is determined to contribute to a greener future for the UK through the widespread deployment of electric vehicles. Our vision is to be the nation's cleanest, quietest and safest emissions-free parcel delivery company. We call on manufacturers plus local and national government to partner with us to help make this vision a reality.

### National government

1. DPD calls for a cohesive industry discussion with the DfT to establish appropriate regulation and best practice guidance to ensure the safe and responsible operation of e-Cargo bikes.
2. DPD calls on the government to streamline and remove bureaucracy from the registration process of alternative fuel new to market vehicles to improve fleet uptake
3. DPD calls on OLEV to open the plug-in grant schemes to a wider range of vehicles, increasing its flexibility and support for organisations like DPD who are seeking methods to support delivery of the Road to Zero strategy
4. Policy makers must ensure that policy reflects the current technology available and does not regulate in a way that is undeliverable because of the speed of manufacturer vehicle development

### Local government

5. Local authorities, London Boroughs, TfL and other key stakeholders should engage final mile operators to help establish micro-depots
6. Policy makers must make clean air, ULEV, and zero emission zone standards consistent and not create local policies that create uncertainty and unnecessary challenges for operators

### Manufacturers - DPD calls on mainstream vehicle manufacturers to:

7. Increase the supply of economically viable right-hand drive 3.5t electric vehicles to the UK market
8. Continue to support innovations that will help enable the government's 'road to zero' vision.



## Contact

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