

Audit and Assurance Committee



Date: 7 June 2018

Item: Annual Report 2017/18

This paper will be considered in public

1 Summary

1.1 The purpose of this paper is to present the Annual Report to the Audit and Assurance Committee.

2 Recommendation

2.1 **The Committee is asked to note the Annual Report, comment on its contents, and note the delegation to the Managing Director, Customers, Communication and Technology the task of making any adjustments prior to submission to the Board.**

3 Background

3.1 The Annual Report is one of TfL's key publications and a statutory requirement under the Greater London Authority Act 1999 (as amended). Following discussion by the Committee, the report will be submitted to the meeting of the Board on 25 July 2018.

3.2 The Statement of Accounts and the Annual Governance Statement are being considered elsewhere on the agenda. Following approval, the documents will be combined to form the Annual Report and Statement of Accounts 2017/18.

List of appendices to this paper:

Appendix 1 - Annual Report

List of Background papers:

None

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Annual Report and Statement of Accounts

2017/18

Draft 30 May 2018

MAYOR OF LONDON



**TRANSPORT
FOR LONDON**
EVERY JOURNEY MATTERS

About Transport for London (TfL)

Part of the Greater London Authority family led by Mayor of London Sadiq Khan, we are the integrated transport authority responsible for delivering the Mayor's aims for transport.

We have a key role in shaping what life is like in London, helping to realise the Mayor's vision for a 'City for All Londoners'. We are committed to creating a fairer, greener, healthier and more prosperous city. The Mayor's Transport Strategy sets a target for 80 per cent of all journeys to be made on foot, by cycle or using public transport by 2041. To make this a reality, we prioritise health and the quality of people's experience in everything we do.

We manage the city's red route strategic roads and, through collaboration with the London boroughs, can help shape the character of all London's streets. These are the places where Londoners travel, work, shop and socialise. Making them places for people to walk, cycle and spend time will reduce car dependency and improve air quality, revitalise town centres, boost businesses and connect communities.

We run most of London's public transport services, including the London Underground, London Buses, the Docklands Light Railway, London Overground, TfL Rail, London Trams, London River Services, London Dial-a-Ride, Victoria Coach Station, Santander Cycles and the Emirates Air Line. The quality and accessibility of these services is fundamental to Londoners' quality of life. By improving and expanding public transport, we can make people's lives easier and increase the appeal of sustainable travel over private car use.

We are moving ahead with many of London's most significant infrastructure projects, using transport to unlock growth. We are working with partners on major projects like Crossrail 2 and the Bakerloo line extension that will deliver the new homes and jobs London and the UK need. We are in the final phases of completing the Elizabeth line which, when it opens, will add 10 per cent to London's rail capacity.

Supporting the delivery of high-density, mixed-use developments that are planned around active and sustainable travel will ensure that London's growth is good growth. We also use our own land to provide thousands of new affordable homes and our own supply chain creates tens of thousands of jobs and apprenticeships across the country.

We are committed to being an employer that is fully representative of the community we serve, where everyone can realise their potential. Our aim is to be a fully inclusive employer, valuing and celebrating the diversity of our workforce to improve services for all Londoners.

We are constantly working to improve the city for everyone. This means freezing TfL fares so everyone can afford to use public transport, using data and technology to make services intuitive and easy to use, and doing all we can to make streets and transport services accessible to all. We reinvest every penny of our income to continually improve transport networks for the people who use them every day.

None of this would be possible without the support of boroughs, communities and other partners who we work with to improve our services. We all need to pull together to deliver the Mayor's Transport Strategy; by doing so we can create a better city as London grows.

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Message from the Mayor

Working towards my Transport Strategy, we are committed to making transport in London safer, cleaner and more affordable.

From the streets we live on to the bus and Tube services we use, transport shapes our daily lives and creates new opportunities.

In March, I published my Transport Strategy. This demonstrates my commitment to prioritising people's health and changing London's transport so the city works better for everyone.

My strategy sets out a bold vision for making London healthier, safer and more welcoming, with the goal that 80 per cent of journeys will be made by walking, cycling or public transport by 2041.

Improving London's air quality is key to this work and we have made huge progress over the past year. For the first time since records began 10 years ago, London entered the third week of January without having breached legal limits for toxic nitrogen dioxide (NO₂) air pollution. It normally exceeds these targets by 6 January.

This progress could not have been achieved without fresh thinking on London's roads. In October 2017, I introduced the T-Charge to start cleaning up our toxic air ahead of the start of the central London Ultra Low Emission Zone in 2019.

I launched the first two Low Emission Bus Zones in Putney and Brixton, and pollution levels have fallen drastically as a result.



Image 1: Mayor of London, Sadiq Khan

I am also helping taxi drivers to buy zero emission capable (ZEC) vehicles by providing funding to replace the oldest taxis and speeding up the installation of new rapid charging points across the city.

We need streets to be welcoming environments for people to walk and cycle in, and I am pleased that construction has now begun on the next

stage of Cycle Superhighway 6 in Camden and Islington.

As well as being clean and pleasant, transport has to be safe, reliable, accessible and affordable. Over the past year, I have been working hard to provide Londoners with the high-quality services they deserve and to create transport links that work for everyone.

I have continued to keep TfL fares frozen, protected TfL's travel concessions, brought in the unlimited Hopper fare and got night services up and running on London Overground following its huge success on the Tube.

TfL also has a vital role to play in the growth of the city and delivering new housing. As well as taking forward new infrastructure schemes, TfL is developing its own land and this year brought to market sites that will deliver more than 3,800 homes. Under my leadership, half of these homes will be affordable. By working closely with unions and bus operators, I am helping to improve working conditions. In 2017, I introduced the Licence for London, a deal to help drivers fairly move between bus companies, and I secured a new £23,000 minimum wage for London's 25,000 bus drivers.

It's only through working with others that we can truly make a difference to this great city. Our partners, our contractors, our people and their unions all make a vital contribution and I am grateful for everything they do.

Sadiq Khan
Mayor of London

Commissioner's foreword

We have made good progress towards delivering our Business Plan with the safety of our customers, staff, contractors and suppliers as our top priority.

Safety must always come first. In November, we marked the first anniversary of the tragedy at Sandilands, where a tram overturned and left the rails. Dane Chinnery, Donald Collett, Robert Huxley, Philip Logan, Philip Seary, Mark Smith and Dorota Rynkiewicz lost their lives and a further 62 people were injured. Our thoughts remain with their families and loved ones, and we continue to do everything we can to support them.

The Rail Accident Investigation Branch published its report in December 2017, and we are working with them, the Office of Rail and Road, tram operator First Group, and the wider industry to make sure all the report's recommendations are delivered and that an event like this never happens again.

Our job is to deliver the Mayor's Transport Strategy and make travelling in London healthier, easier and more affordable, while building a strong financial position that creates a net operating surplus by 2021/22.

This year we continued to modernise our business, concentrating on efficiencies and streamlining. In 2016/17, we cut our year-on-year operating costs for the first time in our history and this year we exceeded our savings targets when cutting costs for the second year running. We have achieved this while managing the loss of more than £700m a year in operational grant funding from government.



Image 2: Commissioner, Mike Brown MVO

Our transport services must be affordable and accessible. The Hopper fare has made a huge difference to many Londoners, providing unlimited bus and tram journeys in one hour for £1.50. The Mayor's freeze on TfL fares is also helping our customers save money and encouraging more people to use public transport. This is supporting our passenger numbers relative to other transport operators in London and the South East, and helping Londoners at a time when household budgets have never been under greater pressure.

We have also continued to make improvements in the accessibility of our network. We delivered the 73rd

step-free London Underground station at Bromley-by-Bow in March 2018 and our goal is to have 100 step-free stations by 2022. The Elizabeth line will be fully accessible when it opens through central London in December 2018. The new railway will change the face of travel in London, and over the past year it has been fantastic to see the response from our customers to the first Elizabeth line trains that have come into passenger service between Liverpool Street and Shenfield.

As part of our Healthy Streets Approach, all our roads and infrastructure projects are designed to encourage people to make better travel choices. In January,

we expanded our record-breaking Santander Cycles scheme to Brixton, introducing another seven docking stations and 200 bikes. More Cycle Superhighways, Quietway routes, and plans for a new walking and cycling crossing linking Rotherhithe and Canary Wharf will help to encourage Londoners to swap their cars for more sustainable and active ways of travelling.

Our work to support London's growth and create new homes has continued apace. This year we comfortably beat our targets for developing the property we own, and half of all the homes we build will be affordable.

Finally, we were all devastated when Ian Nunn, our Chief Finance Officer, passed away very suddenly in July 2017. Ian was a true friend and a great leader, who helped us build a plan for driving down costs while maintaining investment in London's transport networks.

We have built on that plan and, in 2017/18, we have gripped our finances and made a great start to delivering our five-year Business Plan, guided by the Mayor's Transport Strategy.

Mike Brown MVO
Commissioner

Year at a glance

We reached major milestones and launched several new services in 2017/18.

April 2017

The 'Please offer me a seat' badge and card are launched to help customers with invisible conditions.



Image 3

May 2017

As part of a UK-wide launch, the new Samsung Pay app can be used for 'pay as you go' travel on our network.

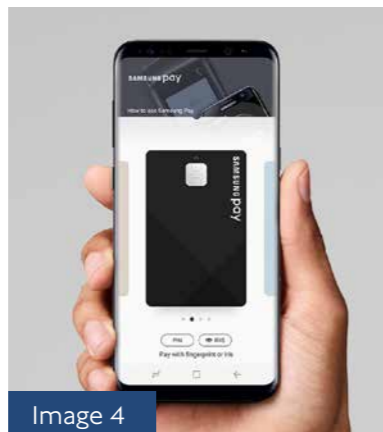


Image 4

June 2017

The first of the new trains that will serve the Elizabeth line runs between Liverpool Street and Shenfield.



Image 5

October 2017

London sees the launch of the T-Charge, the world's toughest emissions charge for older, more polluting vehicles.



Image 9

November 2017

The second Oxford Street consultation outlines plans for public spaces, cycle routes, pedestrian crossings and more.

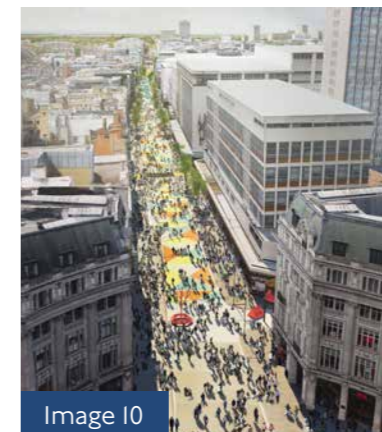


Image 10

December 2017

London Overground's first 24-hour services start running at weekends between Dalston Junction and New Cross Gate.



Image 11

July 2017

A £42m fund will help taxi drivers replace the most polluting diesel cabs, supporting plans for a zero-carbon city by 2050.



Image 6

August 2017

The Night Tube marks its first anniversary, with figures showing it has boosted London's economy by £171m.



Image 7

September 2017

An innovative pilot shows how collecting anonymised WiFi connection data can help us improve Tube journeys.



Image 8

January 2018

The Hopper fare is extended so customers can make unlimited bus and tram journeys in an hour for £1.50.



Image 12

February 2018

Santander Cycles is extended to Brixton, with seven docking stations and 200 bikes available to hire.



Image 13

March 2018

Bromley-by-Bow becomes the 73rd Tube station with step-free access, helping disabled people or those with buggies or luggage.

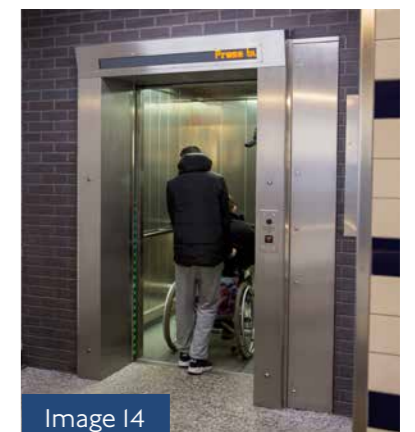


Image 14

The strategy and vision

This report covers our work in 2017/18 to deliver the Mayor's Transport Strategy.

Our role is to deliver this strategy in partnership with London's boroughs, businesses, local communities, consumer organisations and many others. The ambitious plan will increase the attractiveness of public transport

and make cycling and walking easier, more convenient options.

The Mayor's Transport Strategy covers three key themes and provides the overall context for everything we do.

Healthy Streets and healthy people

Investment will focus on improving the places where people live, work, go to school, spend time and travel. Reducing traffic dominance and prioritising walking, cycling and public transport use will enable Londoners to live active, healthy lives and help create a city that works well for its residents and visitors.

A good public transport experience

The right investment will ensure public transport is attractive. Joined-up planning for the whole journey will help integrate public transport and street-level investment. Having the right services where people need them, reducing crowding and keeping fares affordable will minimise car dependency.

New homes and jobs

Transport improvements are vital to the creation of new homes and jobs, and will make sure London's growth supports healthy lives. Our investment will help to create communities where local amenities are within walking and cycling distance and public transport is available for longer journeys, reducing car dependency.

The challenge

London's population is expected to rise to 10.8 million people by 2041 – creating six million additional journeys every day. We must act to avoid growing congestion, pollution and ill health. The aim is that, by 2041, 80 per cent of trips will be by walking, cycling or public transport.

The vision

During the 25 years covered in the Mayor's Transport Strategy, we will need to be prepared for continuing advances in technology and changes to the way we live. We must secure fair and sustainable funding models for investment in transport projects in London.



Image I5: The Mayor's Transport Strategy will make cycling and walking more attractive options

Operational performance

Figure 1:

Buses	2013/14	2014/15	2015/16	2016/17	2017/18
Passenger journeys (millions)	2,382 *2,405	2,385	2,314	2,262	2,247
Kilometres operated (millions)	491	489	492	495	490
Schedule operated (per cent)	97.7	97.1	97.2	97.4	98.1
Excess wait time (high frequency routes) (minutes)	1.0	1.1	1.2	1.1	1.0
Customer satisfaction (score)	83	85	86	86	86

* The method for calculating child journeys changed in 2014/15. The figure on the top row shows corrected figures for 2013/14. The figure on the bottom row shows uncorrected figures as previously published

Figure 2:

TfL's road network	2013/14	2014/15	2015/16	2016/17	2017/18
Journey time reliability (am)	89.0	88.3	87.8	88.0	88.7
Traffic flow – major roads weekdays*	94.6	95.9	95.2	95.1	94.8
Customer satisfaction (score)	75	74	74	70	70
Resolution time for serious and severe disruption (unplanned) per event (hours)	2.0	2.0	1.9	1.9	1.7
Hours of serious and severe disruption (planned)	195	931	1,404	506	445

* Traffic volume compared with an index of 100 from Period I3, 2006/07

Figure 3:

London Underground	2013/14	2014/15	2015/16	2016/17	2017/18
Passenger journeys (millions)	1,265	1,305	1,349	1,378	1,357
Kilometres operated (millions)	76.2	80.3	82.5	83.7	84.4
Schedule operated (per cent)*	97.5	97.6	97.0	96.9	96.6
Excess journey time (weighted) (minutes)*	5.2	4.6	4.6	4.7	4.6
Customer satisfaction (score)	83	84	85	85	85
Lost customer hours (millions)*	24.2	22.7	26.5	26.1	23.9

* Includes industrial action

Figure 4:

DLR	2013/14	2014/15	2015/16	2016/17	2017/18
Passenger journeys (millions)	101.6	110.2	117.0	122.3	119.6
Kilometres operated (millions)	5.8	5.8	6.0	6.0	6.1
Planned kilometres delivered (per cent)	99.2	99.3	98.5	99.0	98.4
Customer satisfaction (score)	87	89	89	89	87

Operational performance

Continued

Figure 5:

London Trams	2013/14	2014/15	2015/16	2016/17	2017/18
Passenger journeys (millions)	31.2	30.7	27.0	29.5	29.1
Kilometres operated (millions)	3.0	3.0	3.0	3.2	3.3
Planned kilometres delivered (per cent)	98.8	97.9	99.0	97.1	98.6
Customer satisfaction (score)	89	89	90	90	91

Figure 6:

London Overground	2013/14	2014/15	2015/16	2016/17	2017/18
Passenger journeys (millions)	135.7	139.9	185.2	188.8	190.1
Kilometres operated (millions)	7.9	7.8	10.5	10.8	11.0
Planned kilometres delivered (per cent)	96.1	95.2	94.4	94.4	98.4
Customer satisfaction (score)	82	83	84	84	83

Figure 7:

Emirates Air Line	2013/14	2014/15	2015/16	2016/17	2017/18
Passenger numbers (millions)	1.5	1.5	1.5	1.5	1.4
Customer satisfaction (score)	93	93	93	93	93
Availability (per cent)	95.0	96.3	94.4	98.7	97.6

Figure 8:

London River Services	2013/14	2014/15	2015/16	2016/17	2017/18
Customer satisfaction (score)	89	90	90	90	*na
LRS Passenger Services** (including Woolwich Ferry) (thousands)	8,412	10,023	10,301	10,620	10,017

* The frequency of London River Services customer satisfaction surveys reduced in 2017/18

** From 2013/14 new passenger counting software was introduced so the data for years before that is not comparable

Figure 9:

London Dial-a-Ride	2013/14	2014/15	2015/16	2016/17	2017/18
Customer satisfaction (score)	92	92	92	91	92
Trip requests scheduled (per cent)	91	90	90	89	91

Figure 10:

Cycle Hire	2013/14	2014/15	2015/16	2016/17	2017/18
Customer satisfaction (score)	75	82	83	83	83
Cycle hires (millions)	8.2	10.1	9.9	10.5	10.4

Figure 11:

TfL Rail	2013/14	2014/15	2015/16	2016/17	2017/18
Passenger journeys (millions)	na	na	*40.1	47.8	45.3
Customer satisfaction (score)	na	na	83	83	83

* Moved to TfL in P3 – data based on 11 periods

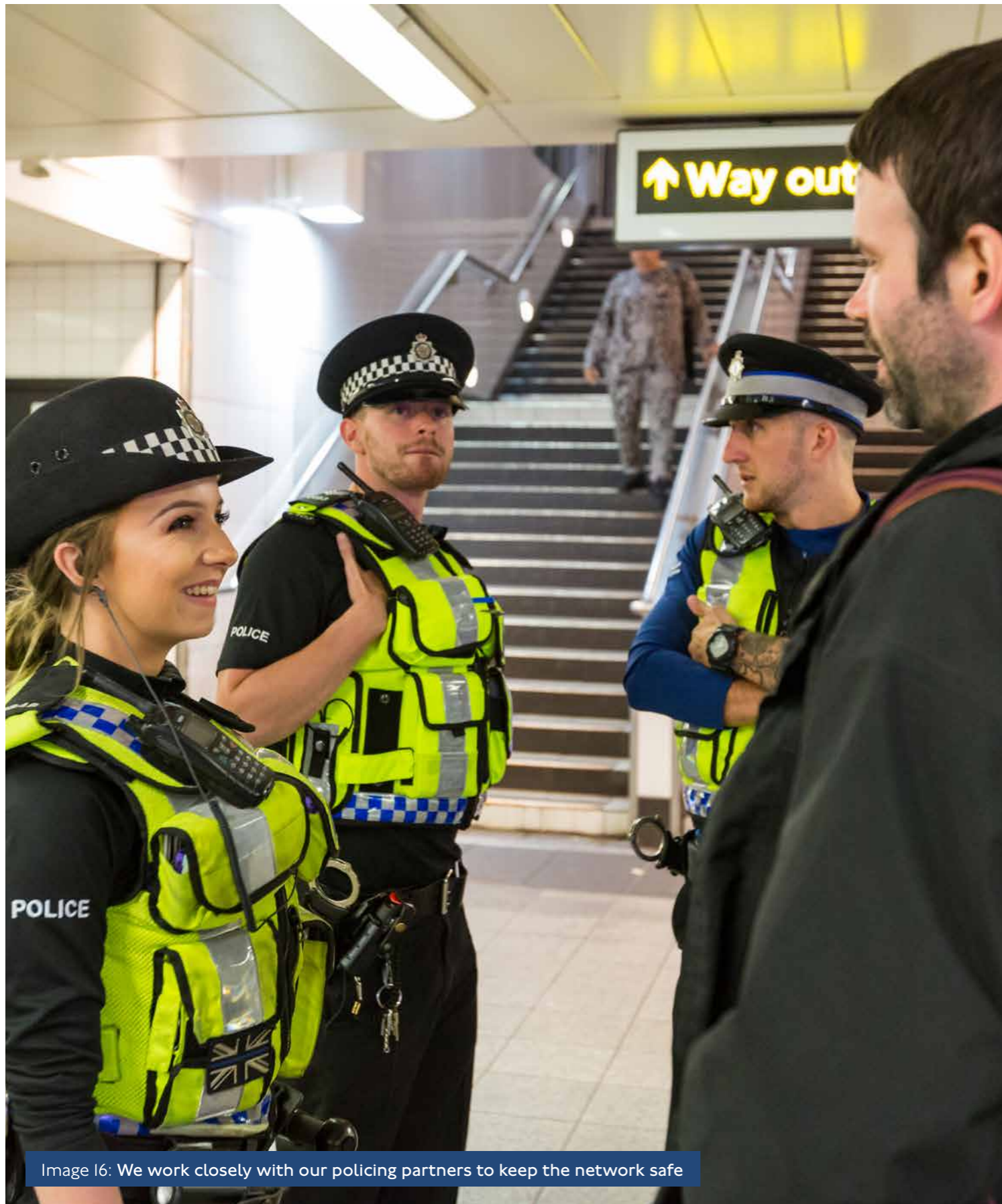


Image I6: We work closely with our policing partners to keep the network safe

Safety and security

Everybody has the right to travel around London confidently and safely.

The safety of our customers, staff, suppliers and contractors is our top priority. We ensure that we meet our stringent safety standards and that they reflect industry good practice.

We work closely with partners including the Metropolitan Police Service (MPS) and British Transport Police (BTP) to prevent criminal offences and reassure people that our network is safe.

The terrorist attacks at London Bridge and Parson's Green served as a tragic reminder of the importance of our work to support our partners in protecting London's roads and transport network, deter terrorists and reassure the public.

Safety on London Trams

Further action was taken this year to improve safety following the tragic tram overturning at Sandilands on 9 November 2016, in which Dane Chinnery, Donald Collett, Robert Huxley, Philip Logan, Philip Seary, Mark Smith and Dorota Rynkiewicz lost their lives and 62 people were injured.

We have taken on board all of the recommendations from the Rail Accident Investigation Branch, and BTP. We also published our own investigation, produced by SNC-Lavalin.

Our thoughts remain with everyone affected and we continue to offer support in any way we can, including through the Sarah Hope Line (see page 18 for more details).

In September, we introduced a permanent reduced speed limit across the tram network of 70km/h. We have introduced better speed monitoring, installed new signage for drivers and upgraded the CCTV recording system. The number of speed signs has been increased and additional lineside digital signage provides more warnings to drivers.

Enhanced chevron signs are in place at the four sites with significant bends. 'In-cab vigilance' technology, which alerts the driver if it detects they are distracted or tired, has also been fitted.



We fund more than

3,000

police and police community support officers to keep people safe



£500,000

awarded to six operators as part of making buses safer

Case study

Sarah Hope Line

The Sarah Hope Line provides support for those affected by injury and other events on our network. The service is available to anybody who has been involved in a life-changing incidents and their families, as well as witnesses to such events.

It is run by specially trained staff, who can make referrals for counselling and offer a range of specialist support, including reimbursing medical costs and assisting with national and international travel arrangements.

In 2017/18, the Sarah Hope Line team managed 697 calls relating to events on board buses, trams and the Tube.

We also supported people affected by the Grenfell Tower fire by co-ordinating drop-in counselling sessions.

We continue to promote the service, and presented to the Metropolitan Police Family Liaison Officers and met with surgical and trauma care specialists at St George's, The Royal London, St Mary's and Kings College and the London Air Ambulance Service.

An alert system that monitors and manages speeds is being developed and, with safety experts, we are testing options to strengthen the glass in all trams.

We also continue to work with the UK tram industry to ensure lessons are learned and that we are collectively able to introduce any further measures that could improve the safety of trams across the country.

In February, we hosted a second Tram Summit. The two-day event brought together owners and operators from across the industry to discuss our response. This included a visit to the site in Croydon to analyse what has been done to make the tram network safer, a chance to hear from some of the people and the families affected, and how we have done our best to offer all the support we can through the Sarah Hope Line.

In March, the Mayor announced that we would provide Croydon Council with £750,000 over three years. This money will be used to support health and social services in New Addington and the surrounding community.

Detailed papers were presented to, and discussed by, the TfL Board and Safety, Sustainability and Human Resources Panel on the steps we have taken.

Safety on the surface network

There were 6,590 injuries to our customers and workforce across the surface transport network, which is a slight increase on the previous year.



Image 17: A 70km/h speed limit has been introduced for trams

The majority of customer injuries occurred on the bus network (94 per cent of all customer injuries). Tragically, three of these injuries resulted in passenger deaths: two fell down the stairs and one fell after disembarking.

Buses were also involved in seven fatal collisions with six pedestrians and a motorcyclist. Slips, trips and falls were the main cause of injuries.

To help prevent this type of injury, we ran a campaign to encourage customers to think about their personal safety and take extra care when travelling on

public transport. For buses, the campaign included posters and a trial of automated messaging that reminds customers to hold on while the bus is moving.

We are reviewing the results to determine future action, which is likely to include further, more targeted trials.

Collaborating to improve bus safety

In July 2017, the London Assembly Transport Committee published its review of bus safety. It made a number of recommendations, which we are actively addressing through a Bus Safety Programme.

Safety and security

Healthy Streets and healthy people

A good public transport experience

New homes and jobs

Operating our business

i

Police community support officers work in partnership with thousands of frontline transport staff to help keep our passengers and employees safe.

Ensuring that we fully understand the causes and contributory factors leading to injuries is key to achieving our injury reduction targets. In July 2017, we ran a workshop with bus operators to improve the quality and speed of bus incident investigations, and ensure we learn lessons and share them across the industry in a timely manner.

We analysed police collision investigation files for fatalities involving buses, which identified a range of problems and potential countermeasures, including autonomous emergency braking, improving wing mirror design, and re-designing buses to reduce the impact of any collision. We are now evaluating the benefits of these potential measures.

