

Appendix 1

Safety, Health and Environment Quarterly report

Quarter 3 2021/22

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Introduction and Executive Summary

This report summarises our performance in the last Quarter and identifies strategic trends covering the period from 19 September 2021 to 11 December 2021, unless specified.

It sets out ways in which we have continued to keep our customers and workforce safe during the coronavirus pandemic. This Quarter, our priority remained reassuring them that we continue to do all that we can to operate safe and clean services for London. In parallel, we have continued to make progress towards our longer-term safety, health and environmental objectives.

During Quarter 3, we saw an increase in customer numbers, which ended the quarter at 0.67 billion customers, representing a 0.13 billion increase from the end of Quarter 2. Looking ahead to Quarter 4, we will be closely monitoring how our customer numbers were impacted by the prevalence of the Omicron variant of COVID-19 and the Government's work from home guidance to the public. Our customer numbers still have some way to go until reaching pre-pandemic levels, which means that many of our key safety, staff and environmental performance indicators remain at different levels than they might have been previously.

We have progressed with the implementation of measures to improve our short and long-term safety, health and environmental performance. We have continued to perform well on most of our safety metrics. However, in Quarter 3 we did not meet our customer injury rate target, which can be largely attributed to a seasonal peak in intoxication-related injuries in the lead up to Christmas. It is worth noting that the overall customer injury rate this quarter has improved when comparing with the previous two quarters of 2021/22.

Although TfL is continuing to emerge from the COVID-19 pandemic, coronavirus remained the top cause of short-term absences in Quarter 3, albeit representing a lower percentage of total short-term absence than in Quarter 2. Mental health and musculoskeletal-related health remained the top two causes of long-term absence. Shortly after Quarter 3 ended, on Monday 13 December 2021 and in-line with the Government's Plan B restrictions, TfL reissued the guidance for our staff who were able to, to revert to working from home. Following the Government's decision to remove Plan B restrictions from 19 January 2022, we have been able to gradually return to the office.

In 2018, the Mayor's Transport Strategy set out the goal of Vision Zero, that, by 2041, all deaths and serious injuries will be eliminated from London's transport network. This Quarter, we published the [Vision Zero Action Plan Progress Report](#) which includes new measures such as improving safety for people motorcycling and working with delivery companies and riders to understand how to better safeguard people riding motorcycles for work.

In Quarter 3, we expanded the Ultra Low Emission Zone to cover the area within the North and South Circular Roads. This demonstrates our commitment to improving

London's environment and will bring the health benefits of cleaner air to millions more Londoners, both inside and outside the zone. The global spotlight was firmly turned to the environment when the COP26 conference was held in Glasgow from 31 October – 13 November 2021, and the debates there underlined the importance of TfL's goal to transition to a zero-carbon London by 2030.

About this report

This report explores and highlights the performance, trends and measures we are implementing to improve safety, health and the environment performance.

Throughout this report, our 'customers' refers to direct users of our services, and our 'workforce' includes our directly employed staff as well as people working in our supply chain. For both groups, we use data collected directly from our operational businesses. Some assault data comes from both our own internal reporting systems and the police.

When referring to people killed or seriously injured, the following causes of injury are excluded: an injury which results from an incident arising from a pre-existing medical condition; intentional self-harm resulting in a physical injury or death; criminal activities perpetrated by customers or members of the public on other customers or members of the public.

Unless otherwise stated, 'streets' refers to all of London's roads, including those managed by London's boroughs. Where we report safety data for streets, we use data collected by the Metropolitan Police Service and the City of London Police, in-line with Government requirements. All road safety data is provisional and subject to review and assurance, with the final data published annually in-line with Department for Transport requirements.

Reporting period

Most data covers the quarter from 19 September 2021 – 11 December 2021, except for some work-related violence and aggression data which is reported six months in arrears. Some data is provisional and is subject to change.

Mayor's Transport Strategy and Scorecard

Our role is to enable London to move safely and