We commissioned a new Certificate of Professional Competence accredited safety training course for drivers and instructors. The course, which will start in early 2019, will build on the success of Hello London, an interactive customer-service focused training

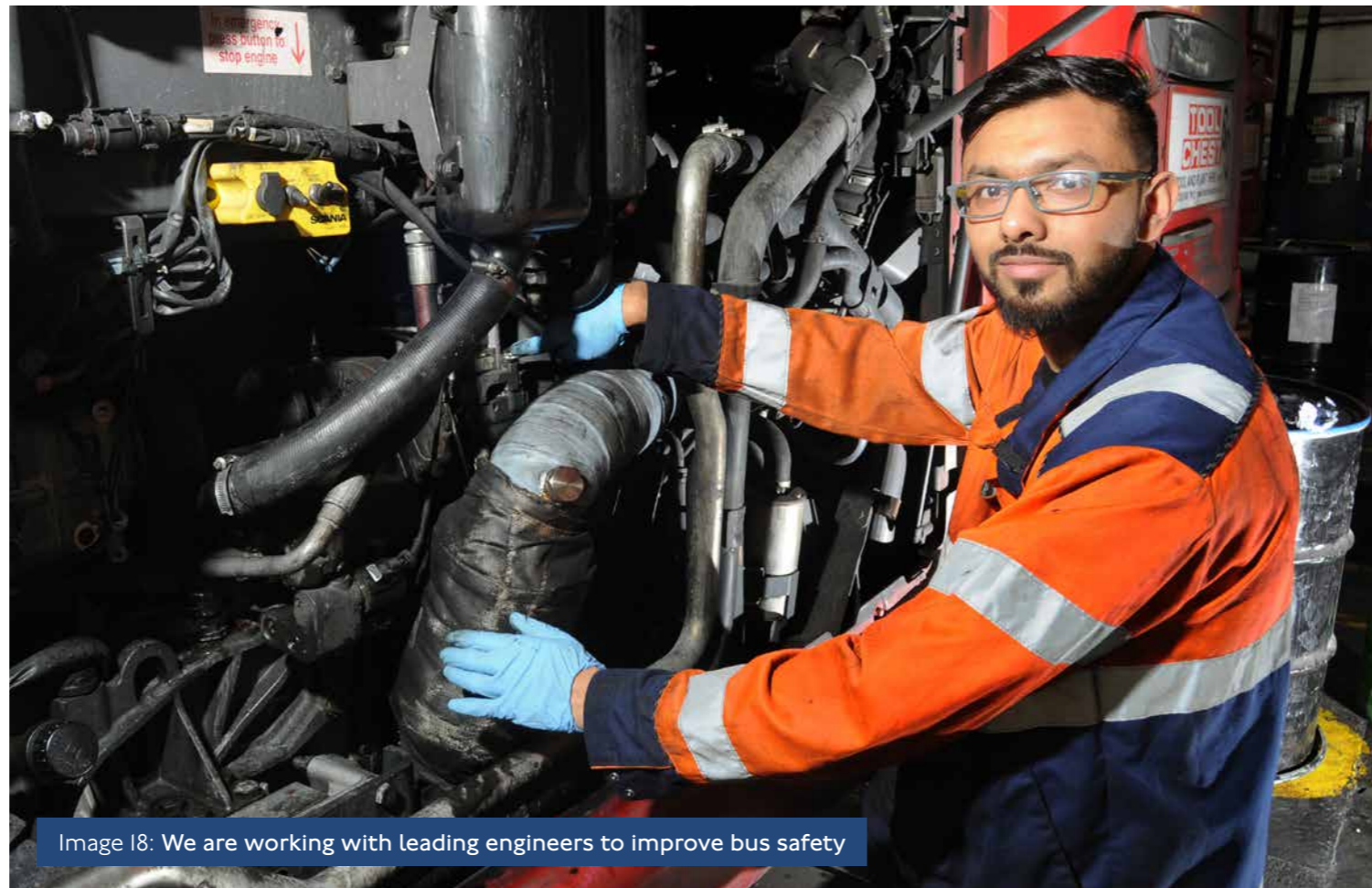


Image I8: We are working with leading engineers to improve bus safety

course delivered for thousands of bus drivers, contractors and other staff.

We launched a new approach to measuring safety performance, which features two new measures: a bus operator safety performance index (SPI); and a measure that examines the maturity of the bus companies' safety arrangements. This enables us to effectively monitor bus company performance and identify long-term actions that address root cause barriers to safety improvement.

The SPI, which is already in place in our contracted London Rail businesses, uses several indicators to measure health, safety and environment (HSE) performance and allows us to further analyse incidents on buses. We will use both measures to monitor bus operator performance in 2018/19.

Bus safety technology

In August, we announced plans to test new safety technology on buses. The move builds on the Mayor's ambitious 'Vision Zero' approach to road danger,

Partnership spotlight

Tackling crime

We work closely with the police to ensure London's transport network is a safe, low-crime environment.

We do not tolerate behaviour where someone is targeted, or made to feel uncomfortable on their journey, because of who they are or perceived to be. In October, to mark National Hate Crime Awareness Week, we joined forces with the police for more than 200 community events, promoting the #WeStandTogether message.

Also offering their support were representatives from Tell MAMA, a reporting service for victims of anti-Muslim hate crime. We met east London communities to stress the importance of reporting hate crime.

On 25 November, we supported International Day to Eliminate Violence Against Women and Girls. We worked with the police to raise awareness and encourage victims of unwanted sexual behaviour to report it. We continue to safeguard children and vulnerable adults, such as rough sleepers or people with mental health issues, who travel or seek refuge on our network.

We also supported the MPS on Operation Sceptre, which targets knife crime and Operation Venice, tackling moped-enabled crime.

‘Safer buses, including redesign and additional safety features, are key to delivering the Mayor’s stated aim of eliminating death and serious injury involving a bus in London by 2030. TfL’s bus safety programme is a good example of tackling danger at source’



Cynthia Barlow
Chair, RoadPeace



Image 19: Safety messages on Oyster wallets

set out in his Transport Strategy. This aims for no one to be killed in, or by, a London bus by 2030, and for deaths and serious injuries from road collisions to be eliminated from London’s streets by 2041.

The five-month independent trials began in January at the Transport Research Laboratory. We are working with leading engineers and technical specialists, bus manufacturers and operators on measures including:

- Autonomous emergency braking that allows the vehicle to detect its surroundings and automatically apply the brakes
- Features to alert pedestrians and other road users of the presence of buses, such as lights or audible warnings
- A re-design of the front of buses to reduce the impact of a collision

- Changes to bus interiors to improve passenger safety, such as higher-grip flooring and softening sharp corners
- Improvements to enhance drivers’ vision, such as better mirror design

The results of the trials will feed into a new Bus Safety Standard, which will be incorporated into bus operator contracts from the end of 2018.

In August, we also published a report on Intelligent Speed Assistance, which limits how fast buses can travel, following a successful trial in 2016. This technology began to be rolled out on new buses in December 2017.

Safety on the Underground

Throughout 2017/18, we focused on improving how we communicate safety messages with our customers, particularly to reduce slips, trips and falls. This involved adding new signs on escalators reminding people to hold the rail. At stations with the most incidents, we distributed Oyster card wallets with safety messages and made safety announcements.

This work has reduced the number of customer accidents by five per cent compared with 2016/17. Importantly, the number of incidents of people falling into the gap between the train and the platform dropped by almost 10 per cent.

We also focused on improving safety within London Underground. The senior management team regularly makes safety tours, but in November, for the first time,

Case study

Bus Safety Summit

In November 2017, we held the inaugural London Bus Safety Summit, which brought together bus operators, industry experts and stakeholders to hear from other industries about how they manage safety and promote a safety culture throughout their organisations.

There were several presentations on how other sectors, such as aviation, manage driver fatigue and the measures that can be used, such as fatigue detection devices.

The Rail Safety and Standards Board is developing a fitness for duty tool and London Trams has implemented a driver protection device.

Two operators have been awarded funding from the Bus Safety Innovation Fund to develop sensors in driver cabs to detect eye and face movements, picking up on signs of fatigue and distraction.

Their proposals use two different technology suppliers. They work by monitoring the driver’s eye and face movements and providing an alert, via a vibration to the driver’s chair, if drowsiness is detected. Both these studies are due to conclude in the summer of 2018.

Partnership spotlight

The Bus Safety Innovation Fund

We awarded £500,000 to six operators in November to make London's buses safer.

The Bus Safety Innovation Fund was open to all bus operators and we encouraged management, bus drivers and other staff to share their ideas.

There were 14 bids in total, with awards being made to Abellio, CT Plus, Go-Ahead, RATP, Tower Transit and Metroliner. Ideas included alarms to alert pedestrians to approaching buses, sensors, acceleration limiters, psychometric testing and a joint project with the London Cycling Campaign to appoint road user champions in depots. Many operators have set up partnerships with universities and not-for profit organisations, including cyclist groups and technology companies to develop their ideas.

The money will be used to develop and test the ideas. If successful, they could be introduced across the network.

The successful bids were announced during the inaugural London Bus Safety Summit. This brought together industry professionals as part of our work to reduce the number of people killed or seriously injured on the network.

directors and managers started sharing information and photos from their safety tours on our internal communications channel, Yammer.

This has contributed to nine per cent fewer staff or contractors being hurt at work in 2017/18 compared with 2016/17.

We are planning further improvements for 2018/19 focusing on the main risk areas: working at height, slips, trips and falls, workplace violence, putting people to work safely, safe track access and improving safety culture.

Safety on the DLR

A new customer safety strategy on the DLR was developed to help prevent injuries between the platform and the train. It included new signs that show customers the location of emergency Help Points and platform specific announcements.

We took on board best practice principles from the London Underground escalator safety study and added safety strips at the top and bottom of escalators to improve visibility and help prevent trips. At London City Airport station, posters and staff reminded people to use lifts when carrying luggage, which led to a 60 per cent reduction in escalator incidents.

London Overground door protection

All trains on the London Overground now feature a system that prevents the doors opening on the wrong side of the train after we introduced the technology on the Barking to Gospel Oak and Romford to Upminster routes.

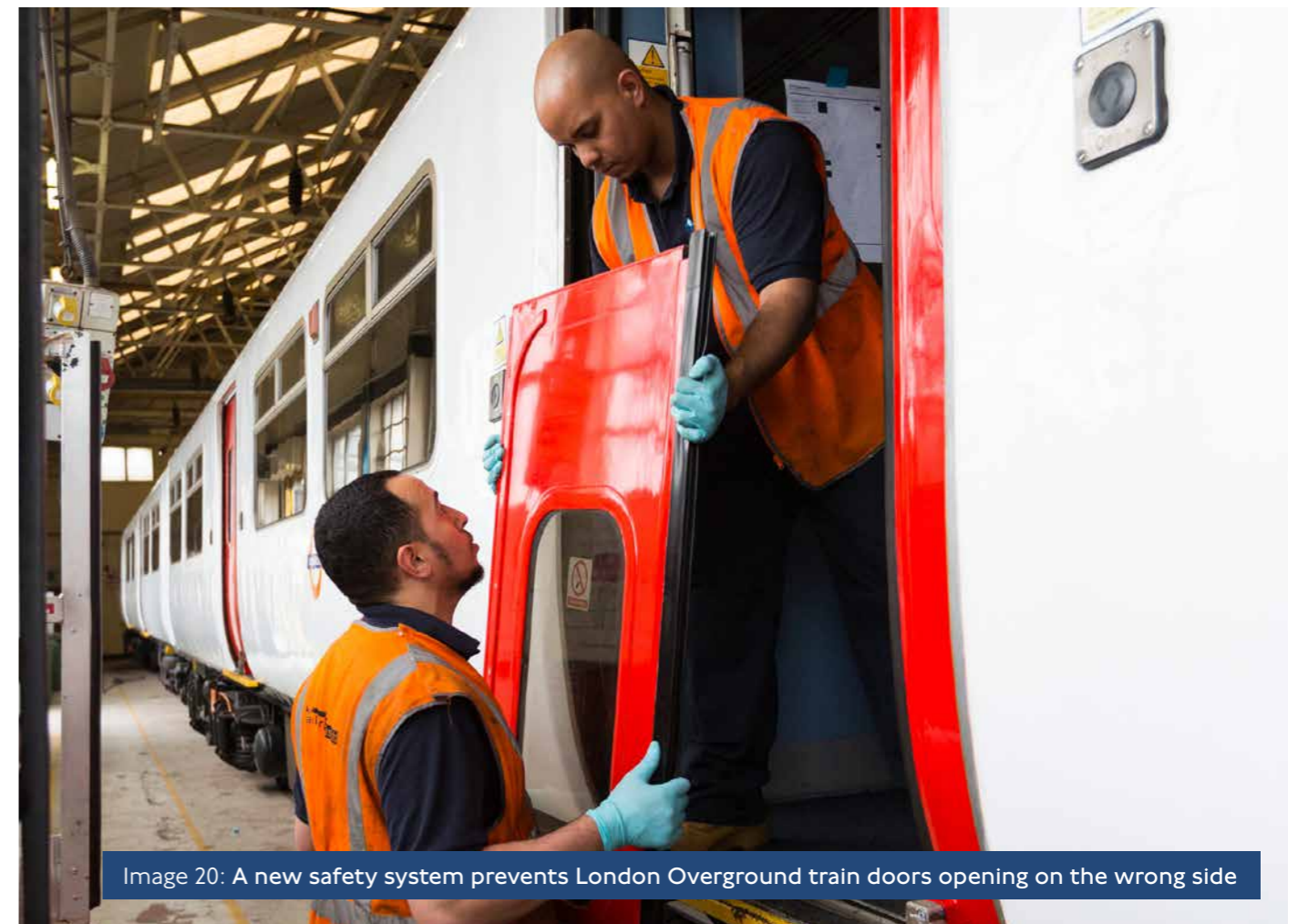


Image 20: A new safety system prevents London Overground train doors opening on the wrong side

This was in anticipation of the new Class 710 trains entering service in 2018. The system provides additional mitigation against doors being opened on the wrong side by providing a visual and audible warning to drivers.

Motorcycle safety

We launched a range of new measures to raise standards within the motorcycle delivery industry, while also improving the confidence and skills of motorcyclists in London.

We are working with the motorcycle delivery and courier industry to explore the expansion of the Fleet Operator Recognition Scheme. The voluntary standard has been successfully used in the haulage industry since 2011 to promote safety, efficiency and environmental best practice. It awards companies bronze, silver or gold accreditations.

We also created three new training courses for motorcyclists that develop rider confidence, skills and knowledge.

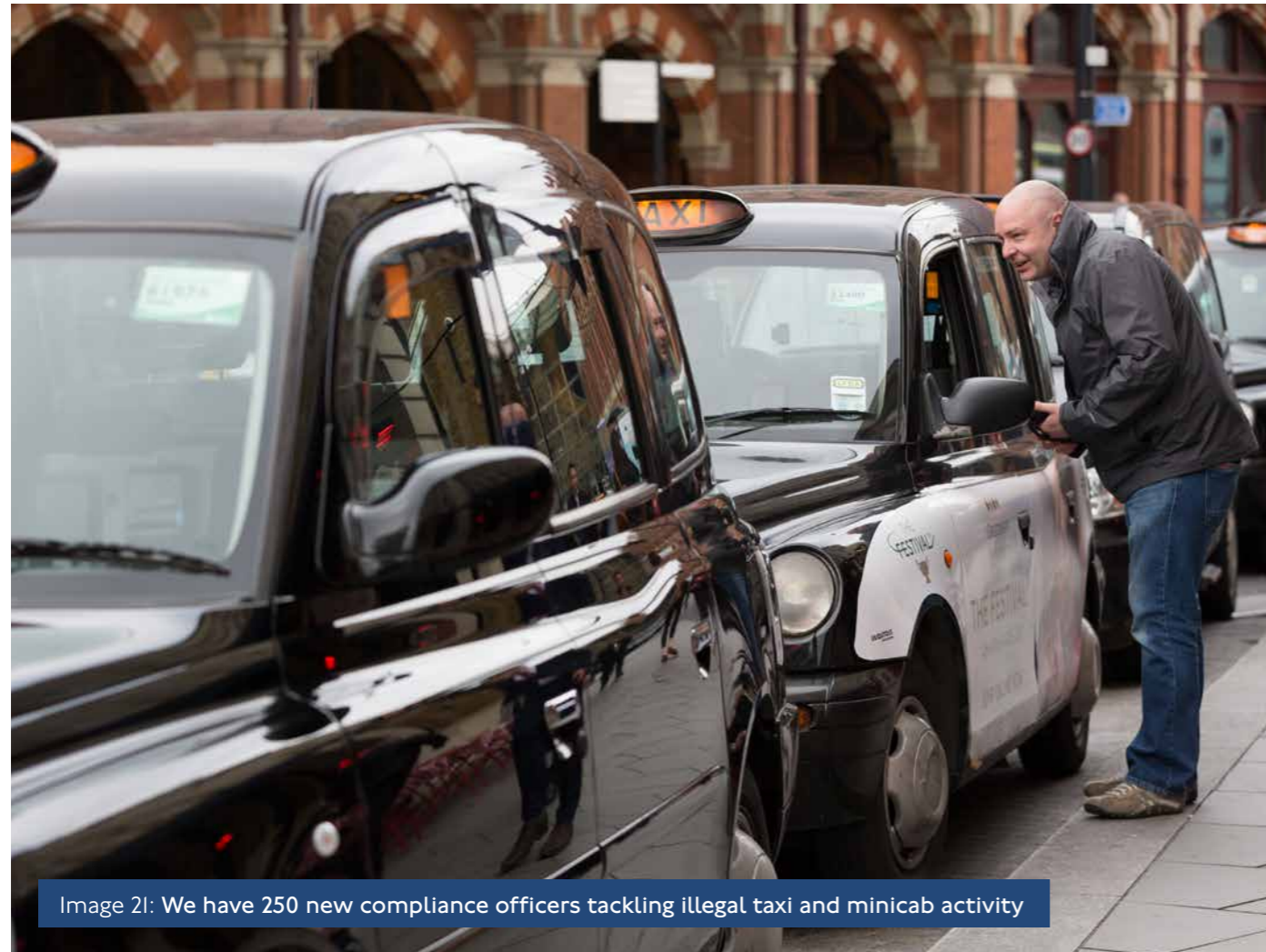


Image 21: We have 250 new compliance officers tackling illegal taxi and minicab activity

Improving safety in the taxi and private hire sector

In 2016, the Mayor announced an increase in the size of our taxi and private hire compliance unit and we have since recruited 250 new compliance officers. This has significantly increased our ability to tackle non-compliant and illegal taxi and minicab activity in London. We are now checking more than five times as many taxi and private hire drivers and vehicles than in 2016/17.

In March 2018, we consulted on a range of safety improvement measures for users of private hire vehicles. These include an advanced driving test for private hire drivers, providing passengers with clear information on who to contact to provide feedback and raise a complaint, whether more robust background checks could be introduced for drivers and whether changes to insurance arrangements are needed for private hire services.

We also explored whether new signage displayed in private hire vehicles would make it easier for customers to raise concerns about the driver's behaviour and driving, as well as the condition and accessibility of the vehicle.

The market has transformed in recent years as technology is making it easier and cheaper for customers to make bookings via apps. More services are offering ride-sharing, where people share vehicles and pay separate fares.

In February, we published a new policy statement setting out how private hire ride-sharing will work in the future and how passengers can stay safe. The statement is available at tfl.gov.uk/tph-policy.

We continue to look at other areas in the interests of improved public safety and standards of service. This includes progressing new regulations on safeguarding, disability, equality and knowledge of private hire legislation as part of an enhanced driver assessment.

Safer lorries

In November, we launched a 10-week consultation on our Direct Vision Standard (DVS) star ratings for heavy goods vehicles (HGV), after studies showed HGVs were involved in a disproportionately high number of fatal collisions.

The DVS will be the first action of its kind to categorise HGVs according to the level of a driver's direct vision from a cab. HGVs will be given a star rating between zero and five, with

'This is the first scheme of its type in the world which is looking to address directly the cause of many pedestrian and cyclist fatalities: poorly designed lorry cabs that restrict visibility'



Duncan Dollimore
Head of Campaigns and Advocacy, Cycling UK

Safety and security

Healthy Streets and healthy people

A good public transport experience

New homes and jobs

Operating our business

only those rated three-star and above, or which have comprehensive safety systems, able to operate on London's roads from 2024.

The development of the proposed DVS forms part of the Mayor's Vision Zero approach to reducing road danger.

Safely delivering major projects

We work with a wide range of companies from across the UK to safely deliver our major projects with minimal harm to the environment.

Based on accident and incident analysis, we are focused on improving our safety performance. We ran a campaign to help individuals to take ownership of their health and safety. This contributed to a 30 per cent reduction in lost time injuries, a 52 per cent cut in major injuries and a 44 per cent reduction in reporting injuries, diseases and dangerous occurrences compared with 2016/17.

This has resulted in a 20 per cent reduction in total workforce injuries, surpassing our 17 per cent target. Crucially, this has made health and

safety a genuine conversation between colleagues, who are empowered to act on issues at our construction sites.

To support our new approach, we launched a supplier assessment tool, which uses quality criteria to help identify good practices and the areas for improvement.

The assessment process is jointly carried out with our suppliers and allows us to share good practice and track the effectiveness of improvement plans and risk mitigations when they are needed. The tool is in early stages of development but our aim is to expand it across all our capital works.

We believe strongly in two-way engagement with our suppliers and in March we launched a capital projects Zero Harm forum and complementary Safety Improvement Groups.

These sessions promote sharing, learning and action between clients and contractors on important HSE issues so that all parties involved improve their performances.

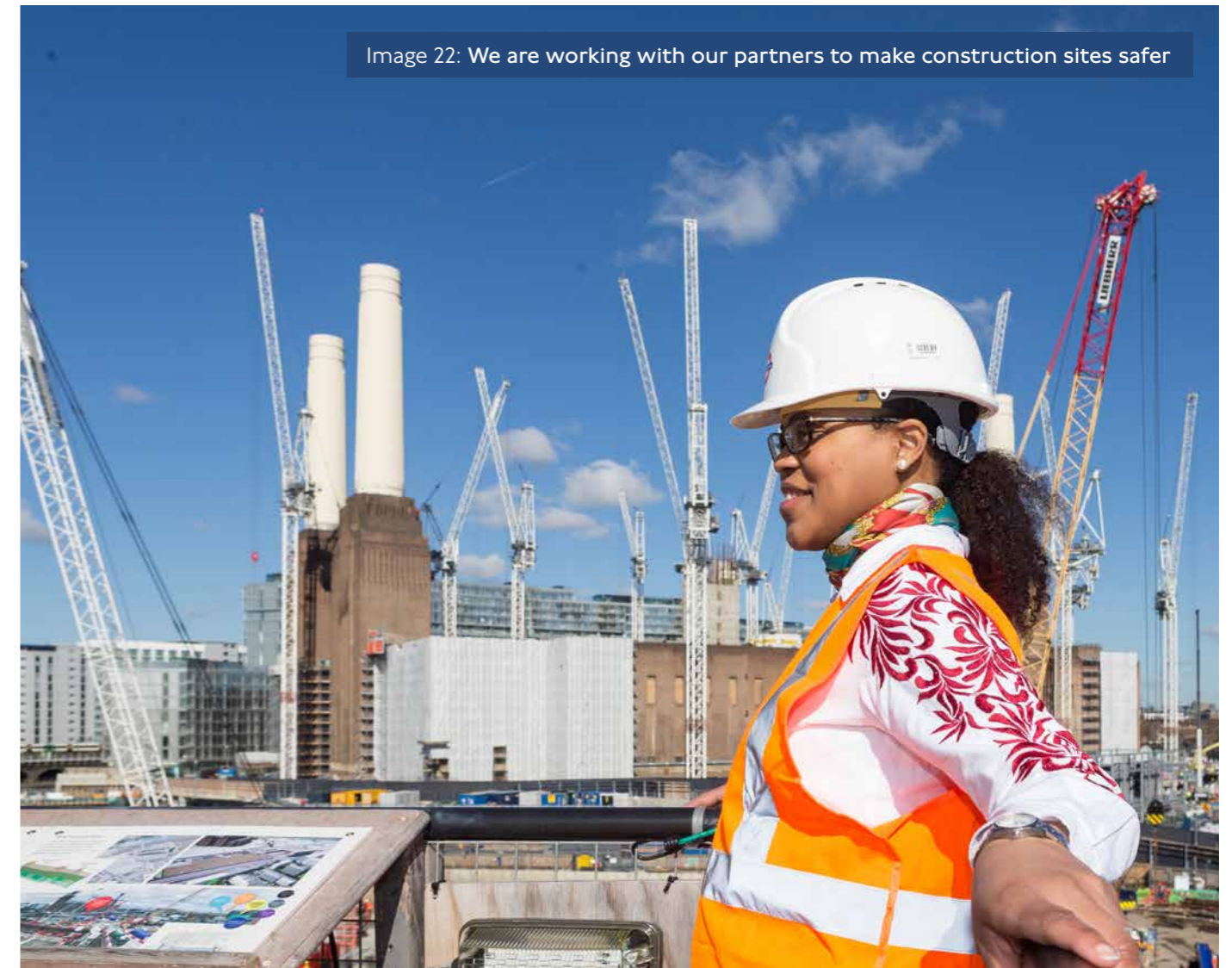


Image 22: We are working with our partners to make construction sites safer

We're aiming to eliminate death on or by London buses by

2030



73

junctions targeted to reduce the number of people killed or seriously injured



TfL Supplier Awards

In November, we held our first TfL Supplier Awards to recognise the contribution that our suppliers make to running and improving transport in London.

FM Conway won the best safety initiative award for its work to reduce the risk posed by mobile devices.

Working with its IT experts and suppliers, FM Conway developed an in-cab solution in lorries that stops the use of mobile phones and all other dangerous behaviours while driving. ♦

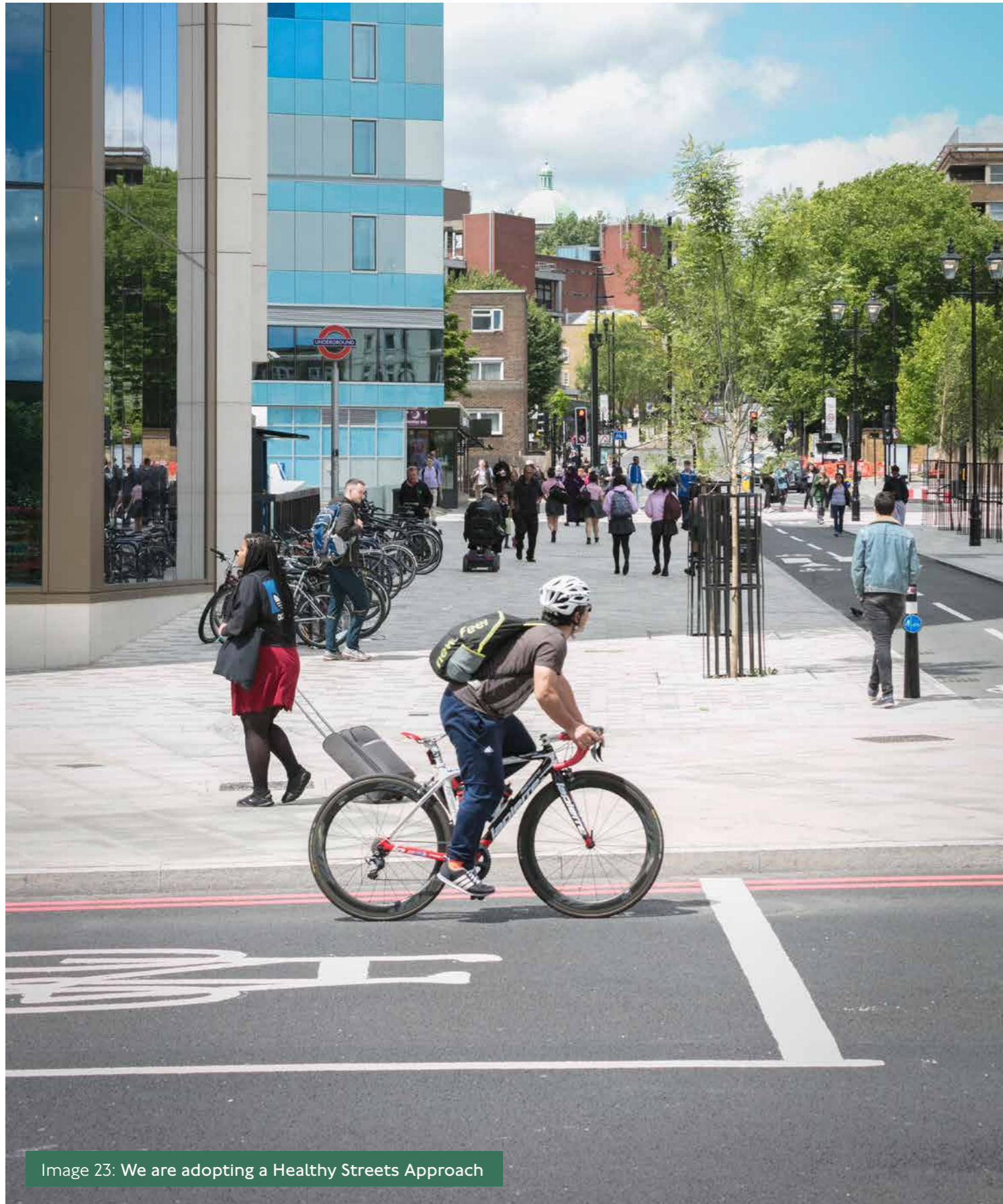


Image 23: We are adopting a Healthy Streets Approach

Healthy Streets and healthy people

Transport plays a vital role in improving the health and quality of life of all Londoners.

As decades have passed, cars and technology have taken over many of the tasks that used to require physical effort. As a result, lack of activity is now one of the biggest threats to our health.

We have allocated £2.1bn to help Londoners increase their physical activity by reducing their reliance on driving, providing better local spaces, prioritising more affordable transport and improving walking and cycling opportunities.

This Healthy Streets Approach is designed to improve our air quality, reduce congestion on the roads, and help make London's diverse communities greener, healthier and more attractive places in which to live, work, play and do business.

Active, inclusive travel

There has been an 8.8 per cent increase in the number of cycle trips made year-on-year since 2016, and our latest figures mean that since 2000, London has seen a 154 per cent increase in the number of journeys made by bike. On average, 730,000 trips are now made in the capital by bike per day.

This rise in demand has been reflected by the popularity of Santander Cycles, which saw year-on-year record numbers of hires for seven months of the year. October was the best month ever, with just under one million hires. In total, more than 67 million journeys have been made on the bikes since the scheme launched in July 2010 and it forms a key part of our efforts to get Londoners active.



£2.1bn

allocated to help Londoners increase their physical activity



6

additional cycle routes given the green light

Partnership spotlight

New Santander Cycles

Among the many improvements made to the Santander Cycles scheme this year was the introduction of a new bike built by England's longest established cycle manufacturer, Pashley Cycles in Stratford-upon-Avon.

The first of the new bikes were introduced this year, with thousands more set to join the hire scheme over the next few years.

The new cycles offer riders improved handling, safety and comfort. They include a gel saddle, lower frame, puncture prevention tyres, new gear hub and front and rear Blaze lighting.

Serco will continue to maintain the cycles, as well as distribute them around London. The cycles have Bluetooth and the capacity for GPS technology, which will enable Serco to record the performance of the bikes.

British start-up company Blaze has helped transform the lights on the new Santander Cycles, which include a new brighter brake light and greatly enhanced Blaze Laserlight at the front with 180-degree visibility.

The Blaze Laserlight is now fitted to all 12,000 Santander Cycles to make riders more visible and increase their confidence on the roads.



Image 24: The cycling network is being expanded to make travel by bike more accessible

Expanding the cycling network

We have been working hard to make cycling easier and more accessible for tens of thousands more Londoners. The Santander Cycles scheme expanded its reach south from Stockwell, with seven new docking stations installed in Brixton after funding was provided by Lambeth Council. Together, these stations provide space for up to 200 bikes.

In January, the Mayor announced six new cycle routes that will help to create a pan-London network and improve people's health, tackle congestion and clean up London's air.

The routes, which will receive a £142m investment, were selected from a shortlist of 25 corridors, which were identified as having the greatest potential

for cycling. The new routes were developed using our Strategic Cycling Analysis, which identified connections where new cycling infrastructure is required to enable more people to cycle.

The six new routes will run from Tottenham in the north, to Peckham in the south, and from Barking in the east, to Willesden Junction in the west.

River crossings

In November, we unveiled plans to provide a new Thames river crossing between Rotherhithe and Canary Wharf for pedestrians and cyclists. This project is one of a number of possible new schemes designed to improve cross-river connections. Together, they would offer new links for public transport, vehicles, pedestrians and cyclists.

'Cycling is taking off in London and TfL's new figures prove that Londoners flock to high-quality cycle lanes and routes'



Ashok Sinha
CEO, London Cycling Campaign

Case study

Cycling infrastructure improvements

We have continued to invest in the infrastructure and services that are required to enable and encourage Londoners onto their bikes.

In December, the East-West Cycle Superhighway was fully opened, providing a largely segregated two-way cycle track between Tower Hill and Lancaster Gate. We are continuing with some finishing touches along the route, which should be complete in summer 2018.

Work also started to expand the North-South Cycle Superhighway (CS6) between Elephant and Castle and King's Cross. The route is due to be completed later this summer.

Work continues on our Quietways, which offer routes for people who want to cycle along lower-traffic streets, with most of the first seven having completed sections. More sections and the next phase of the scheme will be launched through 2018.

Three Mini-Hollands boroughs – Waltham Forest, Kingston and Enfield – are progressing well with their plans to transform neighbourhoods into greener, healthier, more attractive public spaces.

Super cycling

In September, we launched a consultation on plans for Cycle Superhighway 9, which would bring safer cycling to west London. It would add nearly six kilometres of segregated track to the Capital's roads, linking Kensington Olympia to Brentford. It would also feature significant improvements for pedestrians, including better traffic light and pedestrian crossings.

In the same month, the Mayor announced plans to introduce Cycle Superhighway 4, which would provide a continuous segregated route between Tower Bridge and Greenwich.

The plans include new pedestrian crossings, improved public spaces and a host of other improvements aimed at making the area more attractive and accommodating future growth.

Cycling grants

We invited community and not-for-profit groups across London to apply for grants to get their communities cycling. In July, we announced that we had made up to £300,000 available to help 30 groups offer a range of cycling initiatives to people who may not otherwise ride a bike. These include cycle training, loan bikes, guided rides and courses to teach basic cycle maintenance.

New projects will receive up to £10,000 over three years. To encourage an even greater number of people to take up cycling, an additional £3,000 grant is available this year for the purchase of electric bikes.

Tackling congestion

The Congestion Charge has played an important role in reducing the number of vehicles in central London, but in the past five years there has been a 12 per cent increase in the number of motorists issued with Congestion Charge Penalty Charge Notices (PCNs).

To encourage greater compliance and help tackle congestion, from 2 January 2018 we increased the PCN charge from £130 to £160, reduced to £80 for prompt payment. This followed a public consultation that received more than 7,400 responses.

Transformation of Oxford Street

The first public consultation on changes to the Oxford Street district, in partnership with Westminster City Council and the Mayor, revealed strong support for transforming the area into a new traffic-free public space in the heart of London.

The consultation ran between April and June 2017, with almost 12,000 responses from local residents, businesses, visitors and other stakeholders.

Partnership spotlight

Cycling Grants London

Over the past two years, our Cycling Grants London programme has helped 46 community groups encourage more than 12,000 people to cycle.

One participant from the London Bike Kitchen group in Hackney said she learnt how to fix her bike and is no longer embarrassed to ask questions about cycling.



Image 25: More cycling routes have been given the go-ahead



46

community groups are encouraging more than 12,000 people to cycle

1,000

local children are now breathing cleaner air thanks to the Low Emission Bus Zone in Brixton



Image 26: A public consultation has shown strong support for a traffic-free Oxford Street



Of the respondents who completed an online questionnaire, 43 per cent strongly supported the proposals and a further 19 per cent offered their backing. Thirty per cent did not support the transformation. Feedback made it clear that any scheme must address a range of transport, accessibility and congestion concerns.

We examined all of the issues raised through the consultation before presenting the detailed proposals at a second consultation in November 2017, the results of which were published in March 2018. The ultimate decision on the scheme will be made by Westminster City Council.

Almost
12,000

responses were received to the Oxford Street consultation



Junction review

Work has started on the review of 73 junctions that were identified as having poor safety records. This analysis will now take place each year to prioritise those in most need of improvement.

Waterloo roundabout and Lambeth Bridge northern roundabout were among those identified and, in June, major proposals were unveiled to make the intimidating junctions safer for everyone.

The plans are designed to enhance conditions for walking, cycling and public transport. They include segregated cycle lanes, cycle-specific traffic lights, wider paths, the removal or transformation of the junctions and vastly improved public spaces. Following a consultation in 2017, work is expected to start in early 2020.

Transforming local neighbourhoods

The boroughs of Ealing, Greenwich, Hackney, Haringey, Havering, Lewisham and Waltham Forest were the first round of winners in the new, multi-million pound Liveable Neighbourhoods funding initiative. The aim is to transform areas across London into greener, healthier, more attractive public spaces.

The boroughs were all successful in their initial bids, which is the first scheme set up to directly deliver the Mayor's Healthy Streets Approach across London.

They will now develop their proposals further to secure a share of the £114m available. Projects will include changes to town centres and residential areas to improve conditions for walking

'This is an important step towards tackling air pollution on one of the busiest streets in the UK. Initiatives like this encourage people to walk and be active, which not only cuts emissions but also helps people lower their risk of heart disease and stroke'



Simon Gillespie
Chief Executive,
British Heart Foundation

and cycling, reduce traffic dominance and help businesses by making places more attractive. There will be another round of funding and other boroughs will be able to submit proposals for further Liveable Neighbourhoods support.

In July, we concluded our work to transform Archway into a safer, more pleasant and accessible town centre. The £12.6m project began in February 2016 and included replacing the outdated one-way gyratory with two-way traffic. There is a new public space, safer cycle lanes and better pedestrian crossings.

We worked closely with Islington Council on the improvements, which have boosted the local community by making the area more attractive for residents and visitors, and for future investment.

We are also working closely with Islington Council on the transformation of the area around Old Street. This will begin

later in 2018 and the council is looking for innovative design concepts for the public space that encompass public art and embrace the spirit of 'Tech City' – the technological, economic and cultural powerhouse around Old Street.

In July, we published proposals to improve Nine Elms to support regeneration in the area and make it better for pedestrians, cyclists and bus passengers.

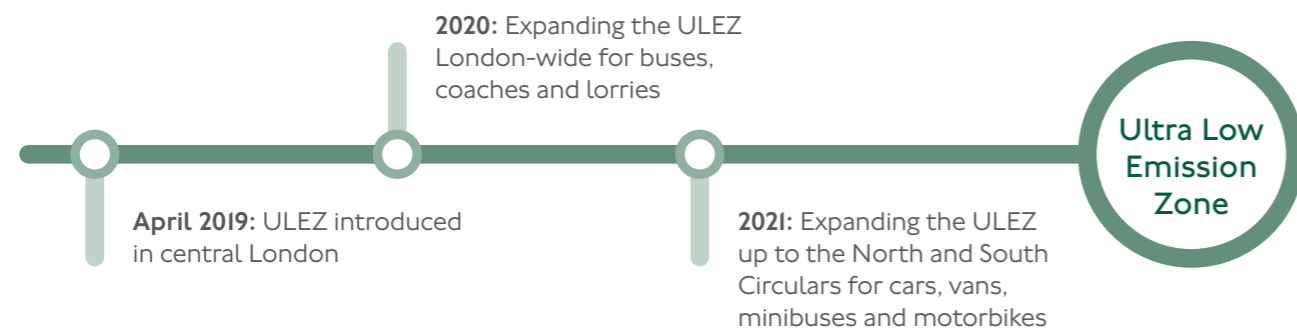
The 2.5km stretch of Nine Elms Lane and Battersea Park Road would be completely redesigned to create more attractive and accessible streets.

Another consultation took place in the summer that considered works to make Fiveways in Waddon, Croydon, simpler and safer for all road users. This proposed improvement would provide a safer, more direct route through the area, helping to reduce delays and congestion.

Image 27: Working with the boroughs we are transforming local areas



Countdown to the Ultra Low Emission Zone



Clearing the path

We want to make walking around London easier, more welcoming and more enjoyable. As part of a programme to achieve this, more than 2,000 pavement obstructions have been removed in the past two years.

Two businesses, Eroma Café on Holloway Road, Islington, and Troyganic Café and Wine Bar on I32 Kingsland Road, Hackney,

were issued with a series of warning letters and four Fixed Penalty Notices for unlawfully obstructing the highway. The two business owners failed to remove the obstructions despite repeated requests and both were found guilty of highway obstruction on 27 April 2017. They were fined a total of £660 and ordered to contribute £2,400 towards the costs of prosecution and pay a victim surcharge of £90.

Case study

Low Emission Bus Zones

In December, the second Low Emission Bus Zone was introduced in Brixton Road, one of the most polluted areas of London.

The new clean bus zone, running from Brixton Hill to Streatham Place, carries 130,000 passengers a day on 450 buses across 23 scheduled routes.

Every bus on the route meets Euro VI standards thanks to a combination of new technology and retro-fit initiatives. More than 200 buses are new double-deck Euro VI hybrid and 13 are new single-deck cleaner diesel buses, while 230 buses have been retrofitted to meet a Euro VI emission standard.

Services run close to a number of primary schools, meaning more than 1,000 local children are now breathing cleaner air.

The first zone was launched on Putney High Street in March 2017. After less than six months, hourly pollution level breaches had reduced by 90 per cent. Early analysis suggests a 40 per cent reduction in annual NO₂ concentrations on the High Street.

Between 700 and 800 new low-emission buses are being introduced to the fleet every year, with diesel-only buses being phased out.

Improving air quality and the environment

In January the Mayor revealed that, for the first time since records began 10 years ago, London entered the third week of January without having breached legal limits for toxic nitrogen dioxide (NO₂) air pollution.

Every year for the past decade, London's air has exceeded legal hourly limits by 6 January, and often by 3 January. For London to breach these limits, 18 hours of very high pollution levels need to be recorded at any individual site.

The improvement in air quality can be partly attributed to recent hard-hitting measures including the T-Charge and targeting the most polluted bus routes by introducing the first two Low Emission Bus Zones.

Cleaning up the air

The world's toughest emission standard, the £10 T-Charge, was introduced on 23 October. Now, drivers of older, more polluting petrol vehicles and the dirtiest diesel vehicles will pay the new tariff plus the Congestion Charge – a total of £21.50 (T-Charge and £11.50 Congestion Charge) for every weekday they drive in the zone between 07:00 and 18:00.

Vehicles that do not meet the Euro 4 standards for both particulate matter (PM) and nitrogen oxides (NO_x) emissions will be liable for the T-Charge. Pre-Euro 4 vehicles are typically those registered before 2006 that are more than 12 years old, but we have been advising anyone who has a car registered before 2008



Image 28: London has the largest electric bus fleet in Europe

to check whether it is eligible. To help motorists, there is a free online vehicle checker at tfl.gov.uk/t-charge.

Ahead of the introduction of the charge, the Mayor ran a hard-hitting advertising campaign to underline the harm London's air can do to people's health. It featured on social media and on posters and featured images of everyday objects, including a coffee cup and a baby's bottle, that appear to be covered in pollution. The headline stated: 'If you could see London's air, you'd want to clean it too.'

We already boast the largest electric bus fleet in Europe, with more than 2,500 hybrid electric buses. In June, the Mayor announced that London's most polluting buses would be cleaned up, with their harmful emissions cut by up to 95 per cent. More than half of London's entire bus fleet will now be upgraded.

Through the new £86.1m programme, around 5,000 buses will be retrofitted with a new exhaust system. By September 2020, the entire bus fleet will be at least Euro 6 standard.

Partnership spotlight

Freight enforcement

November marked the two-year anniversary of the London Freight Enforcement Partnership. The joint initiative between us, the City of London Police, Driver and Vehicle Standards Agency and the MPS targets non-compliant drivers, vehicles and operators on London's roads.

Since the launch, this multi-agency approach has led to 106 arrests, 221 vehicles being seized and 12 operator licences being revoked.

It sends a clear message that dangerous freight practices will not be tolerated. In addition, more than 33,000 freight vehicles have also been stopped and checked, and 9,114 fixed penalty notices and traffic offence reports have been issued.



Image 29: Taxi manufacturers are prioritising greener models

Taking action on diesel

Taxis are a significant contributor to poor air quality. They are responsible for 16 per cent of NO_x and 26 per cent of PM emissions from central London's roads.

A £42m fund was launched to encourage owners of the oldest, most polluting diesel black cabs to retire them from London's fleet. Now, anyone with taxis aged between 10 and 15 years old can check whether they are eligible for our 'delicensing' scheme. If so, they can apply

for a grant of up to £5,000 in exchange for retiring their vehicle.

As an example, the owner of a 10-year-old taxi would receive £5,000, scaling down to £1,200 for a vehicle aged between 14 and 15 years old.

The three-year scheme aims to speed up the process of tackling the city's filthy air, improving the taxi fleet, and working towards the goal of making London a zero-carbon city by 2050.

From January 2018, no more diesel taxis new to licensing are being licensed in London, and a number of manufacturers are prioritising delivering new greener, state-of-the-art Zero Emission Capable (ZEC) models.

We have worked closely with a number of manufacturers who are developing ZEC taxis. In January, the first electric TX e-city taxi, made by London EV Company, was handed over to black cab driver David Harris. The cabs have an advanced battery with a small back-up petrol generator and have a range of up to 400 miles. We have now licensed more than 140 vehicles.

A fully electric Nissan taxi, developed by Dynamo, is expected to be available later in 2018, which will offer more choice for drivers.

Electric vehicle charging

We allocated £4.5m to 25 London boroughs to install electric vehicle charging infrastructure. Each will receive a maximum of £300,000 for up to 1,500 standard-speed, on-street charging points in residential areas.

The funding will help more people swap polluting vehicles for zero-emission ones. The new infrastructure is in addition to the network of rapid charging points that will be in place by the end of 2020.

Following a competitive bidding process, we appointed the Centrica Consortium, BluepointLondon, Chargemaster, Electricity Supply Board and Fastned to fund, install, maintain and operate the network.

Safety and security

Healthy Streets and healthy people

A good public transport experience

New homes and jobs

Operating our business

The charging points will power vehicles in around 30 minutes – a huge time-saving considering three to four hours are required when using a standard unit. We had installed 100 rapid charging points by January, with the network growing to 150 by the end of 2018 and 300 by 2020.

Clean air alerts

In January, King's College London was appointed as duty forecaster to continually monitor London's air pollution. It uses the existing air quality monitoring network and cutting-edge modelling tools, and will provide alerts as required.

When high and very high air pollution is forecast, alerts are displayed at public locations across London, on our 2,500 bus stop countdown signs and at all Tube stations. Alerts and guidance are also available via social media, an app and a text service.

In addition, King's College will alert other stakeholders, so the information can be used to benefit Londoners who are most vulnerable to the impacts of poor air. These include children and staff at schools, and potentially care homes and GPs' surgeries in the near future.

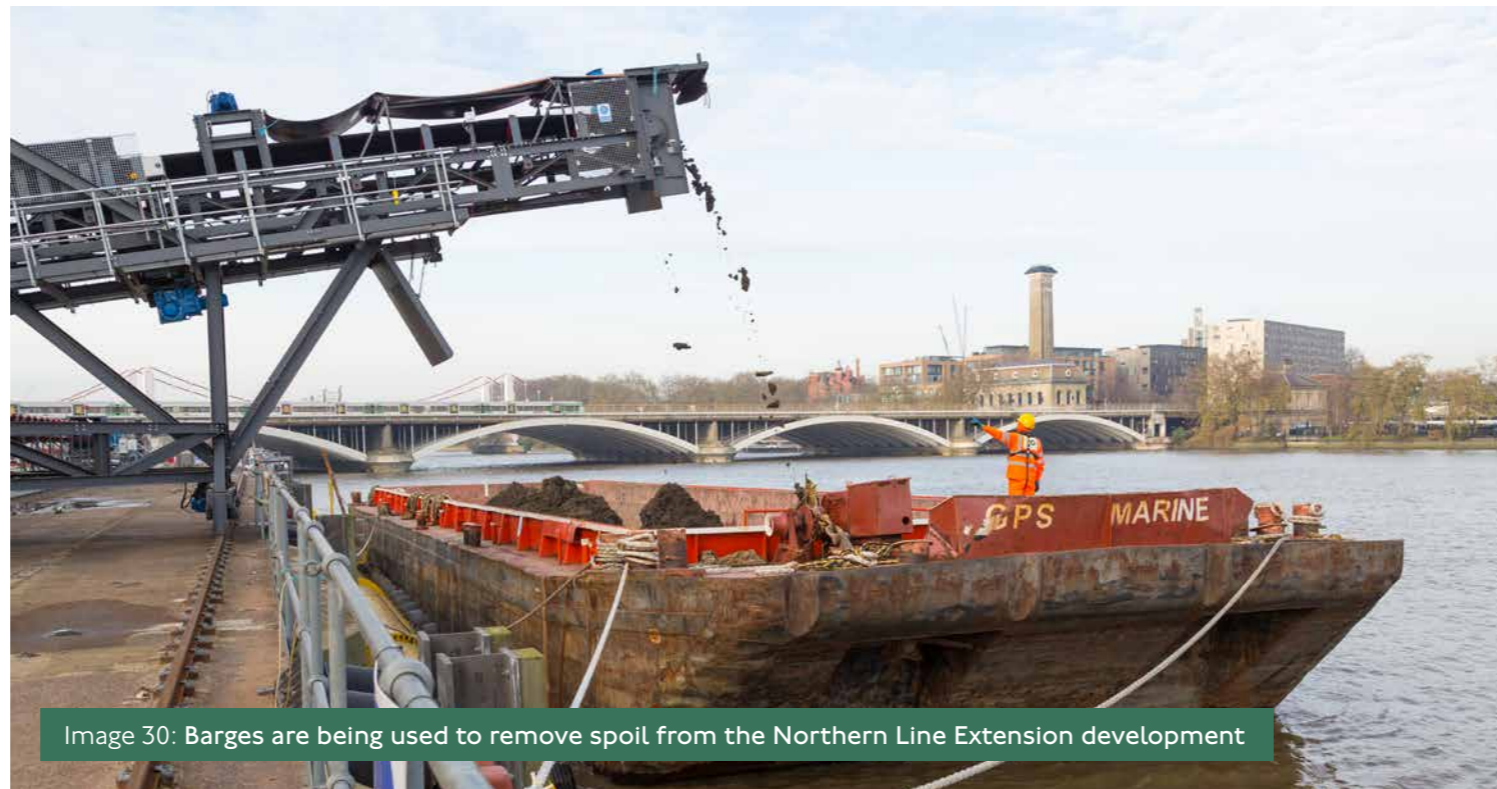


Image 30: Barges are being used to remove spoil from the Northern Line Extension development

River service

Using river barges to carry waste from the Northern Line Extension development saved 1,999 tonnes of CO₂ and took 105,653 truck journeys off London's roads. In the past 18 months, barges have carried 845,229 tonnes of spoil down the Thames to a site in Essex, where it has been used to transform former industrial land into

arable farming plots. The barges made 701 journeys, the last of which left Battersea jetty in January 2018.

Reuse and recovery

We have successfully trialled a reuse and recovery initiative at our York Road station site. This one-stop shop stores any surplus plant, equipment and materials

from our maintenance and upgrades activities and makes them available to our other schemes, ensuring our assets are fully utilised. We are implementing plans to scale up this activity during 2018. The initiative helps to support the Mayor's circular economy goal, by keeping valuable assets and materials in economic use for much longer.

Space for nature

Much of our land, buildings and developments have green infrastructure or spaces for nature in and around them that are important to the wellbeing of the whole city. We have developed a mechanism to help deliver the Mayor's policy of net gain for biodiversity – ensuring our work always generates an improvement in biodiversity.

We have developed a comprehensive baseline of the biodiversity value of all our estate and a toolkit for measuring improvements. This is being trialled at several key sites and will ultimately be used in all key construction and maintenance operations. ♦

£42m

fund to encourage owners of old diesel black cabs to retire them



More than
2,500
hybrid electric buses



100

rapid electric vehicle charging points installed across 25 boroughs

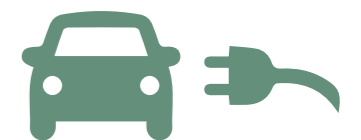




Image 31: Fares remain static for 'pay as you go' journeys on the DLR

A good public transport experience

Everyone should be able to get around London in the way they want, at a more affordable price.

London has one of the most extensive public transport networks in the world – every day, more than nine million journeys are made by bus, Tube, train, tram and river boat. As our population increases towards 10.8 million by 2041, we will need to accommodate another six million daily trips.

We are working hard to make travel in London more convenient, affordable and accessible. This includes delivering new services such as the Elizabeth line, wholesale upgrades of Tube lines and stations, and improving those we already have through, for instance, better payment options, reliability enhancements and step-free access.

This work is vital to meet the needs of our growing city. It also supports the Mayor's priorities of reducing reliance

on the car, tackling air pollution and ensuring 80 per cent of journeys are made by public transport, cycling or walking by 2041, and making our transport network more accessible.

Improving affordability and customer service

In November, the Mayor confirmed all TfL fares would be frozen for a second consecutive year, and the continuation of all existing fares concessions. He called on the Government to do the same on National Rail services, including London's suburban lines.

Bus and tram fares in London cost just £1.50, the same price as in 2016. Fares have also remained static for 'pay as you go' journeys on the Tube, DLR, Emirates Air Line, Santander Cycles and rail services, where TfL fares apply.

£200

saved by the average London household, by 2020, as a result of the Mayor's fares freeze



13,000

more people a day will benefit from the unlimited Hopper fare



Safety and security

Healthy Streets and
healthy people**A good public
transport experience**

New homes and jobs

Operating our business

i

95 per cent of visitors to London use public transport at some point during their trip.



Image 32: The Hopper fare is helping customers to save money

‘This new Hopper fare will be especially welcome for those on low incomes and will help encourage even more people to switch to public transport. London leads the way in flexible, smart ticketing and this latest addition makes public transport a no-brainer for Londoners’



Stephen Joseph
Chief Executive, Campaign
for Better Transport

The freeze is encouraging more people to use public transport. London Overground was the only one of the four main train operators within London and the South East to see passenger numbers rise, while bus ridership was more stable than outside London. By 2020, it will have saved the average London household around £200. Protected travel concessions continue to benefit young people, those over 60, veterans, apprentices and people on Jobseeker’s Allowance.

The Mayor’s Hopper fare was extended in January, so customers can make unlimited bus and tram journeys within an hour – but only pay £1.50. It is helping even more Londoners to save money.

More than 140 million journeys have already been made using the fare since it was launched in September 2016.

Explore London

The year also saw the introduction of the Explore London ticket. Visitors can now enjoy an all-day option that covers MBNA Thames Clippers, Santander Cycles and the Emirates Air Line and costs 20 per cent less than paying for these services individually.

Improving London Overground

We are delivering an ambitious programme of improvements on London Overground, which included the launch of 24-hour services in east London in

December 2017 and extension to north London in January 2018.

This year we will also introduce a new fleet of electric trains, which will run on the Gospel Oak to Barking route once Network Rail completes electrification work. These trains will provide more capacity and reliability, and will feature walk-through carriages, air conditioning and live network information screens.

The electrification will also improve air quality for people living and working along the route. In addition, we have plans for more of these trains to support more frequent services along the London Overground network.

Case study**World Kindness Day**

To mark World Kindness Day on 13 November, we asked Londoners to spare a thought for their fellow passengers when travelling.

Our #TravelKind campaign saw posters and social media films highlight the small things people could do to improve journeys for others.

This included having their payment cards ready, making space for customers using wheelchairs, keeping their cool on the road and moving down inside Tube and train carriages to make space for other passengers.

One of the films included a London Ambulance Service paramedic advising customers to help others off the train if they fall ill.

Mark Evers, London Underground's Chief Customer Officer, said: 'We are putting huge investment into transforming public transport and our roads, making them easier and more pleasant to use. As we do this, our customers can also take some simple steps to help make travelling around London better for everyone.'

'Today, on World Kindness Day, we want to raise awareness that being #TravelKind to others can help everyone have a smoother journey.'

Cashless payments

In September, we began an eight-week consultation on plans to make trams 'cashless'.

The proposal would see existing cash ticket machines, which only sell a small number of paper tickets every week, removed from the network. Customers who previously chose to pay this way would be encouraged to switch to Oyster or use contactless cards.

Only 0.3 per cent of single tram journeys are paid for with a ticket bought from a machine at tram stops – fewer than 250 a day. Following the consultation and changes to the bylaws, we will be making trams cashless later this year.

Refunds

We are committed to making sure that our customers pay the correct fare. Every quarter we publish our Customer Service and Operational Performance report that shows, for example, that we made 3,921,539 automated refunds to our customers over the course of the year. These refunds were given for a number of reasons, including not touching in or out with a 'pay as you go' card or using the wrong card.

A new fully accessible railway

When the Elizabeth line becomes fully operational in December 2019, its 41 accessible stations will transform travel across the London.

In December, we awarded contracts for step-free access and improvements at four stations that will join the route when

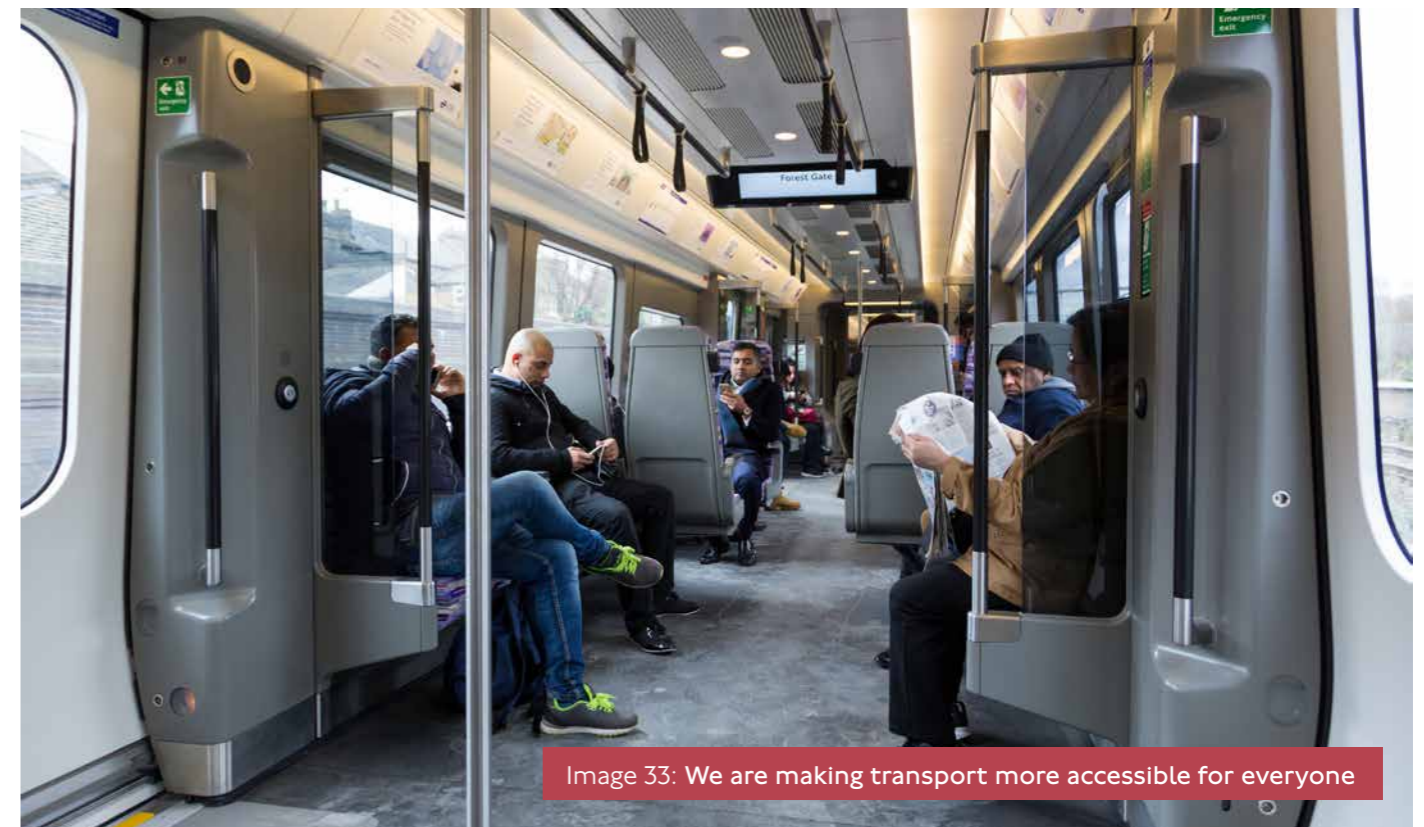


Image 33: We are making transport more accessible for everyone

the line opens – Hanwell in west London, Iver and Langley in Berkshire, and Taplow in Buckinghamshire. Other enhancements include lifts, footbridges, improved ticket halls and better facilities, such as customer information screens. At Iver, a new station building will replace the current 1920s structure.

All stations on the Elizabeth line will have step-free access, including the new stations in central London (currently being built by Crossrail Ltd) and existing stations in east and west London that will become part of the line.

These upgrades are part of our work to improve stations on the Elizabeth line,

which will stretch from Berkshire and Buckinghamshire through London and out to Essex.

Improving step-free access

Making public transport more accessible, and therefore a more viable option for older and disabled people and those with buggies, will help to meet many of the aims set out in the Mayor's Transport Strategy.

On the Tube, investment of £200m – the largest in its history – will result in 30 new stations becoming step-free by 2022. This will take the overall number to 100 step-free stations, which equates to 40 per cent of the network.

Case study

Lift contract

As part of the Mayor's Tube accessibility programme, a 25-year lift contract was awarded to supplier Otis in January.

The contract delivers the same standards of reliability but at a fraction of the cost and length of time it previously took to design, manufacture and install a lift.

We anticipate that this will cut the cost of installing each lift by 70 per cent, making savings of £15m that can be reinvested in improving transport in London. It will also cut the delivery time by 40 per cent, allowing us to introduce step-free access in the quickest time possible.

In June, new step-free schemes were announced for Amersham, Buckhurst Hill, Cockfosters, Mill Hill East, Osterley and South Woodford. Work is due to finish by 2020.

In November, shortly after completing the £300m upgrade of Bond Street – the 72nd step-free Tube station – we announced that Knightsbridge would also become step-free in 2020. Two new entrances will be built, and we will open areas of the station that have been closed to the public since the 1930s.

The Mayor followed this, in January, with the news that a further 13 stations would become step-free by spring 2022 – Boston Manor, Burnt Oak, Debden, Hanger Lane, Ickenham, North Ealing, Northolt, Park Royal, Rickmansworth, Ruislip, Snaresbrook, Sudbury Hill and Wimbledon Park.

Bromley-by-Bow became the 73rd step-free Tube station in March, following the installation of new lifts. We also announced that South Kensington – one of the busiest stations on the network – is set to be transformed as part of a deal to sensitively redevelop our land around the site, reflecting its

status as an iconic gateway to one of London's most popular cultural areas. Subject to planning permission, the work could be complete by 2022.

Access for everyone

Our work to increase accessibility includes design improvements to help people navigate the network. This means well-planned, logical spaces; signage and information when and where customers need it; effective surface treatments, materials and lighting; and using, for instance, public art to create pathways and signal landmarks and destinations.

But we must do more than just improve our physical infrastructure. For some people, there are other barriers that prevent them choosing public transport.

In July, we introduced a new Tube map to make travelling easier for customers with claustrophobia and other anxiety conditions. It shows the stations and sections of the network that are underground, so helps people work out the right route for them. It also illustrates where London Overground, DLR and TfL Rail services run through tunnels.

The map was created in response to customer feedback and has been welcomed by charities. It followed results in December, showing that our 'Please offer me a seat' badge had been issued to more than 30,000 people with invisible conditions during its first year.

The badge is specially designed for people who find it difficult to stand. A survey of badge holders carried out in November

'An accessible Tube network is vital for older people. It means they can see friends and family, have a more active social life, and make the most of everything London has to offer'



Paul Goulden
Chief Executive Officer,
Age UK London



The Tube network has 270 stations, with more than half above ground. The Victoria and Waterloo & City lines are the only lines that are wholly underground.

90%

of Tube, bus and rail journeys paid for using Oyster or contactless cards



100

step-free stations by 2022



‘The Please Offer Me a Seat badge has made a massive difference to the daily lives of many people who simply cannot stand on their journeys. We hope TfL will keep encouraging people to give their seat to anyone who may need it regardless of whether they are wearing a badge or not’



Alan Benson
Chair, Transport for All

demonstrated that more than 78 per cent found it easier to get a seat and 95 per cent were likely to recommend the scheme to someone who needs it.

The campaign’s importance has been widely acknowledged and similar schemes have since been introduced elsewhere in the UK and internationally.

Shaping and growing the bus network

We operate one of the world’s most frequent and extensive bus networks, with more than 9,000 vehicles on 675 routes.

Buses are crucial to the city’s success and carry many more passengers than any other of our services. We are working hard to modernise the fleet and more accurately match services to customer demand. In April, following extensive consultation, we confirmed changes to 23 routes in central London.

Passenger demand on Oxford Street is shifting, as people choose different travel options, including cycling and walking. A more reliable, 24-hour Tube has taken pressure away from the network and the opening of the Elizabeth line will further influence people’s journeys.

More than
6 million
bus journeys
every weekday



40%
fewer buses running
on Oxford Street
as a result of
matching services
to demand

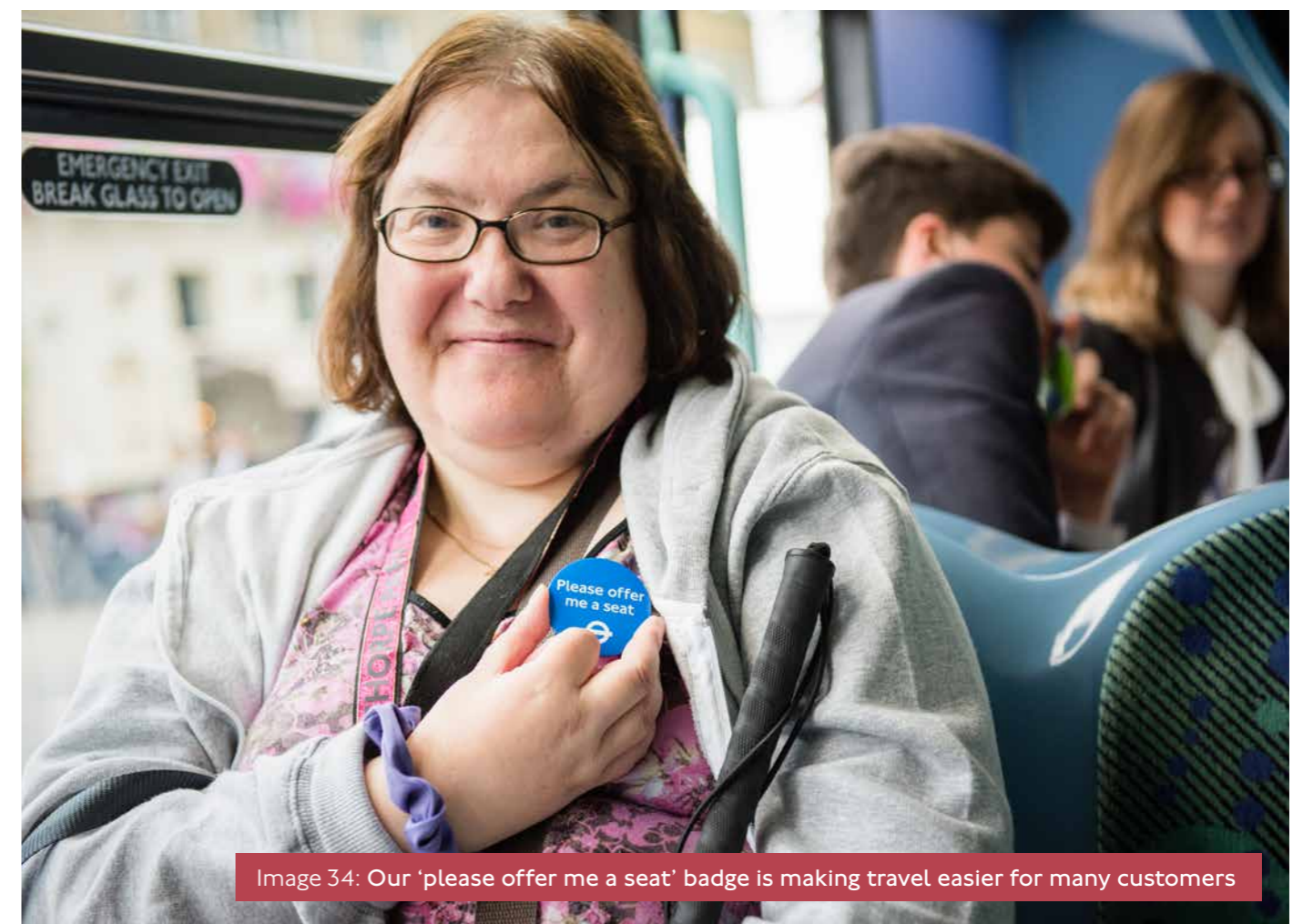
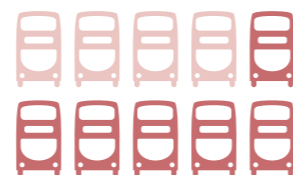


Image 34: Our ‘please offer me a seat’ badge is making travel easier for many customers

Buses will be redirected away from Oxford Street, with the termini for some routes moving to Park Lane, Trafalgar Square and Tottenham Court Road. Other routes will be extended to maintain connections.

Once the plans are in place, there will be 40 per cent fewer buses running on Oxford Street. This will improve the quality of the air at the heart of Europe’s busiest shopping district. See page 35 for more information.

Serving London’s hospitals

In July, following our review of bus services used by more than 40 hospitals and specialist healthcare centres, the Mayor set out his long-term vision for improvement.

Priorities include new links, more vehicles and re-routing services. These are subject to consultation, infrastructure changes and funding, and we will work with the NHS, councils and other interested parties to progress the plans.



Image 35: The Night Overground launched between Dalston Junction and New Cross Gate

Some projects are already under way, with more frequent services to Queen Mary's Hospital in Sidcup and we are providing new links to Central Middlesex Hospital in Park Royal, North Middlesex University Hospital in Edmonton and Whittington Hospital in Highgate.

Further potential changes would enhance services to 32 other sites including Queen Elizabeth Hospital in Woolwich, Hillingdon Hospital in Uxbridge, Kingston Hospital and Royal London Hospital in Whitechapel.

Bus colour trial

As well as providing better access to services, the Mayor wants to make buses as easy to use as the Underground. In May, he unveiled the first 'Tube-style' approach to bus travel.

As part of a trial in east London, more than 60 red buses were given their own splash of colour to mark seven different routes. The main destinations and interchanges were listed on the side of the vehicles and stop signs were also colour-coded.

The changes were designed to simplify journeys for passengers travelling in Barkingside and across the area, including journeys to and from Romford, Walthamstow, Ilford, Loughton and Barking.

Extending night services

London's predicted population growth will have a significant impact on our rail network. It is vital that we increase and enhance our services to add much-needed capacity.

December saw the first 24-hour London Overground route open, on Fridays and Saturdays, between Dalston Junction and New Cross Gate.

In February, as figures showed that more than 35,000 journeys had already been made using the service, it was extended to Canonbury and Highbury & Islington.

The extension, which links the Night Overground to the Night Tube network via the Victoria line, has made travel easier and quicker for many shift-workers, including those in the emergency services and hospitality sectors, in north and east London.

It is benefiting local business and enhancing London's already booming night-time economy.

The Night Overground is part of the Mayor's strategy to create a fairer, greener, healthier and more prosperous city by improving public transport. Its launch follows the huge success of the Night Tube.

'The Night Overground service will inevitably bring more visitors to the area, allowing our long-standing team to get home safely and cheaply, as well as improving local air quality with fewer car journeys in the area'



Matthew Segal
Manager, Frederick's Restaurant,
Islington



Image 36: The Night Tube is boosting the economy and supporting jobs

Figures released in August to mark its first anniversary show that, in just a year, the service catered for nearly eight million journeys.

It has also boosted London's economy by £171m and supported more than 3,600 jobs.

Research by London First and EY also predicted the Night Tube will be even more beneficial to the economy than previously forecast – estimates suggest it will add £138m of value every year for the next three decades. This is significantly more than the £77m a year initially forecast.

State-of-the-art signals

In October and December, we successfully tested the new state-of-the-art signalling and control system that will transform services on the Circle, District, Hammersmith & City and Metropolitan lines.

These four lines are among some of the oldest sections of the Underground, with parts dating back to 1863. Together they make up 40 per cent of the Tube network and carry around a million passenger journeys each day.

This technology, developed by Thales, is a major part of one of our most critical

upgrades. It will deliver significant improvements for customers: quicker journeys; more frequent and more reliable trains; and better and more accurate live travel information.

The system will be launched in stages throughout 2018, giving customers on the Circle and Hammersmith & City lines more accurate information and fewer delays. Service frequency will begin to increase from 2021, when more of the network goes live and, by 2023, all four lines will be using the technology.

Thirty new 'S stock' trains have already been fitted with the radio communications technology by train manufacturer Bombardier. It allows services to run closer together, so more trains can run (32 every hour in the central London section) and more people can travel.

The four lines will see an increase in capacity of up to 33 per cent in the busiest times, creating space for 36,500 more customers. It will also enable us to run Night Tube services on these lines in future. At Hammersmith, a state-of-the-art control centre for the lines is being built and is nearing completion.

Bakerloo line

November also saw highly complex engineering work carried out on the Bakerloo line to increase reliability and improve journey times. The work is part of our £2.3bn programme to modernise the Tube and improve customers' journeys.

Essential improvements involved upgrading important junctions at Paddington and replacing more than 100 metres of track at Queen's Park.

We also took the opportunity to complete maintenance work at Lambeth North.

White Hart Lane

In July, we announced that Taylor Woodrow would be appointed to design and rebuild White Hart Lane station, by spring 2019.

The station is used by 1.3 million customers a year. Improvements will include a new ticket hall, entrance and forecourt; step-free access from street to platform; better cycle parking; and CCTV and Legible London signage, in order to help people continue their journeys on foot.

The Night Tube has cut late-night journey times by more than

20 minutes



A new signalling system will boost capacity on the Tube network by

40%



Partnership spotlight

On-demand bus trial

We are approaching businesses – including bus operators and tech companies – to investigate whether innovations in ride-booking can be used to create an on-demand bus service.

The potential partnership could see a minibus ordered through an app, or a service run on a semi-fixed route that could be diverted to pick-up individual passengers.

In March, businesses were asked to express their interest in trialling new services, intended for nine passengers or more. If a trial goes ahead, it would involve a small number of vehicles in an area of outer London where car dependency is high and other forms of public transport are less viable. It would run for no more than 12 months.

Director of Transport Innovation, Michael Hurwitz, said: 'Any potential trial would be a new TfL service designed to support the existing local transport network and improve accessibility and London's air quality.'

Traditional buses, which currently carry more than three million passengers a day, have a vital role to play in delivering the Mayor's Transport Strategy. New innovations trialled as part of the initiative would not replace existing services.

Another station to benefit from improvement works was Chalk Farm. During July and August, its two 50-person lifts were refurbished to increase reliability. CCTV and hearing induction loops were also installed.

Bond Street

During the same month, we completed the £300m upgrade at Bond Street, an important West End location and one of the busiest stations in central London.

Shoppers, workers and visitors can now enjoy step-free access and quicker, easier, more comfortable journeys through the station. This is thanks to a 30 per cent increase in capacity resulting from a new entrance and ticket hall on the north side of Oxford Street at Marylebone Lane.

Other benefits include a pair of new escalators, which make it easier to exit the station, and two interchange tunnels to further ease congestion.

Preparatory work to provide step-free access to the Elizabeth line has also been completed ahead of services calling at Bond Street in December 2018.

Holborn station consultation

The station welcomes around 63 million customers every year. By the 2030s, this is expected to increase by up to almost 30 per cent so the station, which was designed in the early 1900s, needs to be modernised.

During October and November, a consultation was held on plans that would see the station more than double



Image 37: The £300m upgrade of Bond Street station has improved accessibility

in size. Plans include a new second entrance and exit on Procter Street.

Three new lifts in the existing Kingsway entrance would provide step-free access to both the Central and Piccadilly lines. In addition, new interchange routes between the lines would greatly reduce crowding during peak periods.

Further consultation is scheduled to take place in 2019.

Camden Town consultation

In June, Londoners were given an opportunity to comment on plans to treble the size of Camden Town station with 97 per cent of respondents backing the scheme.

More than 30 million customers use the station each year, with the number set to rise by 40 per cent by 2021, making it one of the busiest interchanges on the Underground.

Case study

Piccadilly line reliability

We constantly look for new and innovative ways to improve our services. At the end of September, two specially converted 1973-stock Rail Adhesion Trains (RATs) were introduced on the Piccadilly line to tackle disruption caused by falling leaves.

The RATs dispense an adhesive material that makes tracks less slippery, reducing the risk of train wheels locking and wearing down.

Other measures to help the line run smoothly during the autumn included:

- The most intensive trackside vegetation clearance to date
- Securing access to more detailed weather prediction data
- Trackside signage that warns drivers of any low-adhesion areas and temporary speed restrictions
- A new timetable that allows for reduced train speeds in areas where low adhesion is expected, in line with industry best practice
- Recruiting additional train maintenance staff and buying more spare wheels to provide a 24/7 wheel-changing facility at both depots on the Piccadilly line



Image 38: Capacity on the DLR will increase by 30 per cent when new trains are introduced in 2022

Proposals, including a new entrance on Buck Street, three new escalators and step-free access, will ease crowding.

A further consultation on how the proposed second entrance might be built will be held later in 2018.

The DLR

In May, we began our search for a supplier to provide 43 new, walk-through, air-conditioned trains for the DLR. Four bidders, announced in November, will continue to the next stage, with the contract awarded in autumn 2018.

Set to be introduced in 2022, the trains will increase capacity by more than 30 per cent. They will be more reliable and offer live travel information, as well as charging points for mobile devices.

Significant redevelopment is taking place in and around the Docklands area; in the Royal Docks alone, up to 36,500 jobs and 7,000 homes are being created.

In addition, passenger use will continue to rise when the DLR network connects with the Elizabeth line from the end of 2018.

Partnership spotlight

Adopt-a-station scheme

In February, residents, businesses and schools were invited to help put their local DLR station at the heart of their community.

The 'Adopt-a-station' initiative, which is being trialled at Poplar, will see space used to publicise events, classes and workshops taking place in the local area.

It will also showcase the art and activities of, among others, schools and gardeners.

The scheme is being run in partnership with KeolisAmey Docklands, which operates the DLR, and the people who live and work around the station.

Custom House

Further work to improve capacity on the DLR has included upgrading Custom House station. Closed in February 2017, it reopened in January, although work will continue until spring 2018.

When complete, the station will have a 50 per cent greater capacity and will be ready for Elizabeth line services to run from late 2018.

The work will also shorten walking routes between DLR platforms and the surrounding area.



Image 39: The Elizabeth line will boost rail capacity in central London by 10 per cent

The Elizabeth line: the final countdown

The Elizabeth line, which launches in December 2018, will redefine travel in London with quicker, easier, more accessible journeys. It will reduce congestion on the Tube and an extra 1.5 million people will be within a 45-minute commute of the city's main employment districts.

The new stations and travel links are expected to boost the economy by £42bn and support thousands of new jobs and homes in London and the South East.

In a significant milestone, a train was driven through the new tunnels for the first time in February. The maiden voyage beneath the streets of London was made possible after a section of the 25kV overhead lines was successfully activated.

In December, we released a Tube map featuring the line. It is among the most significant changes to the iconic map in recent decades.

The first phase of the new railway, including 10 step-free stations, will be unveiled in December 2018. When it opens fully a year later, it will boost central London's rail capacity by 10 per cent, connecting Reading and Heathrow in the west with Shenfield and Abbey Wood in the east.

In March, we confirmed that 'pay as you go' go fares on the Elizabeth line in central London will be the same as the Tube equivalent, ensuring affordable travel for millions of people.

'The Elizabeth line will transform many journeys to work, home, the airport or around London, allowing many more people across the South East to enjoy one of the greatest cities in the world'



Mike Brown MVO
London's Transport Commissioner



Image 40: Elizabeth line roundels have been installed at stations

Purple roundels

In January, brand new purple Elizabeth line roundels were installed at stations including Tottenham Court Road, Farringdon and Custom House, although they will remain under wraps until the launch date.

In June, customers were given a taste of the state-of-the-art fleet that will serve the railway. After extensive testing, the first walk-through, air-conditioned train began running between Liverpool Street and Shenfield on the TfL Rail route. There will be 70 trains in the fleet

£42bn

boost to the UK economy from the Elizabeth line



200 million

passengers carried a year on the Elizabeth line



when the Elizabeth line fully opens in December 2019.

Increased services

Initially, 15 trains an hour will run through the new Elizabeth line tunnels, rising to 24 an hour in the central section by May 2019. In July, we announced that services would be more extensive and frequent than originally anticipated – 70 trains in total rather than 66.

When the line is fully operational, 20 trains an hour will run off-peak services between Paddington and Whitechapel, rather than the planned 16. A further two trains an hour will operate between Paddington and Shenfield, and between Paddington and Abbey Wood during off-peak hours.

Peak services to destinations west of Paddington will be improved significantly, with services from Reading doubled from two to four trains an hour, and services to Maidenhead increased from four to six. Trains will also call at Heathrow Terminal 5, meaning all Heathrow terminals will be served by the Elizabeth line.

Changing technology

London is widely regarded as Europe's leading technology hub, with a growing sector of more than 40,000 digital businesses employing almost 200,000 people. It is also home to major bases belonging to many leading global tech companies.

While London leads the way in tech growth, there are areas of the city where slow and unreliable broadband

Elizabeth line timeline to launch

May 2018: TfL Rail service opens between Paddington and Heathrow, replacing the existing Heathrow Connect service and part of the Great Western inner suburban service. (TfL Rail continues to operate its Liverpool Street to Shenfield route)

December 2018: The Elizabeth line opens as three services:

- Paddington (Elizabeth line station) to Abbey Wood via central London
- Paddington (mainline station) to Heathrow (Terminals 2 & 3 and 4)
- Liverpool Street (mainline station) to Shenfield

May 2019: Direct services operate between Paddington and Shenfield, and Paddington and Abbey Wood. Services from Paddington to Heathrow will continue to start and end at the mainline station

December 2019: The Elizabeth line is fully open, with services running from Reading and Heathrow, including Terminal 5, in the west through the central tunnels to Shenfield and Abbey Wood in the east



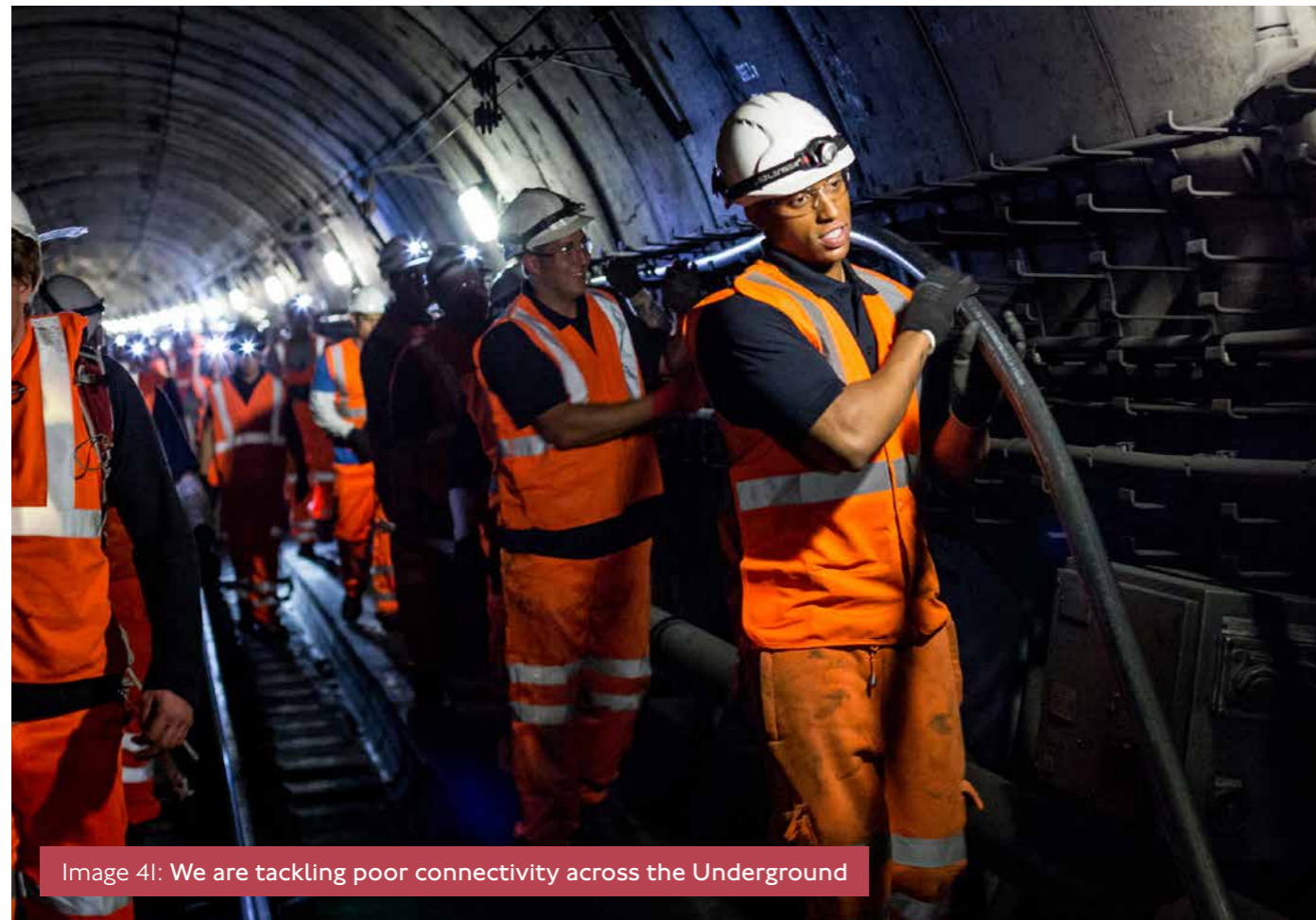


Image 41: We are tackling poor connectivity across the Underground

frustrates both businesses and residents, for instance Rotherhithe and parts of Westminster and the City of London.

A package of measures to tackle areas of poor connectivity was announced in August. This includes appointing a troubleshooting 'Not Spot Team' to work with London Underground on providing better connectivity for Tube customers.

Significant progress was made last year following tests of 4G mobile on the Waterloo & City line. The trial, which

took place during the summer, saw the technology tested in tunnels and stations. Once live, it will, for the first time, allow customers to check their emails, read the latest news and social media updates, and access live travel information while underground.

All four major mobile network operators (Vodafone, O2, Three and EE) participated in the design of the trial, with Vodafone and O2 carrying out testing in tunnels, which took place outside customer hours. As well as providing valuable insight into

how this technology could be introduced more widely on the Tube, the trial tested how easy it would be to make data calls from one station to another, without dropping mobile reception.

Leading the way

In June, the Mayor outlined his vision for London to become the world's leading 'Smart City' – with digital technology and data at the heart of making it an even better place to live, work and invest.

As part of his plans, he has unveiled 'Better Futures', a new £1.6m incubator fund to help 100 London-based small businesses deliver low-carbon and clean-tech products to tackle the causes and effects of climate change.

Open data

We commissioned research from Deloitte that showed the release of our free open data is generating economic benefits and savings of up to £130m a year.

For almost a decade, we have been releasing a significant amount of data – timetables, service status updates and disruption information – in an open format for anyone to use, free of charge.

'Business needs fast and reliable connections across our Capital – in the office, for people working from home and when they're on the move'



David Leam
Infrastructure Director,
London First



Oyster card top-ups
can now be collected
in just 30 minutes

Our open data is generating
annual economic benefits
and savings of up to

£130m

Safety and security

Healthy Streets and
healthy people**A good public
transport experience**

New homes and jobs

Operating our business

‘Open data is changing our everyday lives and how organisations like TfL work. In fact, data is becoming as important as other types of infrastructure, such as roads and electricity, which means building strong data infrastructure is vital to economic growth and wellbeing’



Jeni Tennison
CEO, Open Data Institute

i

There are 675 apps that are powered using our open data feeds. These are accessed by 41 per cent of Londoners.

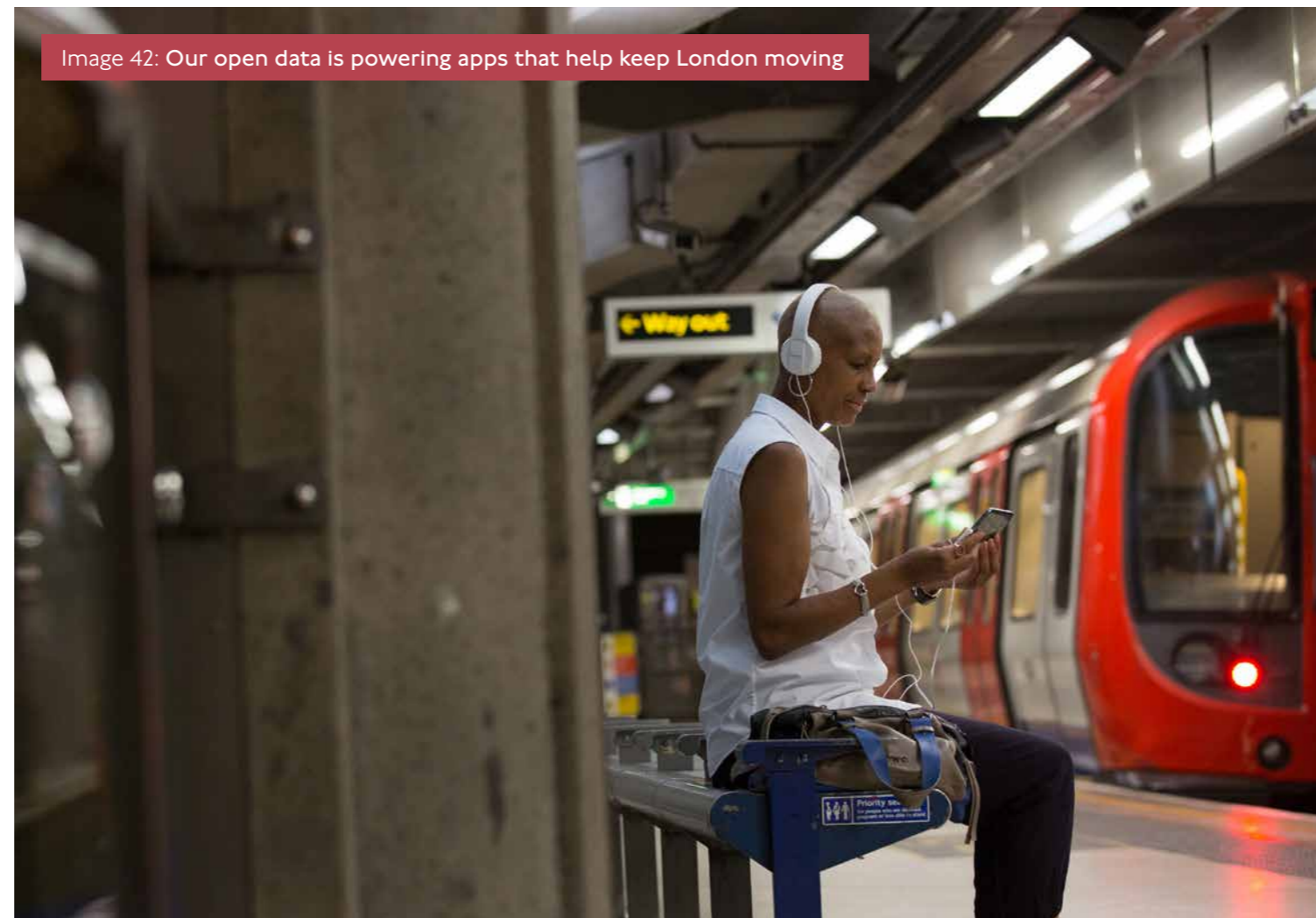


Image 42: Our open data is powering apps that help keep London moving

This allows developers and partners to quickly bring new products and services to market and extend the reach of our own information channels in stations, at bus stops and online. Our data powers 675 apps, which are used by 41 per cent of Londoners.

The research also shows that by providing open data to developers, we are improving journeys, saving people time, supporting innovation and creating jobs.

Using tech to improve customer service

In June, we launched the next generation in customer service technology with our first ever ‘TravelBot’. The new social media tool, which is powered by artificial intelligence, can ‘chat’ with customers using Messenger and, for instance, tell them when their next bus is due and provide service updates and Tube maps. It can also link directly to one of our Customer Service Agents, making it easier than ever to ask us a question.

Case study

Expanding our data

Earlier in the year we challenged app designers to improve our services for cyclists after expanding the data we make available to them.

We have added mapping information for eight Cycle Superhighways and one Quietway to our open data portal, so developers can help more Londoners find the best cycle options for them. New routes will be added as they open.

The information, which is provided at cycling.data.tfl.gov.uk, allows developers to accurately map out the existing network within apps and on websites. This can be combined with previously released open data, such as the location of cycle parking at Tube stations and availability of Santander Cycles bikes at docking stations.

We already deal with a huge number of queries every day through our two Facebook pages. The technology makes it even easier for customers to get information on the Messenger platform in a way that is fast and straightforward.

In September, we published the results of a four-week pilot that we ran between November and December 2016 that studied how depersonalised WiFi connection data from customers’

Case study

Blackwall Tunnel trials

Delays at the Blackwall Tunnel caused by drivers running out of fuel have been reduced following innovative trials involving us, social navigation app Waze and Eurotunnel.

More than 36 million journeys are made through the tunnel every year and it is one of the busiest sections on London's road network.

Cars running out of petrol, and lorry drivers unaware their vehicles are over-height, cause tail-backs, costing London almost £7m, and resulting in nearly 400 hours of delays each year.

Over the six-month trial, 459 drivers acted on the fuel alert message and re-routed to petrol stations, reducing the risk of breaking down. There were fewer tunnel breakdowns compared with the same period last year.

We worked with Eurotunnel Le Shuttle Freight to tackle over-height incidents. We targeted lorries entering the UK via Eurotunnel with leaflets informing drivers of the best choice between the Blackwall Tunnel and Dartford Crossing, dependent on the time of day, vehicle and height restrictions.

We also ran a campaign advising on the busiest times, which saw two per cent of drivers re-time their journeys.

mobile devices could be used to better understand how people navigate the Tube network, and help us improve their journeys. It focused on 54 stations in Zones 1-4 and saw more than 509 million de-personalised pieces of data, collected from 5.6 million mobile devices on around 42 million journeys.

The pilot revealed a number of results that could not have been detected from ticketing data or paper-based surveys. This has given us a better and more detailed understanding of how passengers move through some of our busiest stations, which means we can better manage crowding during peak times or disruption.

All data was depersonalised, no individuals could be identified and no browsing data was collected.

Apps make travelling easier

We have introduced a range of improvements to our Oyster ticketing system over the past year to make travel easier.

Passengers who top up their credit or buy Travelcards using Oyster online can now collect their purchase from any Tube or rail station, bus or tram stop or River Bus pier when they touch in, rather than having to nominate a station when they make their purchase.

The upgrade has also significantly reduced the time it takes for the product to become available at ticket gates. It previously took up to 24 hours but can now be done in just 30 minutes.

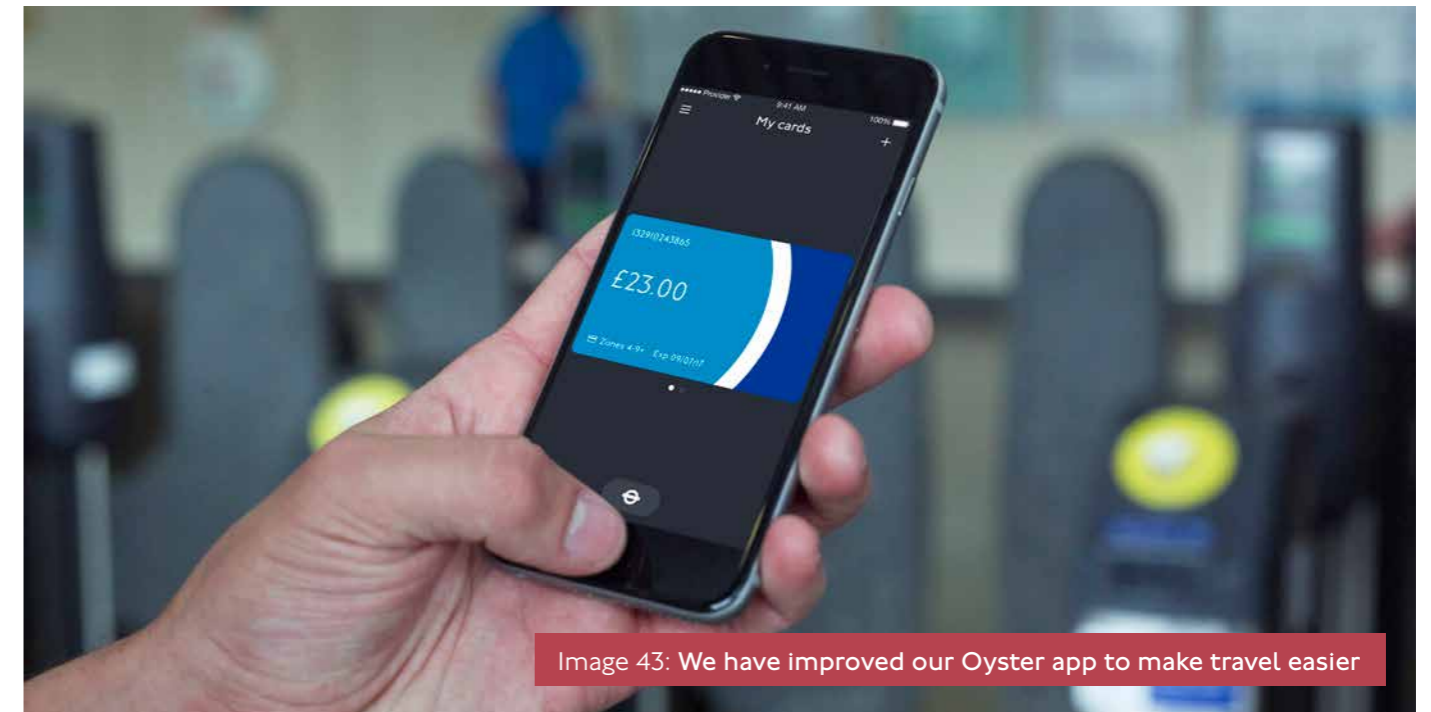


Image 43: We have improved our Oyster app to make travel easier

In addition, with just a few quick taps on their smartphone, customers can check their balance, add pay as you go credit and Travelcards, and top up their card using our new Oyster app. They can also view the last eight weeks of their journey history and, for the first time, receive 'low balance' alerts.

Our app is free to download via the Apple App Store and Google Play Store.

Customers can now also use Samsung Pay on their mobile phone to travel. The app, which can be downloaded from the Samsung Galaxy Apps Store, supports MasterCard plus Visa credit and debit cards from major UK financial institutions. It can be used for pay as you go journeys on buses, the Tube, trams, DLR, London Overground, TfL Rail, the Emirates Air Line, River Bus services and most National Rail routes in London. ♦



1 billion

journeys made by contactless payment on London's transport network

36 million

journeys are made through the Blackwall Tunnel every year



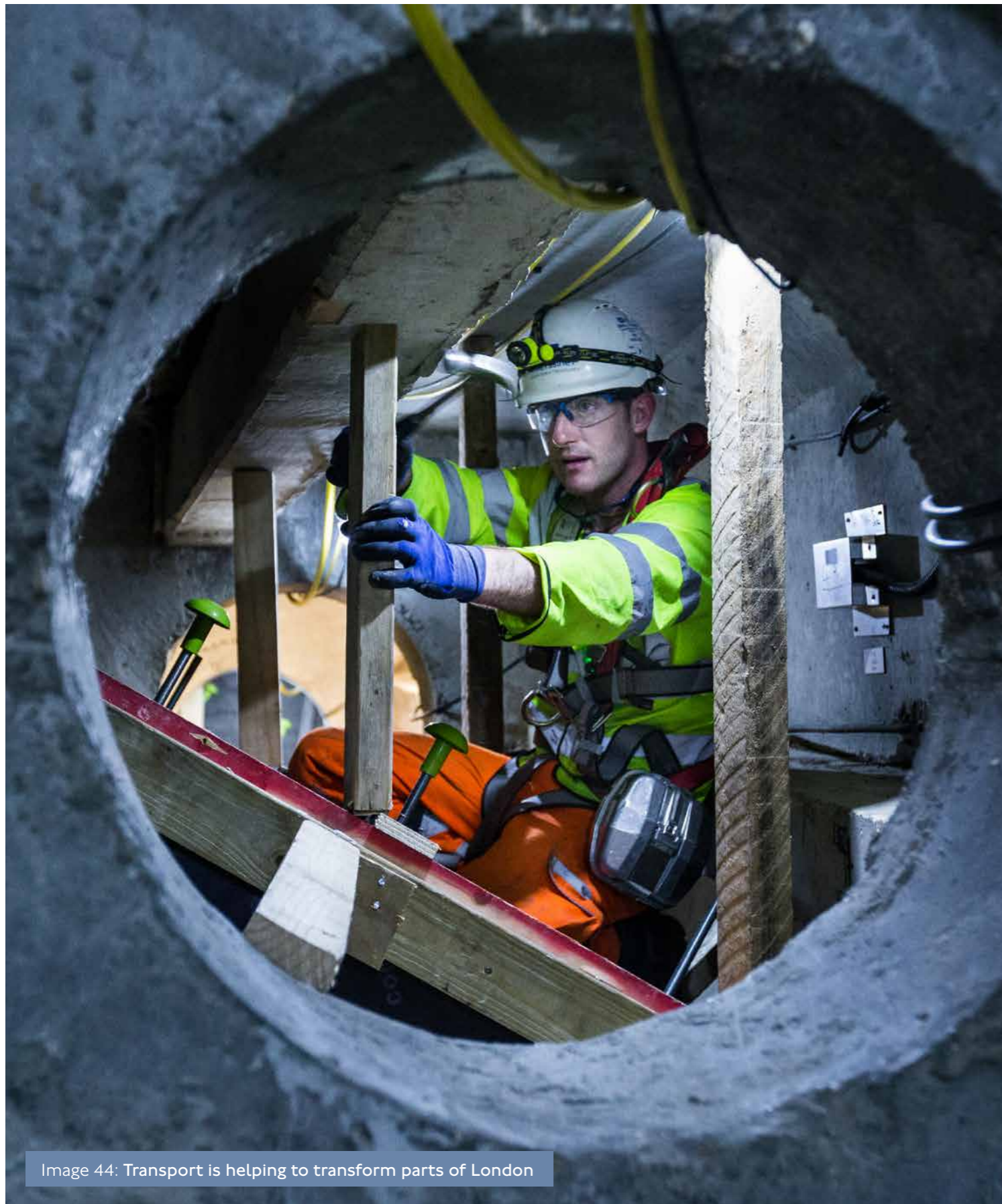


Image 44: Transport is helping to transform parts of London

New homes and jobs

Transport shapes our cities and regions, develops economies and supports new homes and jobs.

Transport encourages growth, which is essential for London's continued success. But it has to be the right type of growth – the type that encourages people to walk, cycle and swap their cars for public transport.

We are working to take develop key infrastructure themes, such as Crossrail 2 and the Bakerloo Line Extension, which will deliver hundreds of thousands of homes and jobs across London.

By developing our land and property, we are adding to this growth. Unlocking our land has the ability to transform dozens of neighbourhoods across London, create thousands of jobs, and generate hundreds of millions of pounds to plough back into the transport network, alongside operational improvements such as step-free access at stations. We are also helping to deliver the Mayor's vision of creating more affordable homes.

Working in partnership to benefit Londoners

We are now an established property developer, creating partnerships to deliver thousands of homes on our land, as well as generate vital long-term revenue. Over the course of the year, we brought forward 22 sites, capable

of providing more than 3,800 new homes, half of which will be affordable.

Landmark Court

In July, we announced Triangle London Developments as our preferred bidder to create a joint venture to develop Landmark Court in Southwark.

Triangle London Developments is a consortium of U+I and Notting Hill Housing and is one of the partners on our Property Partnership Framework.

The currently underused site is within walking distance of London Bridge station, Borough Market, Tate Modern and the Globe Theatre. It will be transformed into a local cultural and social hub, where people will want to live, work and visit.

The site has the potential for about 130,000 sq ft of new commercial, retail and work space, and around 80 new homes (at least 35 per cent of which will be affordable). Proposals will make the most of outdoor public space and improve walking routes in the area.

Landmark Court is one of the first five locations fast-tracked for development by the Mayor, which overall comprise 50 per cent affordable housing.

‘There is huge opportunity to create something very special at Landmark Court that really adds to and complements the fabric of the neighbourhood’



Richard Upton
Deputy Chief Executive, U+I

i

More than 60 per cent of our procurement is with companies outside London and this investment supports around 50,000 jobs beyond the Capital. Over the past three years, we have spent more than £700m in the North West, including £400m in Manchester alone.

The joint venture will consult with Londoners to develop a detailed design before applying for planning permission. Work is expected to start in 2019, with completion anticipated by 2022.

Blackhorse Road

We named BLLQ LLP as our preferred bidder for a joint venture partnership to develop a 1.8-acre site opposite Blackhorse Road station in northeast London. Currently used as a car park, it has the potential to provide around 350 new homes by 2022, 50 per cent of which will be affordable. Subject to permissions, work could begin in 2019.

The site is surrounded by a number of developments, which are creating a new neighbourhood made up of around 1,700 homes, plus retail, commercial and leisure spaces. It is ideally placed for public transport owing to its close proximity to Blackhorse Road station, which is served by the Victoria line and London Overground. Local bus routes, as well as walking and cycling connections will provide even more options for commuters.

Limmo Peninsula

In February, we also announced plans to transform a key Elizabeth line tunnelling site into a new neighbourhood with 1,500 homes, 40 per cent of which will be affordable.

The 12.3-acre Limmo Peninsula site in Canning Town is the largest site we have released, and will deliver 600 much-needed affordable homes in a new neighbourhood in east London.

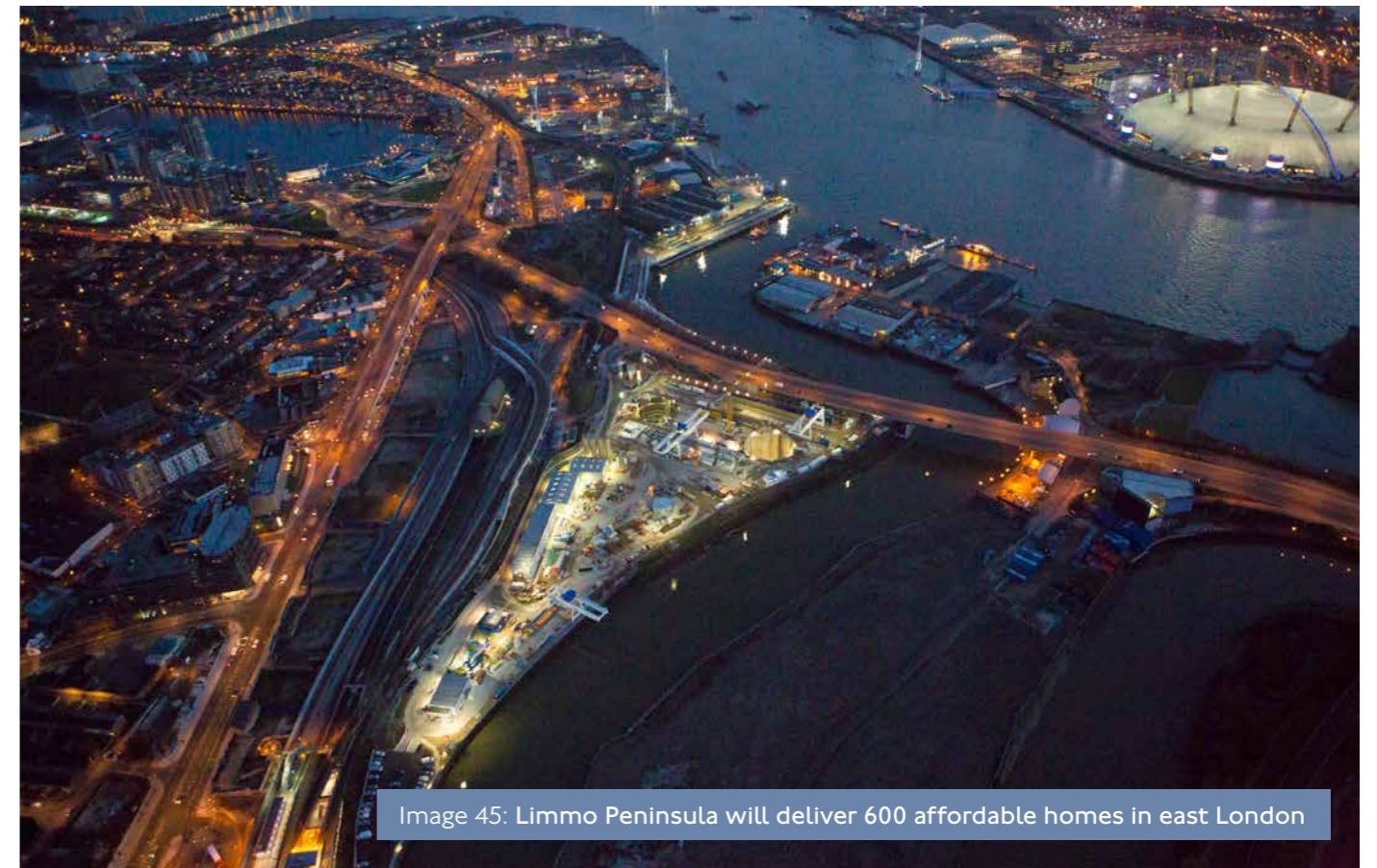


Image 45: Limmo Peninsula will deliver 600 affordable homes in east London

Elizabeth line over-station development

We are also progressing a huge programme of retail, commercial and residential developments above Elizabeth line stations in central London.

Plans are in place for 12 major property developments that cover more than three million square feet of high-quality office, retail and residential space between Paddington in the west and Woolwich in the east.

These schemes will raise an income of around £500m for reinvesting in improving transport in London.

Greater rail capacity

In August, the Government gave the go-ahead for a vital new London Overground extension to Barking Riverside.

The 4.5km extension of the Gospel Oak to Barking line to Barking Riverside Development is being part-financed by our Growth Fund and will see four trains running every hour. It will help breathe life into the area, supporting 10,800 new homes and creating a school, healthcare facilities and a new district centre with commercial and leisure opportunities. Construction is due to start in summer 2018, with services operating from 2021.

Safety and security

Healthy Streets and
healthy peopleA good public
transport experience

New homes and jobs

Operating our business

‘This is fantastic news and shows Barking Riverside is on track to become Barcelona on Thames. It’s also yet another sign that Barking and Dagenham is at the epicentre of London’s eastward shift’



Cllr Darren Rodwell
Leader, Barking and
Dagenham Council



Image 46: Our tunnel boring machine broke through at Kennington

London Overground passengers could also benefit from two new stations, at Hythe Road and Old Oak Common. They would provide additional connections to HS2 and the Elizabeth line, and help contribute to the regeneration of Old Oak and Park Royal in west London.

In December, we published results from a five-week consultation that showed there is strong public support for the new stations.

Around 1,000 people responded, with 94 per cent backing the overall plan. Many said they would encourage regeneration, promote inward investment and create new jobs in the area. The findings will now help to shape the next stage of the project.

Old Oak and Park Royal represents one of London’s largest Opportunity Areas and one of the UK’s biggest development sites. It has the potential to provide 25,500 new homes and 65,000 jobs.

Building a better Tube

We are transforming the world’s oldest metro into one of the most modern.

The extension of the Northern line moved a step closer in November, when boring machine Amy broke through at Kennington. It meant the two 3.2km tunnels from Battersea Power Station, via Nine Elms, had been completed.

Since their launch in spring 2017, Amy and sister tunnelling machine Helen had been

working around the clock to create the north and southbound tunnels that will extend the Charing Cross branch of the line.

Due for completion in 2020, it is the first major Tube extension since the Jubilee line in the late 1990s. Construction of two new stations at Battersea and Nine Elms is progressing well and services on the line have continued uninterrupted while the work has taken place.

The scheme will add vital capacity to London’s transport network and enable regeneration of the Vauxhall, Nine Elms and Battersea areas, supporting around 25,000 jobs and more than 20,000 homes. In addition, construction of the extension is adding to the UK economy and supporting a further 1,000 jobs, including around 50 apprenticeships.

Bakerloo line extension

We continued working on proposals to extend the Bakerloo line beyond Elephant & Castle, which could support at least 25,000 new homes and 5,000 jobs in southeast London. The line would also reduce journey times and relieve congestion on local bus and National Rail services.

In July, we published the results of a public consultation on potential stations at Lewisham and New Cross Gate, plus another two along Old Kent Road. Ventilation shafts were proposed between Elephant & Castle and Old Kent Road, between New Cross Gate and Lewisham, and at the end of the line in Lewisham.

Partnership spotlight

Small Sites, Small Builders

In February, we released 10 small sites into the Mayor's 'Small Sites, Small Builders' programme. This initiative will help to support small and medium-sized builders.

The sites range in size from one or two house plots to 42 new home developments. The 10 sites will deliver 111 new homes, of which 68 per cent will be affordable.

Land at Cable Street, near the Shadwell DLR in Tower Hamlets, and a site at Christchurch Road in Lambeth, were both earmarked for community-led housing and will deliver 100 per cent affordable housing.

Overall, around two thirds of respondents expressed support for the Bakerloo line extension. Findings are being carefully considered and will help us to develop our plans. Once a decision has been made on the preferred locations of the stations and ventilation shafts, more work will be done to finalise the tunnelled route. A further public consultation is likely to take place in 2018.

Crossrail 2

We are working alongside an Independent Affordability Review, set up by the Transport Secretary, Chris Grayling, and the Mayor to look at ways of making the Crossrail 2 scheme more affordable.

Crossrail 2 would link National Rail networks in Surrey and Hertfordshire with a tunnel from Wimbledon in the south to Tottenham Hale and New Southgate in the north. By freeing up space on main lines to run faster, longer-distance trains, it would transform journey times and connections across the South East, as well as linking with HS2 at Euston. By boosting the capacity of London's rail network, it would also help to relieve congestion on the Underground.

Blackhorse Road site could provide

350
new homes
by 2022
(50 per cent will be affordable)



130,000 sq ft

potential for commercial, retail and work space at Landmark Court



Image 47: Our commercial railway arches are used by many different small businesses

Crossrail 2 would also boost the economy by up to £150bn and support around 200,000 new homes and 200,000 jobs.

The scheme enjoys widespread support. Last spring, councils across London and the South East, as well as 59 MPs, pledged their support for Crossrail 2 and called on ministers to push ahead with it.

More than 70 business leaders and in excess of 60 homebuilders and developers have told ministers that Crossrail 2 is essential to fixing the housing crisis.

We await a decision from the Transport Secretary on our updated business case and funding following the latest review. Construction could start in the

early 2020s and the railway could be operational in the mid-2030s.

Kingsland Road arches

We own roughly 700 commercial arches across London, conventionally viewed as being suitable for storage or light industrial use.

Seven commercial units in railway arches under the East London line in Shoreditch are set to be renovated to bring a new lease of life to this part of London.

The arches are located close to the junction of Kingsland Road and Old Street. Plans include creating an expanded space and opening up opportunities for retail, food and drink outlets, which would also create jobs. ♦



Image 48: A single Engineering and Major Projects function will help reduce duplication

Operating our business

At the heart of our work is a cost reduction and modernisation programme designed to make sure we are providing the safest, most affordable and efficient transport service for Londoners.

We are making good progress in reducing costs and are on track to achieve our 2022/23 net operating surplus target. We continue to rigorously identify opportunities to make further savings and will always seek to capitalise on commercial opportunities.

Delivering in a changing world

We have consolidated our head office accommodation, vacating older buildings and co-locating staff to our new hub in Stratford, which will save more than £100m by 2022/23. This will improve collaboration and enable smarter, more flexible working.

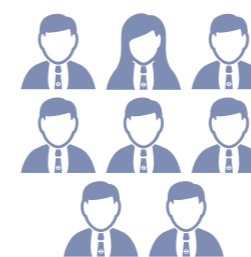
Over the past year, we have identified and implemented new business structures and ways of working that will enable us to function more efficiently and at a lower cost.

We have redesigned 30 business areas, reviewed more than 10,000 roles, reduced management layers and consolidated activity, including creating single Engineering and Major Projects functions. This work has helped to remove duplication, ensure efficiencies and speed up decision making. These major organisational changes will create annual savings of £111m over the life of our Business Plan.

Through our Transformation, we have taken our responsibilities to our people, and their welfare, very seriously. Wherever possible we have done all we can to avoid losing staff. This includes stopping external recruitment, reducing agency workers and redeploying staff across the business. Engaging with staff during this period of change has been a key focus for our leaders.

1 in 8

engineering professionals are women



200

TfL employees promote STEM to young people

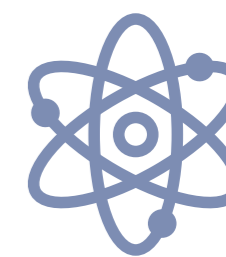




Image 49: We have consolidated 50 facilities management contracts

Other activities to drive down costs by 2022/23 include:

- Reviewing, re-tendering and re-negotiating bus contracts, saving £375m
- Continuing the modernisation of London Underground, including exiting a private partnership maintenance contract that will save around £200m
- Developing plans to deliver £1.2bn of value engineering efficiencies in our Investment Programme

Trade unions

We recognise seven trade unions for the purposes of collective bargaining: ASLEF, PCS, Prospect, RMT, TSSA, Unite the Union and Unison. We have worked with the unions throughout the year and always strive to have a constructive and professional relationship, recognising the vital role they play within the organisation at all levels. This includes negotiations and consultation activities, as well as supporting their members on individual issues.

During the significant transformational change in 2017/18, our union representatives have devoted their

working time to representing employees' interests. This includes scrutinising and challenging change proposals to ensure they are well thought out and working with management teams to avoid redundancies wherever possible.

Our unions also continue to make a valuable contribution to the health, safety and wellbeing of our staff, with union health and safety representatives throughout the company. Representatives also play an active role in equality and learning matters.

More transparency

Since publishing our Transparency Strategy in October 2015, we have increased the amount of data we make available.

Since January 2017, we have published responses to all Freedom of Information (FOI) requests online. We also look for ways to reduce the need for people to submit FOI requests, by making as much data as possible easily accessible.

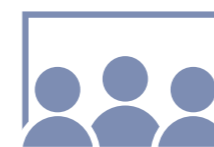
In September, we launched a six-week consultation to help inform the next phase of our strategy. The consultation looked at how we could improve in terms

of providing the regular information that stakeholders want, as well as the data formats and regularity in which they should be published. It also asked for wider comments about how this data should be grouped or presented on our website and whether further support should be provided to developers, stakeholders and researchers who regularly use the data.

Contracting cleaners

In September, a five-year contract was signed with ABM UK to provide cleaning services for Tube stations, trains, bus depots and our buildings. The deal guarantees that 2,800 people will receive the London Living Wage and is one of six facilities management contracts that have been consolidated from 50 – saving money that could be invested in the transport network.

All companies were required to submit an equality and diversity plan as part of their bids, and ABM UK will be measured against this. It will create 150 apprenticeship positions, offering people the chance to earn while they learn. It will also provide opportunities for those who may have previously encountered barriers to employment.



60

digital displays allow Tube customers to watch full-motion ads on platforms



50

of our facilities contracts have been consolidated into six, saving us £34m

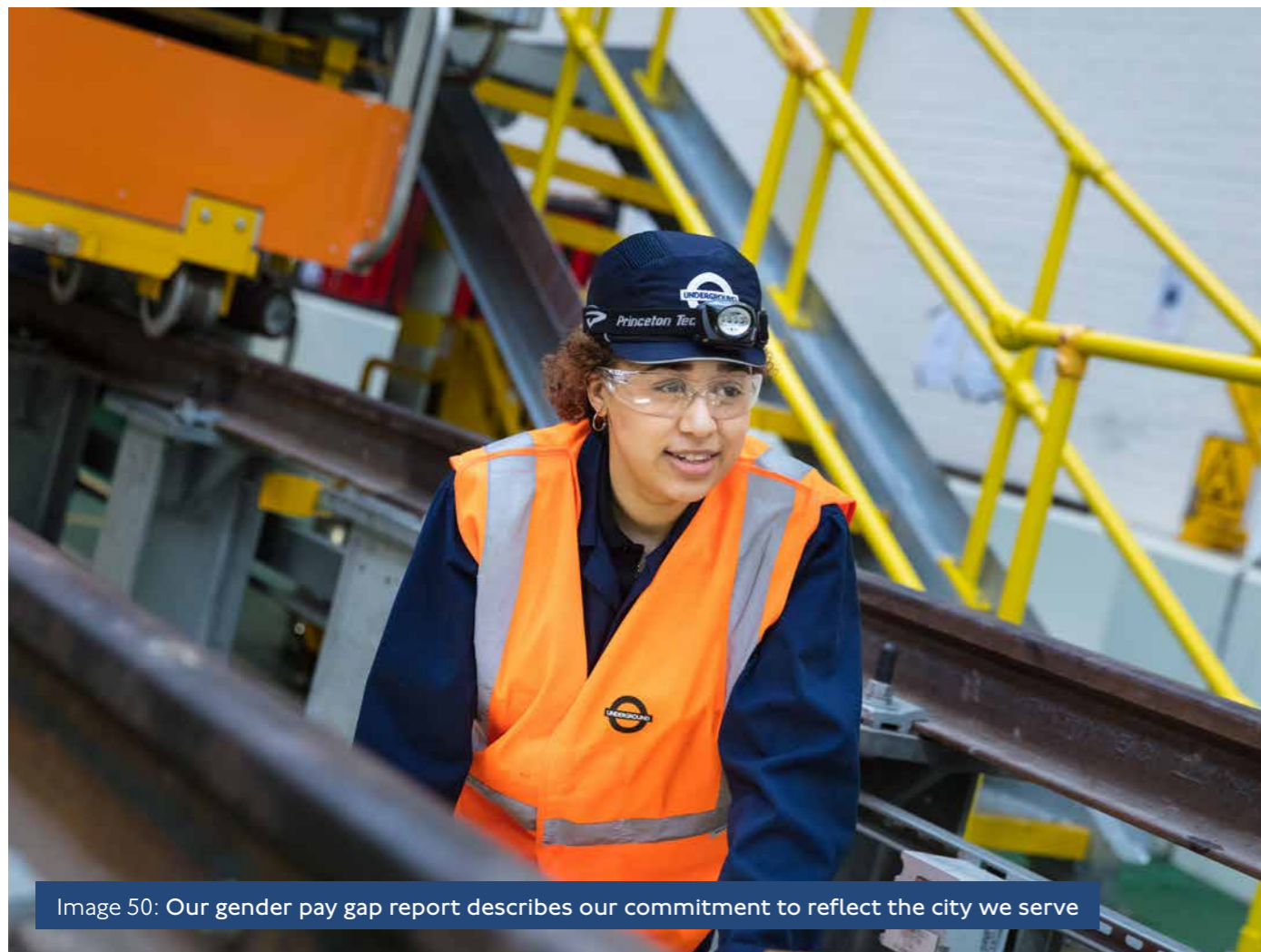


Image 50: Our gender pay gap report describes our commitment to reflect the city we serve

Overground maintenance contract

A new contract for maintaining London Overground's Dalston/Highbury & Islington – West Croydon/Crystal Palace/ New Cross line is providing job security for employees of previous supplier Carillion, which went into liquidation in January.

The agreement, which began in April 2018, allows them to transfer to new contractor Cleshar and guarantees continued work and pay.

Gender pay gap

London is one of the most diverse cities in the world. Our success as an organisation depends upon talented people from all communities, backgrounds and walks of life.

Roles within the transport industry have traditionally been dominated by men and, disappointingly, women account for less than a quarter of our current workforce.

We need to create an organisation that more women choose to join and that encourages women to progress their careers and be successful. This will also help us close the gender pay gap.

We are working hard to address discrepancies in equal pay, but the scarcity of women in leadership roles means we have a way to go. In February, we published our gender pay gap report, which describes our commitment to reflect the city we serve, and make the most of our talent.

We have made significant progress on our commitments:

- This year, we appointed a Diversity and Inclusion Director who is accountable to the Commissioner and responsible for leading our plans in this area
- We have added an 'inclusion index' to make everyone more accountable for diversity and inclusion
- We have partnered with the Cabinet Office's Behavioural Insights team to tackle the gender pay gap, using data and behavioural science to better understand and drive improvements

Engaging new engineers

Fewer young people are going into engineering, and consequently there is a skills gap in the transport sector. This year, we are supporting the DfT's Year of Engineering campaign, which aims to debunk some of the myths around the profession and inspire the next generation to consider it as a career choice.

Case study

Fairer pay and conditions for bus drivers

A landmark deal, brokered by the Mayor between us, trade union Unite and the bus companies, guarantees a fairer pay deal for drivers.

The agreement, called Licence for London, was announced in January. It ends the system where bus drivers moving from one company to another are paid the lowest possible wage, even though they might have years of experience.

Now, drivers can start at a new company at a pay grade that reflects their level of service and history. However, they will still need to complete a probationary period and their service will not technically be seen as continuous, as far as employment law is concerned.

In February, the Mayor also announced plans for improving working conditions for London's bus drivers by ensuring that all have access to a toilet on their routes for all hours of their working day. He will allocate £6m to install permanent toilets along 40 routes that currently only have limited access.

The unions and bus operators were closely involved in resolving this significant concern for drivers.

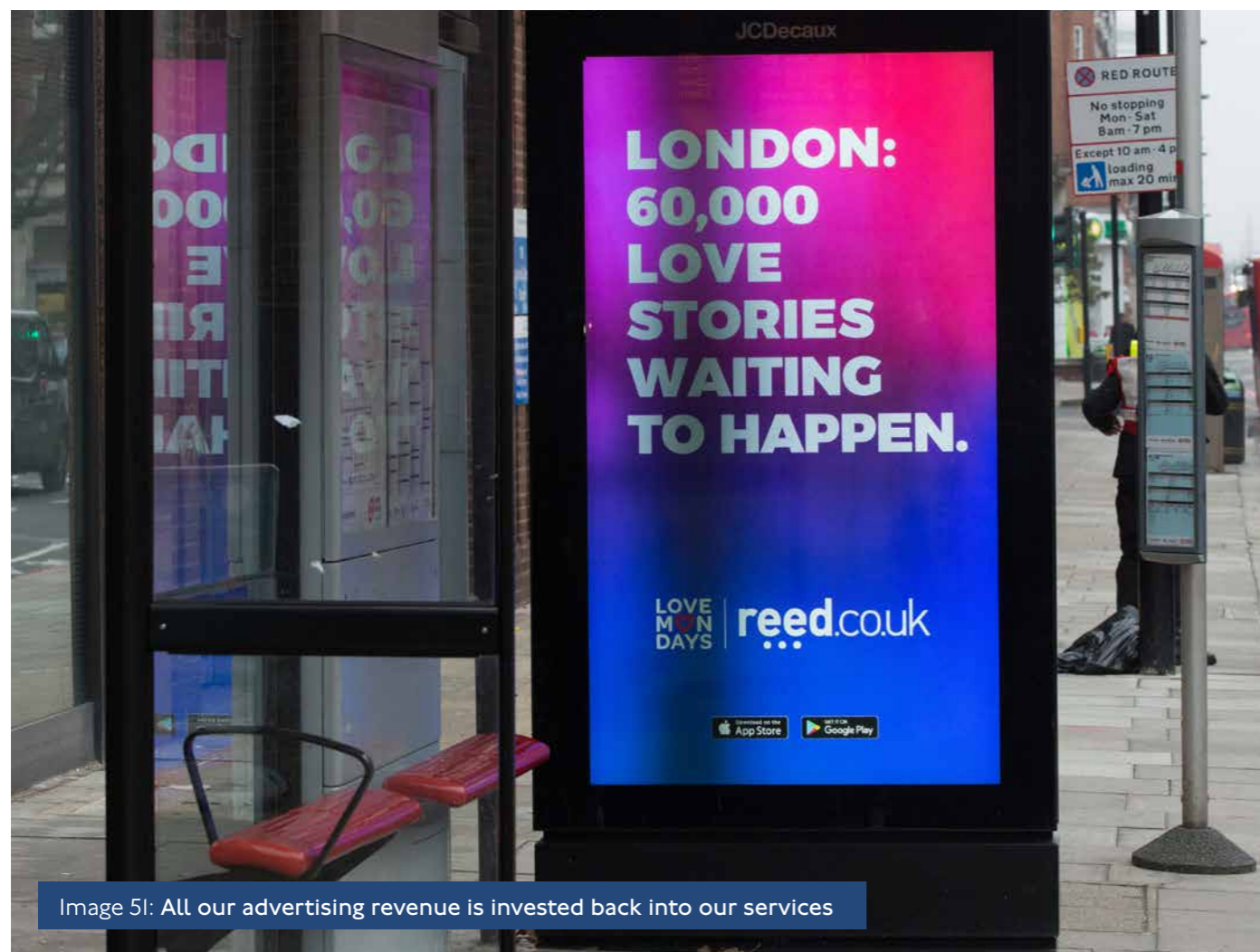


Image 51: All our advertising revenue is invested back into our services

Forecast figures show an anticipated shortfall of more than 55,000 people equipped to work in transport infrastructure by 2020. Also, only one in eight engineering professionals are women and representation from black, Asian and minority ethnic communities is low.

We have more than 200 employees who work with schools and young people to highlight careers in engineering. We also run the TfL Innovate programme,

where schools develop ideas to improve transport (read more on page 90).

Unique proposition

In December, it was announced that the Elizabeth line would be launched in partnership with six brands.

The new railway will dramatically improve transport links throughout the South East. The commercial partners will be offered sector-exclusive advertising rights

across the Elizabeth line environment, as well as the chance to work with us on marketing integration.

A total of 200 million passengers are expected to use the new line annually – more than all of London's airports combined. This offers an unrivalled opportunity for brands to align themselves with a moment in London's history.

Advertising, partnerships and licensing

In September, we published our first annual advertising report, which revealed an increase in our advertising revenue in 2016/17. More than 16,000 adverts ran on our network, earning us around £142m – up nearly 20 per cent from £120m in 2015/16. All of this was invested back into our services.

To ensure these adverts are appropriate for a diverse and growing city, we have revised our advertising policy, with a particular focus on addressing issues around body image. This followed a pledge from the Mayor to ban adverts that could potentially pressurise people to conform to unhealthy or unrealistic body standards.

Partnership spotlight

Hello London

A partnership between us and Exterior Media has launched DX3, London's newest digital advertising channel. Since February, 60 new digital displays across the Tube network have allowed customers to watch full-motion ads while standing on station platforms. Jaguar, LG, Gillette, Tesco and EOS were among the first brands to display content this way.

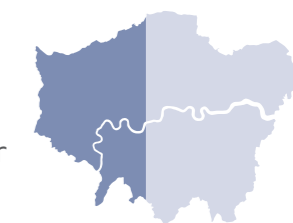
16,000

adverts ran on our network, earning us around £142m



We own
40%

of London's outdoor advertising space



Case study

Innovate TfL

A unique programme – Innovate TfL – gives Year 12 and 13 students the chance to develop their skills and gain valuable work experience with us.

The programme, run in association with Cleshar, asks groups of young people to work together to come up with an innovative solution to a real challenge.

Supported by us and their school, college or youth organisation, they must produce:

- A filmed presentation in school (up to five minutes), with all team members contributing
- A 30-second advert
- A design of their innovation

Team members are assigned roles that reflect the real world, and the best teams are shortlisted to attend an event in central London with our senior staff, stakeholders and suppliers. Those teams also win work experience with us.

Other benefits include the chance to develop skills in communications, project and time management, analytics, research, creativity, numeracy and literacy.

Brand licensing

In May, we signed a five-year deal with the TSBA Group to expand our brand licensing programme, which includes the London Tube map and our roundel logo, to the global market.

Through TSBA, we licensed a weekly magazine, published by Hachette Partworks, that lets fans of London transport build their own authentic 1:12 scale model of the legendary Routemaster. Readers can also find out about London's transport history.

It is available from UK retailers, as well as through buildtheroutemaster.com. We are also working with Hachette Partworks to take the magazine to international markets in the future.

Investing in our people

Our employees are regularly offered mental health and trauma support training to enable them to assist both colleagues and customers.

Last summer we celebrated Pride by transforming parts of the transport network with a new rainbow design, created to raise awareness and show support for the LGBT+ community.

Highlighting #loveislove, the bold design could be seen above the Oxford Street entrance of Tottenham Court Road station. Rainbow roundels also went on display at Tottenham Court Road, Oxford Circus and Piccadilly Circus Tube stations.

Anyone hiring a Santander Cycle also had the chance to ride on one of the 50 bikes



that featured rainbow livery on their rear mudguards. This initiative further demonstrated how proud we are of London's diversity.

Opportunities for young people

Earlier this year, we started the search for around 180 new apprentices, offering exciting opportunities in areas including engineering, cyber security and finance.

Building on the success of our current apprenticeship programme, we have added a further six schemes. Half of these new opportunities will be level-six apprenticeships, meaning students will study for a degree qualification in areas such as civil engineering, quantity surveying and commercial property surveying, while earning and gaining real work experience. ♦

Remuneration Report

Introduction

I am proud to have taken over from Baroness Grey-Thompson as the Chair of the Remuneration Committee earlier this year. In this role, my job is to ensure that TfL has an appropriate remuneration policy to recruit and retain senior employees with the capability and experience to deliver the Mayor's ambitious agenda for transport.

This year, the team at TfL will help people to make more than four billion journeys in and around London safely, reliably and efficiently, and be responsible for some £9.8bn of income and expenditure to keep the city moving and growing. TfL's capital investment programme is one of the largest in the world, and the decisions TfL makes are significant both to the national economy and overseas. We have to make sure our management team is qualified for this challenge.

At the same time, TfL is receiving less financial support from Government than ever before and is going through some of the biggest changes in its history. This Annual Report sets out all of the ways in which the management team is delivering in the face of those challenges, while also cutting year-on-year operating costs this year for the second year running.

Our independent market benchmarking shows that the remuneration of TfL's senior management is relatively low compared with the organisations with which it competes. The base salaries of the Commissioner and his most senior team have, where the accountabilities for the individuals have remained unchanged, been frozen for the four year duration of this Mayoral term.

TfL has completed some significant organisational change over the past 12 months, which brings with it unavoidable one-off costs. Once these are taken into account, the number of senior managers who earned more than £100,000 has fallen this year.

As TfL's Remuneration Committee, we are charged with setting a policy that allows the organisation to compete in a global market to secure the right talent, while always delivering value for money. We feel we have an appropriate and balanced approach to rewarding our senior staff that meets that goal.

Ben Story
Chair of TfL's Remuneration Committee

Governance

Remuneration Committee members

Ben Story (Chair)*
Kay Carberry CBE (Vice Chair)
Baroness Grey-Thompson DBE*
Ron Kalifa OBE
Valerie Shawcross CBE

*Ben Story took over as Chair of the Remuneration Committee from Baroness Grey-Thompson in December 2017

Remuneration Committee role and responsibilities

Remuneration policy is set by TfL's Remuneration Committee to attract and retain the highest calibre individuals to successfully manage a large and complex business, while being mindful of its status as a public sector organisation that is principally funded by fare payers.

The Committee consists of five members as shown left. The Committee's terms of reference are published on the TfL website but essentially involve the review and setting of the remuneration of the Commissioner, Managing Directors, General Counsel and the Chief Finance Officer. The Committee also helps to review the remuneration strategies for the senior manager group, particularly regarding performance related pay.

The remuneration of the Chief Executive of Crossrail is determined by the Crossrail Remuneration Committee. Crossrail is a wholly owned subsidiary of TfL with its own governance arrangements. These include a board comprising executive and independent non-executive directors, as well as two non-executive directors appointed by TfL and the Department for Transport.

The Crossrail Remuneration Committee operates to its own contractually agreed remuneration principles and remuneration framework, rather than the TfL remuneration framework.

Dates of meetings during 2017/18

While Committee members met informally on several occasions during the year, it met formally on two occasions: 19 July 2017 and 2 October 2017.

Activities of the Remuneration Committee during 2017/18

In July 2017, the Committee reviewed overall performance against the 2016/17 TfL and business area scorecards and agreed the final performance awards for the most senior employees.

The Committee asked that its terms of reference be reviewed, so that it considers wider strategic issues around our remuneration structure. This would include benchmarking, skill sets and gaps, talent management, equality and inclusion at senior levels and the ability to attract and retain key staff.

During 2017/18, the TfL Board and Executive Committee have been developing a new TfL Scorecard to provide a clear line of sight between the Mayor's Transport Strategy, our Business Plan, our Budget and how we monitor and drive our performance.

The scorecard focuses on the critical success factors for the year ahead and is an objective method for tracking our performance. The measures are directly linked to the overall Mayor's Transport Strategy objective of 80 per cent of journeys to be made by walking, cycling

or public transport by 2041, and the three key themes:

- Healthy Streets and healthy people
- A good public transport experience
- New homes and jobs

These are also assessed against four key organisational areas: Safety and Operations; Customers; People; and Financial. Each area has a 25 per cent weighting, reflecting their equal importance to our delivery for London.

The measures to be used for the 2018/19 scorecard, together with their alignment to the Mayor's Transport Strategy outcomes and themes, are:

Healthy Streets and healthy people

1 London's transport system will be safe and secure

Measured by the reduction in the number of people killed or seriously injured (KSIs) on London's roads and from incidents involving buses and the number of injuries sustained on the public transport network

2 London's streets will be used more efficiently and have less traffic

Measured by operational improvements to sustainable travel cycling trips

3 London's streets will be clean and green

Measured by the number of London buses that are Euro VI compliant

4 More Londoners will travel actively

Measured by Healthy Streets scheme assessment

A good public transport experience

5 Journeys by public transport will be fast and reliable

Measured by excess journey time (London Underground) and average bus speeds

6 Public transport will be accessible to all

Measured by additional time to make step-free journeys

7 Journeys by public transport will be pleasant

Measured by the percentage of Londoners who agree we care about our customers

New homes and jobs

8 Transport investment will unlock the delivery of new homes and jobs

Measured by the percentage of housing units we take to market in year that are affordable

Mode share

9 80 per cent of journeys will be made by sustainable modes in 2041

Measured by sustainable mode share improvement

All Mayor's Transport Strategy themes

10 All mayor's Transport Strategy outcomes

Measured by key milestone delivery and opening the Elizabeth line central section on time

People

11 A capable and engaged workforce representative of London

Measured by workforce representativeness index (all employees) and workforce representativeness index (Director/band 5), inclusion index and total engagement index

Financial

12 We are prudent and cover our costs

Measured by the net operating surplus and the investment programme

Policy

Board remuneration*

Board members receive a basic fee of £16,000 per annum. Additional fees are paid for each appointment to a committee or panel, up to a maximum total remuneration of £20,000 per annum.

The additional fees are paid at the rate of £1,000 per annum as a member and £2,000 per annum as the Chair of a committee or panel. Members are also entitled to receive free travel on the TfL transport network. No allowances are paid to members.

Any expenses claimed by members, in relation to fulfilling their role as a TfL board member, are published on the board members page of our website, along with details of any gifts or hospitality received.

The remuneration for each member for the year ended 31 March 2018 is shown in appendix 4.

General remuneration

Our general policy is to provide remuneration that attracts, retains and motivates individuals of the right calibre to manage a large, complex organisation. Remuneration packages reflect responsibilities, experience, performance and the market from which we recruit.

The reward structure that has been developed is commensurate with this policy. It includes a base salary and a performance award scheme against the achievement of a range of Public Transport, Customer, People and Financial targets.

The main objective of the remuneration policy is to ensure that reward is based on performance to drive delivery while ensuring that the overall reward package is affordable.

Executive remuneration

The base pay and the total remuneration of the Commissioner, Managing Directors, General Counsel and Chief Finance Officer is set by the Remuneration Committee, which uses external benchmarking and other comparative information to determine remuneration. This is broken down into the following components:

Component	Purpose	Operation	Maximum
Base pay	To reflect the individual's role, experience and contribution. Set at a level to attract and retain individuals of the calibre required to lead a business of TfL's size and complexity.	<p>The following factors are taken into account:</p> <ul style="list-style-type: none"> • Remuneration benchmark information from a specific peer group to identify a market median range of base pay which reflects what TfL's Commissioner, Managing Directors, General Counsel and Chief Finance Officer would receive if they were to work in a similar role in another company of similar size, complexity and scope • The scope and responsibility of the role • The individual's skill, experience and performance against targets • Affordability for TfL 	There is no prescribed maximum salary. There will be no increases to base pay (where the accountabilities for the role remain unchanged) for the Commissioner, Managing Directors, General Counsel, Chief Finance Officer and Directors during the Mayor's current term in office.
Performance related pay	To incentivise delivery of stretching one year key performance targets (both individual and collective) as measured through individual performance objectives and business scorecards.	<p>Performance awards consist of three elements:</p> <ol style="list-style-type: none"> A component for TfL's overall performance as measured by the TfL scorecard A component for the performance of one of the four business areas they lead as measured by the business area scorecard A component for personal performance. <p>The three elements are combined to arrive at an appropriate award. Awards are paid in the following financial year.</p>	<p>The maximum award for the Commissioner is 50 per cent of base pay.</p> <p>The maximum award for Managing Directors, General Counsel and Chief Finance Officer is 30 per cent of base pay.</p>

* Information not subject to audit

Component	Purpose	Operation	Maximum
Benefits	To provide a competitive total reward package that supports attraction, retention and motivation.	<p>The Commissioner, Managing Directors, General Counsel and Chief Finance Officer receive the same core benefits as all other TfL employees. The only enhancements are full family cover for private medical benefit and an annual health assessment (which is available to all TfL Directors).</p> <p>Membership of the TfL Pension Fund, a 'defined benefit' scheme which provides for a pension payable from age 65, based on 1/60th of pensionable salary for each year of service or, if invited and eligible, similar benefits provided on an unfunded basis.</p> <p>Some legacy arrangements apply for certain employees whereby an employer contribution of 10 per cent of salary is paid to either a defined contribution arrangement or as cash supplement at a discounted amount.</p>	Pensionable salary is capped at £154,200 from 6 April 2017 for members who joined after 31 May 1989.

The remuneration received by the Commissioner, Managing Directors, General Counsel and Chief Finance Officer for 2017/18 are shown on pages 110 – 117

Performance related pay

The TfL Group scorecard below shows the performance targets for 2017/18, aligned to our 2017/18 Budget. The scorecard is balanced against four areas with each area receiving a 25 per cent weighting, reflecting their equal importance to our delivery. The table shows the measures used to determine any performance related pay.

Outcome	Unit of measure	2017/18 Target
Public Transport		
Safe and secure travel	Reduction in KSIs on London's Roads (%)	45.4
	Worforce and customer injuries	10,265
Tackling crowding and ensuring good growth	Available passenger km (bn)	116
Improving public transport services	Streets journey time reliability (%)	88.5
	Bus excess wait time (minutes)	1.1
	Average bus speeds (mph)	9.2
	Tube excess journey time (minutes)	4.30
Deliver critical infrastructure, and prepare for the Elizabeth line	Key milestone delivery (%)	100
Customer		
TfL works for its customers	Care metric (%)	51
Active and inclusive travel	PT and cycling journeys (m)	4,088
Reducing impact on air quality, carbon and environment	NO ₂ concentrations (µg/m ³)	61
Deliverable affordable housing	Affordable housing (%)	50
Creating an accessible public transport system	Step-free journeys (%)	16.7

Remuneration

Outcome	Unit of measure	2017/18 Target
People		
A workforce representative of London	All staff workforce diversity (%)	70.3
	B5+ workforce diversity (%)	40
	Action on Equality (%)	90
A capable, engaged workforce	Total engagement (score)	59
A more effective, efficient organisation	Transformation milestone (%)	100
	Transformation survey	+3
Financial		
We are financially sustainable	Net operating surplus (£m)	293
We are prudent	Daily cash above minimum (%)	95
	Period average cash balance (£m)	540

Severance policy

Most employees who leave owing to redundancy do so under TfL's voluntary severance arrangements.

Voluntary severance terms for employees may include, dependent on circumstances, some or all of the following:

- A number of weeks of pay based on length of service, age and weekly pay
- Notice period that an employee may work or receive as a payment in lieu of notice
- Outplacement support or an equivalent cash payment
- Enhanced pension provision

There are minimum service requirements for some of these terms and some elements vary if employees volunteer to leave early during organisational change.

There are also some variations to these terms which have been agreed as local arrangements for the small number of employees who are members of the Local Government and Principal Civil Service Pension Schemes.

Other severance arrangements

In non-redundancy situations, TfL may enter into severance arrangements where to do so is in the interests of the organisation and represents value for money. All such arrangements are considered on a case by case basis.

Benchmarking of Senior Executive's pay

The Remuneration Committee uses data from remuneration consultants New Bridge Street, a division of Aon Hewitt, to benchmark the remuneration for the Commissioner, Managing Directors, General Counsel and Chief Finance Officer against a peer group of comparable companies from transport, infrastructure and public services sectors with which we compete for senior employees.

The Committee uses two primary pay comparator groups. The benchmark is calculated on the basis of a 60:40 split between a Listed Companies Group, consisting of large transport and infrastructure companies and a Publicly Accountable Group, consisting of companies accountable to the UK public, owned or overseen by the government. Benchmarking was last done in 2016.

Listed Companies Group

- National Grid
- BT Group
- SSE
- Centrica
- International Consolidated Airlines Group
- Capita
- EasyJet
- United Utilities
- Bunzl
- Severn Trent
- Royal Mail
- Pennon Group
- Amec Foster Wheeler
- Stagecoach Group
- Thomas Cook Group
- Balfour Beatty
- Carillion
(still trading when benchmarking was done)

- National Express Group
- FirstGroup
- Go-Ahead Group
- Serco Group

Publicly Accountable Group

- BBC
- Manchester Airport Group
- NATS
- Network Rail
- Nuclear Decommissioning Authority
- Post Office

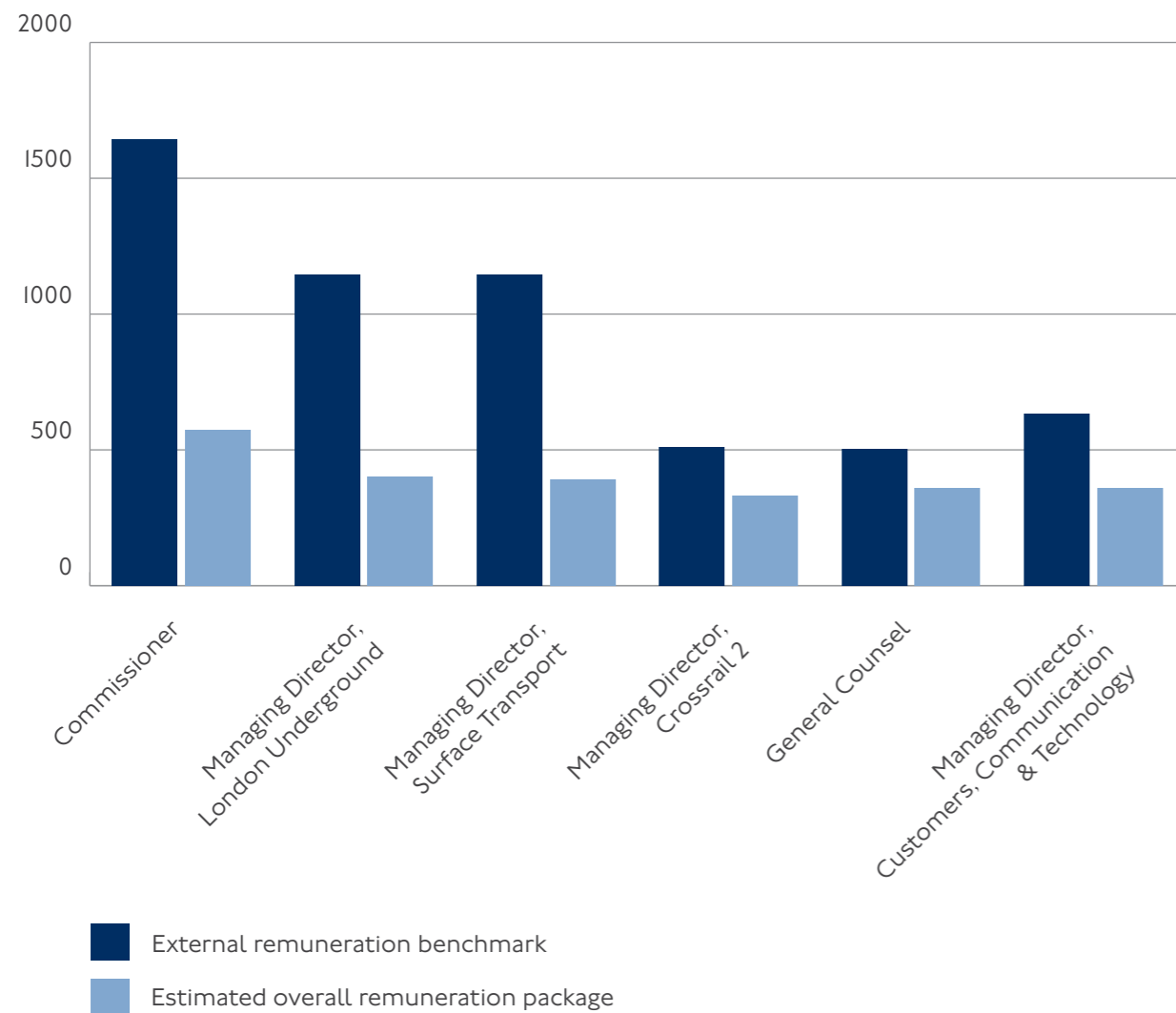
To enable a like-for-like comparison with the peer group, we have adjusted the remuneration of our senior executives to align it with the definitions provided by New Bridge Street.

Estimated overall remuneration for each role has been calculated to include the base salary and estimates for performance related pay and pension provision.

Performance related pay has been based on the average level of performance over recent years and the value of the pension provision is based on standard actuarial assumptions. The value of the estimated overall remuneration package will therefore be different to the actual remuneration paid.

Research has shown that the base salaries and comparable remuneration for the Commissioner, Managing Directors, General Counsel and Chief Finance Officer are significantly below the market level; total estimated overall remuneration is between 35 per cent and 71 per cent of market benchmark levels as shown in the following chart.

Benchmarking of remuneration for Commissioner, Managing Directors and General Counsel (£000s)*



* Chief Finance Officer is excluded from the chart as no permanent Chief Finance Officer was in place at 31 March 2018

Comparison of senior executive pay to rest of TfL

The base salary of the Commissioner in 2017/18 was £355,944. This compares with the median base salary of £49,500 and the lowest base salary (excluding apprentices) of £18,900. The ratio between

the Commissioner's salary and median base salary is 7.2 to 1 and the ratio to the lowest base salary is 18.8 to 1.

The following table shows how total remuneration is split between employees by grade.

	Percentage of total remuneration
Commissioner, Managing Directors and General Counsel	0.2
Directors	0.7
General managers	1.8
All other TfL employees	97.3

Note: employees' remuneration is consistent with the definition on pages XX and XX and includes salaries, fees, performance related pay, benefits in kind, lump sums and termination payments. It excludes employer pension contributions and employer national insurance contributions paid, and is based on remuneration received by employees during the relevant year.

Summary of employee information

Total headcount (including agency staff) reduced from 29,189 on 31 March 2017 to 28,456 on 31 March 2018. The average headcount (permanent and fixed-term contract) has reduced by 137 since last year and the average number of agency staff has reduced by 944.

Headcount management has helped maintain remuneration costs at a similar level despite inflation linked pay increases for some employees and increased severance payments.

Our median cash earnings have decreased from £51,832 to £51,530. The ratio of Commissioner's cash earnings to the pan-TfL median earnings is 7.3:1.

Year	Average headcount (I)	Total remuneration costs £m (I)
2013/14	25,294	1,737.9
2014/15	26,090	1,803.6
2015/16	27,501	1,942.0
2016/17	27,131	1,963.9
2017/18	26,994	2,251.7

(I) From statutory accounts

Note: average headcount and total remuneration costs include permanent, and fixed-term contract (FTC). Total remuneration costs include non-cash pension charges of £595.5m in 2017/18 (2016/17 £365.6m). Group employee costs and average employee numbers for 2013/14-2014/15 have been restated to exclude the costs of British Transport Police Authority staff and officers working on the London Underground. Costs of these individuals have been reclassified as non-employee costs within other service expenditure.

Other employees' remuneration (including Crossrail)

We publish the remuneration of all employees, including those working in our subsidiaries, whose total remuneration was more than £50,000 over the course of the financial year, grouped in rising bands of £5,000. This information is included as Appendix I of this report.

The impact of the transfer of employees into and out of the Corporation* from subsidiaries can cause distortion for year-on-year comparison purposes. An additional voluntary disclosure for the Group** is therefore provided that

shows the combined employee bands for TfL and its subsidiaries (Appendix I of this report).

The remuneration disclosure is also affected by the Crossrail project. The number of employees of Crossrail Limited receiving total remuneration of £50,000 or more decreased from 304 in 2016/17 to 293 in 2017/18. The corresponding figures for those receiving total remuneration of more than £100,000 per year decreased from 61 in 2016/17 to 53 in 2017/18.

* The Corporation is made up of London Streets, Taxi and Private Hire, and the corporate centre which, for legal and accounting purposes, constitutes TfL

** The TfL Group is made up of the Corporation and its subsidiaries and associated undertakings

Employees with a total remuneration of more than £100,000 per year

In 2017/18, 169 people earned a total remuneration of more than £100,000 during the course of the financial year and had a base salary of £100,000 or more per year, compared with 189 in 2016/17. Nineteen people have now left the organisation, a number of whom will not be replaced.

Overtime was worked by specialist engineers and highly skilled project employees, 71 of whom earn a base salary of less than £100,000 per year, but the overtime they earned took their total remuneration above the threshold, compared with 88 in 2016/17. Many of these people are specialist engineers working overnight and at weekends on major projects, such

as installing new signalling on the Circle, District, Hammersmith & City and Metropolitan lines.

A total of 224 people (compared with 122 in 2016/17) who were on a base salary of less than £100,000 per year, received a one-off voluntary severance payment that took their total remuneration above this threshold. This is largely due to people leaving as part of our transformation programme, which is working to reduce management layers and eliminate duplication in order to improve efficiency.

Therefore, the total number of TfL staff (excluding Crossrail) who received total remuneration of more than £100,000 per year, including severance payments and overtime, was 564 in 2017/18 compared with 515 in 2016/17.

Number of employees with a total remuneration of £100k or more

	2017/18	2016/17
Base salary more than £100k	169	189
Base salary between £80k and £100k	100	116
	269	305
Voluntary severance payments taking earnings over £100k	224	122
Level of overtime worked taking earnings over £100k	71	88
Total TfL	564	515
Crossrail	53	61
Total (including Crossrail)	617	576

Appendices

I: Number of employees who received total remuneration of more than £50,000*

Employees' remuneration

This includes salaries, fees, performance related pay, benefits in kind, lump sums and termination payments, but excludes pension contributions paid by the employer.

* Information subject to audit

	Group 2018 number**	Group 2017 number	Corporation 2018 number***	Corporation 2017 number
50,000 – 54,999	5,245	5,466	713	499
55,000 – 59,999	2,582	2,540	615	413
60,000 – 64,999	1,723	1,839	481	304
65,000 – 69,999	1,370	1,352	390	253
70,000 – 74,999	963	1,036	283	206
75,000 – 79,999	721	729	223	161
80,000 – 84,999	510	494	156	92
85,000 – 89,999	336	378	115	64
90,000 – 94,999	223	234	74	46
95,000 – 99,999	146	167	56	34
100,000 – 104,999	119	135	49	28
105,000 – 109,999	68	92	33	21
110,000 – 114,999	67	69	35	17
115,000 – 119,999	51	52	30	9
120,000 – 124,999	34	31	19	13
125,000 – 129,999	31	18	23	4
130,000 – 134,999	36	26	25	8
135,000 – 139,999	23	11	12	2

	Group 2018 number**	Group 2017 number	Corporation 2018 number***	Corporation 2017 number
140,000 – 144,999	18	9	12	4
145,000 – 149,999	16	9	8	2
150,000 – 154,999	7	4	6	1
155,000 – 159,999	11	6	7	1
160,000 – 164,999	6	6	2	3
165,000 – 169,999	14	7	10	5
170,000 – 174,999	7	3	4	2
175,000 – 179,999	14	9	6	6
180,000 – 184,999	10	5	6	3
185,000 – 189,999	10	5	3	1
190,000 – 194,999	3	4	3	2
195,000 – 199,999	9	3	5	1
200,000 – 204,999	3	2	2	-
205,000 – 209,999	6	1	3	1
210,000 – 214,999	5	3	-	1
215,000 – 219,999	4	6	1	4
220,000 – 224,999	3	6	-	3
225,000 – 229,999	3	3	1	2

** The TfL Group is made up of the Corporation and its subsidiaries and associated undertakings

*** The Corporation is made up of London Streets, Taxi and Private Hire, and the corporate centre which, for legal and accounting purposes, constitutes TfL

* Information subject to audit

	Group 2018 number**	Group 2017 number	Corporation 2018 number***	Corporation 2017 number
230,000 - 234,999	2	1	1	1
235,000 - 239,999	3	5	1	2
240,000 - 244,999	1	7	1	2
245,000 - 249,999	1	1	1	1
250,000 - 254,999	2	3	-	1
255,000 - 259,999	-	2	-	1
260,000 - 264,999	4	4	2	1
265,000 - 269,999	1	-	1	-
270,000 - 274,999	1	4	1	-
275,000 - 279,999	2	3	2	1
280,000 - 284,999	2	1	-	-
285,000 - 289,999	2	2	1	2
290,000 - 294,999	2	2	-	-
295,000 - 299,999	1	1	-	1
300,000 - 304,999	1	1	1	-
305,000 - 309,999	1	3	-	3
310,000 - 314,999	2	-	1	-
315,000 - 319,999	1	-	-	-
320,000 - 324,999	-	1	-	-
325,000 - 329,999	2	-	1	-
340,000 - 344,999	-	1	-	1
350,000 - 354,999	-	1	-	-

** The TfL Group is made up of the Corporation and its subsidiaries and associated undertakings

*** The Corporation is made up of London Streets, Taxi and Private Hire, and the corporate centre which, for legal and accounting purposes, constitutes TfL

	Group 2018 number**	Group 2017 number	Corporation 2018 number***	Corporation 2017 number
360,000 - 364,999	1	-	-	-
365,000 - 369,999	2	-	-	-
370,000 - 374,999	1	1	1	-
375,000 - 379,999	-	2	-	2
390,000 - 394,999	1	-	-	-
410,000 - 414,999	-	1	-	-
435,000 - 439,999	1	-	-	-
470,000 - 474,999	-	1	-	-
490,000 - 494,999	-	1	-	-
510,000 - 514,999	-	1	-	1
640,000 - 644,999	1	-	1	-
705,000 - 709,999	1	-	-	-
945,000 - 949,999	-	1	-	-
Total	14,436	14,811	3,427	2,236

Remuneration for senior employees

The Accounts and Audit Regulations 2015 require disclosure of individual remuneration details for senior employees with a base salary of £150,000 or more, calculated on a full-time equivalent basis for those working part-time.

Disclosure is made for each financial year under various categories, and set out in the tables from page xx.

Employer's pension contributions include the contribution in respect of future benefit accrual. Member contributions are payable by employees at a fixed rate of five per cent of pensionable salary.

Salary, fees and allowances are disclosed on an earned basis. Although performance related pay is reported on a cash paid basis, it may not be determined for many months after the end of the relevant year.

Appendices

2: named employees receiving a base annual salary in excess of £150,000 at 31 March 2018*

* Information subject to audit

Notes	Salary (including fees and allowances) 2017/18 £	Performance related pay (PRP) for 2016/17 paid in the year 2017/18** £	Compensation for loss of employment 2017/18 £	Benefits in kind 2017/18 £	Total remuneration excluding pension contributions 2017/18 £	Employer's contribution to pension 2017/18^ £	Salary (including fees and allowances) 2016/17 £	PRP for 2015/16 paid in the year 2016/17 £	Total remuneration excluding pension contributions 2016/17**** £	
TfL employees including subsidiary companies but excluding Crossrail										
Mike Brown, Commissioner	a	*372,845	-	-	2,115	374,959	-	*373,051	139,600	514,701
Howard Carter, General Counsel	b	*255,797	51,407	-	2,115	309,319	-	*255,208	63,249	320,507
Michele Dix, Managing Director, Crossrail 2	c	*169,056	31,363	-	1,651	202,070	-	*169,056	46,464	217,570
Vernon Everitt, Managing Director, Customers, Communication and Technology	d	243,812	55,761	-	2,115	301,688	-	244,016	63,860	309,926
Simon Kilonback, Interim Chief Finance Officer	e	*232,297	28,098	-	1,651	262,046	-	*208,401	33,430	243,431
Gareth Powell, Managing Director, Surface Transport	f	*277,417	34,413	-	1,781	313,611	9,382	*251,546	34,410	287,556
Mark Wild, Managing Director, London Underground and TfL Engineering	g	284,425	42,880	-	1,651	328,956	39,386	214,726	-	215,974
Sarah Bradley, Group Financial Controller	h	157,516	9,650	-	744	167,910	32,138	131,690	9,821	142,232
Justin Brand, Commercial Revenue Director		150,000	69,000	-	744	219,744	36,829	150,000	43,571	194,292
George Clark, Director of TfL Engineering		147,452	19,071	-	1,651	168,174	35,420	130,000	17,680	149,280
Andrea Clarke, TfL Legal Director	i	161,518	26,656	-	1,651	189,825	38,766	148,832	29,770	180,202
Jean Cockerill, Human Resources Director, Employee Relations		156,540	25,560	-	744	182,844	38,106	156,897	27,930	185,548
Tanya Coff, Divisional Finance Director, London Underground		162,000	17,426	-	1,661	181,087	39,386	156,335	16,937	173,993
Graeme Craig, Director of Commercial Development		185,000	30,266	-	1,651	216,917	39,386	185,000	29,000	215,600
Patrick Doig, Divisional Finance Director, Surface Transport		149,973	24,654	-	1,651	176,278	35,534	140,000	26,000	167,600
Stephen Field, Director of Pensions and Reward	j	*190,666	75,233	-	1,651	267,550	-	*190,873	34,400	226,874

*Information subject to audit

	Notes	Salary (including fees and allowances) 2017/18 £	Performance related pay (PRP) for 2016/17 paid in the year 2017/18** £	Compensation for loss of employment 2017/18 £	Benefits in kind 2017/18 £	Total remuneration excluding pension contributions 2017/18 £	Employer's contribution to pension 2017/18^ £	Salary (including fees and allowances) 2016/17 £	PRP for 2015/16 paid in the year 2016/17 £	Total remuneration excluding pension contributions 2016/17**** £
Lester Hampson, Property Development Director		177,157	129,063	-	1,651	307,871	39,386	177,341	42,579	221,520
Stuart Harvey, Major Projects Director	k	*265,036	51,340	-	1,651	318,027	-	*235,860	43,000	280,460
Nigel Holness, Director of Network Operations	l	227,267	65,388	-	1,651	294,306	39,386	186,058	66,549	254,207
David Hughes, Strategy and Network Development Director	m	182,364	31,755	-	1,651	215,770	39,386	177,979	26,680	206,259
Antony King, Divisional Finance Director, Major Projects Directorate	n	42,885	-	-	404	43,288	2,181	-	-	-
Chris Macleod, Customer Director		*206,620	30,228	-	-	236,848	-	*205,618	32,000	237,618
Peter McNaught, Asset Operations Director		162,674	23,472	-	1,651	187,797	39,362	162,596	27,680	191,876
Andrew Pollins, Transformation Director		222,788	25,217	-	1,651	249,656	39,386	231,961	24,820	258,381
Caroline Sheridan Renewals and Enhancements Director, London Underground	o	55,585	-	-	-	55,585	13,484	-	-	-
Paul Thomas, Head of Engineering, New Tube for London	p	171,920	5,950	-	1,901	179,772	39,386	171,806	10,591	184,247
Shashi Verma, TfL Strategy Director and Chief Technology Officer		205,397	36,090	-	744	242,231	48,941	205,398	37,000	243,119
Steve White, Four Lines Modernisation Implementation Director		*207,639	24,606	-	1,651	233,896	-	*210,334	59,880	271,814
Alex Williams, City Planning Director		203,818	23,240	-	-	227,058	470	164,305	19,880	184,185
Brian Woodhead, Customer Service Director		*230,786	59,700	-	1,651	292,137	-	*166,703	-	167,868
Patricia Wright, Chief People Officer	q	*236,225	35,966	-	744	272,935	-	*236,381	39,000	276,102
David Wylie, Chief Procurement Officer	r	171,027	10,000	-	1,651	182,678	39,386	27,730	-	27,990
Ken Youngman, Divisional Finance Director, Commercial Development	s	41,430	-	-	404	41,834	3,636	-	-	-

* Information subject to audit

Notes	Salary (including fees and allowances) 2017/18 £	Performance related pay (PRP) for 2016/17 paid in the year 2017/18** £	Compensation for loss of employment 2017/18 £	Benefits in kind 2017/18 £	Total remuneration excluding pension contributions 2017/18 £	Employer's contribution to pension 2017/18^ £	Salary (including fees and allowances) 2016/17 £	PRP for 2015/16 paid in the year 2016/17 £	Total remuneration excluding pension contributions 2016/17**** £	
Crossrail employees										
Sir Terry Morgan, Non-Executive Chairman	t	250,000	-	-	1,651	251,651	-	250,000	-	251,600
Jeremy Bates, Head of Integration		163,488	21,669	-	1,651	186,808	29,337	156,199	14,500	172,299
Chris Binns, Chief Engineer		170,980	23,039	-	1,651	195,670	17,098	165,456	12,142	179,198
Mathew Duncan, Finance Director		247,016	112,376	-	1,651	361,043	-	241,694	27,077	270,371
Mark Fell, Legal Services Director and Company Secretary		199,573	21,179	-	1,651	222,403	-	174,625	84,405	260,630
Paul Grammer, Commercial Director		238,147	89,900	-	1,651	329,698	-	233,015	27,149	261,764
Richard Palczynski, Programme Controls Director		161,635	10,222	-	744	172,601	16,163	157,350	9,886	167,957
Chris Sexton, Technical Director		230,707	30,057	-	1,651	262,415	29,532	216,499	39,900	257,999
Howard Smith, Director of Operations	u	*183,075	29,173	-	1,651	213,899	-	*183,303	29,930	214,833
Valerie Todd, Talent and Resources Director	v	*258,277	39,498	-	2,115	299,891	-	*249,064	41,076	292,190
Matthew White, Surface Director		156,943	19,713	-	1,651	178,307	29,511	151,406	24,000	177,006
Simon Wright, Programme Director		328,873	105,568	-	1,651	436,092	-	322,831	169,471	493,902
Former employees										
Leon Daniels, Managing Director, Surface Transport	w	195,353	-	444,598	1,528	641,480	-	270,264	70,831	343,145
Ian Nunn, Chief Finance Officer	x	105,136	58,355	-	813	164,305	-	271,095	37,583	310,727
Derek Baillie, Project Manager, Property Development	y	27,318	-	-	-	27,318	-	84,326	-	84,326
Garrett Emmerson, Chief Operating Officer, Surface Transport	z	*15,711	19,000	245,579	59	280,349	-	*190,539	36,000	227,260

* Information subject to audit

Notes	Salary (including fees and allowances) 2017/18 £	Performance related pay (PRP) for 2016/17 paid in the year 2017/18** £	Compensation for loss of employment 2017/18 £	Benefits in kind 2017/18 £	Total remuneration excluding pension contributions 2017/18 £	Employer's contribution to pension 2017/18^ £	Salary (including fees and allowances) 2016/17 £	PRP for 2015/16 paid in the year 2016/17 £	Total remuneration excluding pension contributions 2016/17**** £	
Andrew Wolstenholme, Chief Executive, Crossrail	aa	476,772	160,000	97,734	1,651	736,157	29,532	463,336	481,460	946,396
Ian Lindsay, Land and Property Director, Crossrail	ab	214,773	21,557	123,875	1,651	361,856	-	205,286	28,421	235,307
Will Parkes, External Affairs Director, Crossrail	ac	113,560	18,236	77,064	561	209,421	18,935	144,764	9,094	154,579
Duncan Pickard, Stations Delivery Director, Crossrail	ad	87,656	23,364	-	-	111,020	9,158	174,423	25,452	199,875

* salary, fees and allowances include an allowance paid as a result of the individual opting out of part or all of the benefits provided by the TfL Savings for Retirement Plan or TfL Pension Fund. The allowance is paid at the rate of the employer contribution foregone, discounted by the employer rate of National Insurance in order to ensure no additional employer cost is incurred. It also includes an allowance available to employees on fixed term contracts who choose to join a defined contribution scheme rather than the TfL Pension Fund

** refers to 2016/17 performance related pay awards

*** refers to 2015/16 performance related pay awards

**** total remuneration for 2016/17 also includes benefits in kind as reported in last year's Statement of Accounts

^ a number of senior employees opted out of the TfL Pension Fund during 2015/16. They are instead accruing equivalent benefits under an unfunded defined benefit pension scheme

a salary sacrificed for pension of £7,708 (2016/17 £7,504)
b salary sacrificed for pension of £7,708 (2016/17 £7,506)
c salary sacrificed for pension of £22,000 (2016/17 £22,000). Paid for providing services four days per week
d salary sacrificed for pension of £7,708 (2016/17 £7,504)
e assumed role of interim Chief Finance Officer following the death of Ian Nunn. Formerly Corporate Finance Director
f changed role in year, formerly Director of TfL Strategy and Contracted Services
g salary sacrificed for Cycle to Work scheme of £923 (2016/17 £nil), entered service 20 June 2016
h assumed role of statutory Chief Finance Officer following the death of Ian Nunn in addition to current role
i paid for providing services four and a half days per week, reverted to full-time 25 July 2017

j salary sacrificed for pension of £7,708 (2016/17 £7,504). Performance related pay disclosed as received in 2017/18 also includes one-off payments in respect of 2016/17 and 2017/18 totalling £43,750
k changed role in year, formerly Sub-Surface Programme Director
l previously on secondment to MTR Crossrail
m salary sacrificed for childcare vouchers of £112 (2016/17 £1,456)
n entered service 02 January 2018
o entered service 27 November 2017
p salary sacrificed for Cycle to Work scheme of £462 (2016/17 £538)
q salary sacrificed for pension of £7,708 (2016/17 £7,504)
r entered service 1 February 2017
s entered service 02 January 2018
t paid for providing services three days per week
u salary sacrificed for pension of £7,684 (2016/17 £7,504)

v employed by TfL but on secondment to Crossrail since January 2009
w left service 20 December 2017. Compensation for loss of employment includes payment in respect of contractual notice of £277,768. Payment was in accordance with voluntary severance policy. Salary sacrificed for pension of £5,553 (2016/17 £7,504)
x passed away 25 July 2017. Salary sacrificed for pension of £2,427 (2016/17 £7,504)
y left service 30 June 2017. Paid for providing services 1.5 days per week
z left service 30 April 2017. Salary sacrificed for pension of £631 (2016/17 £7,504)
aa left service 31 March 2018
ab left service 31 March 2018
ac left service 31 December 2017
ad left service 29 September 2017

Appendices

3: Severance payments

We have also published the number and cost of compulsory and voluntary severance termination packages agreed during the year. This is fully in line with the Code. Our policy on severance is found on page [xx](#).

Termination payments disclosed in the tables below include Crossrail, and are reported on a cash paid basis to provide certainty on the amounts reported, and include pension contributions in respect of added years, ex-gratia payments and other related costs.

*Information subject to audit

£	Group 2018 number	Group 2018 £m	Corporation 2018 number	Corporation 2018 £m
Non-compulsory exit packages				
0-20,000	105	1.3	65	0.9
20,001-40,000	146	4.3	107	3.2
40,001-60,000	123	6.2	98	4.9
60,001-80,000	84	5.8	67	4.7
80,001-100,000	76	6.9	64	5.8
100,001-150,000	96	11.6	58	6.9
150,001-200,000	42	7.1	26	4.4
200,001-250,000	22	5.0	14	3.1
250,001-300,000	6	1.7	2	0.6
300,001-350,000	1	0.3	1	0.3
350,000-400,000	2	0.8	1	0.4
400,001-450,000	1	0.4	1	0.4
Total non-compulsory exit packages	704	51.4	504	35.6
Compulsory exit packages				
0-20,000	-	-	-	-
Total	704	51.4	504	35.6

£	Group 2017 number	Group 2017 £m	Corporation 2017 number	Corporation 2017 £m
Non-compulsory exit packages				
0-20,000	112	1.4	2	-
20,001-40,000	152	4.8	2	0.1
40,001-60,000	231	11.3	7	0.4
60,001-80,000	160	11.3	4	0.3
80,001-100,000	122	10.7	2	0.2
100,001-150,000	36	4.2	10	1.3
150,001-200,000	21	3.8	9	1.6
200,001-250,000	6	1.3	2	0.5
250,001-300,000	3	0.8	1	0.3
300,001-350,000	3	1.0	-	-
350,000-400,000	1	0.4	1	0.4
400,001-450,000	-	-	-	-
Total non-compulsory exit packages	847	51.0	40	5.1
Compulsory exit packages				
0-20,000	1	-	-	-
Total	848	51.0	40	5.1

Appendices

4: Representation of equalities groups at different pay levels as at 31 March 2018***

*Excluding Crossrail and TfL apprentices **Information not subject to audit

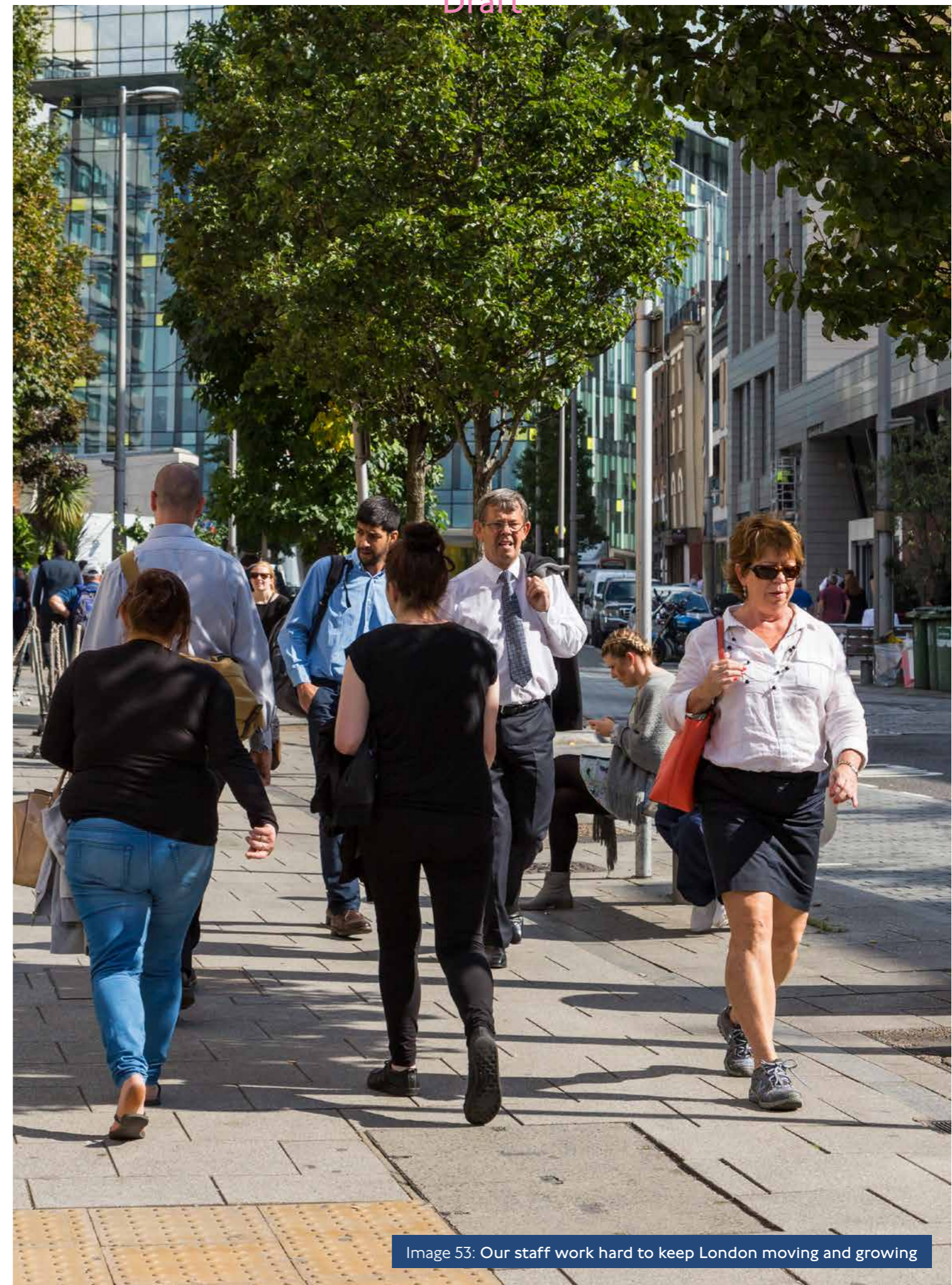
	<£20,000		£20,001 to £30,000		£30,001 to £40,000		£40,001 to £50,000		£50,001 to £60,000		£60,001 to £70,000		£70,001 to £80,000		£80,001 to £90,000		£90,001 to £100,000		>£100,000		
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	
Ethnicity																					
Black, Asian and minority ethnic	3	38%	607	31%	2,195	31%	1,226	25%	2,344	27%	514	20%	160	16%	25	7%	10	8%	11	7%	
White	4	50%	669	34%	2,646	36%	2,674	55%	4,631	54%	1,611	62%	689	67%	246	70%	90	68%	119	74%	
Not stated	1	12%	695	35%	2,351	33%	930	20%	1,640	19%	456	18%	183	17%	80	23%	32	24%	30	19%	
Total	8		1,971		7,192		4,830		8,615		2,581		1,032		351		132		160		
Gender																					
Female	5	63%	763	39%	2,409	34%	1,122	23%	1,366	16%	365	14%	164	16%	64	18%	27	20%	40	25%	
Male	3	37%	1,206	61%	4,779	66%	3,707	77%	7,245	84%	2,216	86%	868	84%	287	82%	105	80%	120	75%	
Other	-	-	2	-	4	-	1	-	4	-	-	-	-	-	-	-	-	-	-	-	
Total	8		1,971		7,192		4,830		8,615		2,581		1,032		351		132		160		
Disabled / Not disabled																					
Disabled	-	-	53	3%	149	2%	76	2%	140	2%	54	2%	14	1%	8	2%	4	3%	3	2%	
Not disabled	6	75%	954	48%	3,203	45%	1,894	39%	3,732	43%	992	38%	433	42%	137	39%	60	45%	99	62%	
Not stated	2	25%	964	49%	3,840	53%	2,860	59%	4,743	55%	1,535	60%	585	57%	206	59%	68	52%	58	36%	
Total	8		1,971		7,192		4,830		8,615		2,581		1,032		351		132		160		

Appendices

5: Board Remuneration*

* Information not subject to audit

	For the year ended 31/03/18 £
Current Board Member	
Sadiq Khan	Not remunerated by TfL
Valerie Shawcross CBE	Not remunerated by TfL
Kay Carberry CBE	18,500
Greg Clark CBE	19,000
Baroness Tanni Grey-Thompson DBE	19,000
Bronwen Handyside	18,000
Ron Kalifa OBE	19,500
Michael Liebreich	19,000
Dr Alice Maynard CBE	18,000
Anne McMeel	20,000
Dr Mee Ling Ng OBE	20,000
Dr Nelson Ogunshakin OBE	19,000
Dr Nina Skorupska CBE	19,000
Dr Lynn Sloman	19,000
Ben Story	18,500



TfL Executive Committee Members 2017/18



Mike Brown MVO
Commissioner



Mark Wild
Managing Director
London Underground



Andrew Pollins
Transformation Director



Alex Williams
Director of City Planning



Howard Carter
General Counsel



Gareth Powell¹
Managing Director
Surface Transport



Stuart Harvey
Major Projects Director



Tricia Wright
Chief People Officer



Michèle Dix CBE
Managing Director
Crossrail 2



Vernon Everitt
Managing Director
Customers, Communication
and Technology



Staynton Brown
Director of Diversity
and Inclusion



Graeme Craig
Director of Commercial
Development



Simon Kilonback²
Chief Finance Officer



Shashi Verma³
Director of Strategy and
Chief Technology Officer

- ¹ Replaced Leon Daniels on 20 December 2017
- ² Replaced Ian Nunn on 25 July 2017 and was permanently appointed as Chief Finance Officer on 17 April 2018
- ³ Joined the Executive Committee on 17 April 2018

Image 54: TfL Executive Committee Members 2017/18

TfL Board Members 2017/18



Sadiq Khan
Chair



Dr Alice Maynard CBE



Michael Liebreich



Dr Lynn Sloman



Kay Carberry CBE



Valerie Shawcross CBE
Deputy Chair



Anne McMeel



Dr Nina Skorupska CBE



Baroness Grey-Thompson DBE



Professor Greg Clark CBE



Dr Mee Ling Ng OBE



Dr Nelson Ogunshakin OBE



Ron Kalifa OBE



Bronwen Handyside



Ben Story

Image 55: TfL Board Members 2017/18

Crossrail Ltd Directors 2017/18



Sir Terry Morgan CBE
Chairman



Pamela Alexander OBE



Michael Cassidy CBE



Matthew Duncan



Terry Hill CBE



Mark Wild



Robert Jennings CBE



Phil Gaffney



Simon Wright OBE

Image 56: Crossrail Ltd Directors 2017/18



Image 57: An Elizabeth line train travels through the new tunnel

Membership of TfL committees and panels

Members of TfL

Sadiq Khan – Chair
 Valerie Shawcross CBE – Deputy Chair
 Kay Carberry CBE
 Prof Greg Clark CBE⁴
 Baroness Grey-Thompson DBE⁵
 Bronwen Handyside⁶
 Ron Kalifa OBE
 Michael Liebreich
 Dr Alice Maynard CBE
 Anne McMeel
 Dr Mee Ling Ng OBE
 Dr Nelson Ogunshakin OBE
 Dr Nina Skorupska CBE
 Dr Lynn Sloman
 Ben Story⁷

Committees of TfL

Audit and Assurance Committee

Anne McMeel – Chair
 Dr Lynn Sloman – Vice Chair
 Kay Carberry CBE
 Dr Mee Ling Ng OBE
 Dr Nelson Ogunshakin OBE

Finance Committee

Ron Kalifa OBE – Chair
 Ben Story – Vice Chair
 Michael Liebreich
 Anne McMeel
 Valerie Shawcross CBE
 Dr Nina Skorupska
 Prof Greg Clark CBE⁴

Programmes and Investment Committee

Prof Greg Clark CBE – Chair
 Dr Nelson Ogunshakin OBE – Vice Chair
 Bronwen Handyside⁶
 Ron Kalifa OBE
 Dr Alice Maynard CBE
 Dr Nina Skorupska CBE
 Dr Lynn Sloman
 Ben Story

Remuneration Committee

Ben Story – Chair⁷
 Kay Carberry CBE – Vice Chair
 Baroness Grey-Thompson DBE⁵
 Ron Kalifa OBE
 Valerie Shawcross CBE

Panels

Customer Service and Operational Performance Panel

Dr Mee Ling Ng OBE – Chair
 Dr Alice Maynard CBE – Vice Chair
 Prof Greg Clark CBE⁴
 Baroness Grey-Thompson DBE
 Anne McMeel
 Dr Nelson Ogunshakin OBE
 Dr Lynn Sloman
 Bronwen Handyside⁶

Safety, Sustainability and HR Panel

Michael Liebreich – Chair
 Dr Nina Skorupska CBE – Vice Chair
 Kay Carberry CBE
 Baroness Grey-Thompson DBE
 Bronwen Handyside
 Dr Mee Ling Ng OBE

4 Stood down from the Customer Service and Operational Performance Panel and joined the Finance Committee as of 6 March 2018

5 Stood down as Chair of the Remuneration Committee as of 9 November 2017 to be replaced by Ben Story

6 Stood down from the Programmes and Investment Committee and joined the Customer Service and Operational Performance Panel as of 9 November 2017

7 Became Chair of the Remuneration Committee as of 9 November 2017

TfL members' meeting attendance 2017/18

Current members

Board member	Board	Audit and Assurance Committee	Customer Service and Operational Performance Panel	Finance Committee	Programmes and Investment Committee	Remuneration Committee	Safety, Sustainability and Human Resources Panel
Sadiq Khan	5 (5)						
Kay Carberry CBE	3 (5)	4 (4)				2 (2)	5 (5)
Prof Greg Clark CBE	3 (5)		1 (3)		3 (4)		
Baroness Grey-Thompson DBE	3 (5)		2 (3)			2 (2)	3 (5)
Bronwen Handyside	4 (5)		1 (3)		1 (2)		4 (5)
Ron Kalifa OBE	2 (5)			4 (7)	1 (4)	2 (2)	
Michael Liebreich	2 (5)			2 (7)			5 (5)
Dr Mee Ling Ng OBE	4 (5)	4 (4)	3 (3)				4 (5)
Dr Alice Maynard CBE	3 (5)		3 (3)		3 (4)		
Anne McMeel	4 (5)	4 (4)	3 (3)	6 (7)			
Dr Nelson Ogunshakin OBE	2 (5)	3 (4)	3 (3)		3 (4)		
Valerie Shawcross CBE	4 (5)			4 (7)		1 (2)	
Dr Nina Skorupska CBE	4 (5)			5 (7)	2 (4)		5 (5)
Dr Lynn Sloman	3 (5)	4 (4)	3 (3)		4 (4)		
Ben Story	4 (5)			4 (7)	4 (4)	1 (2)	

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May 2018

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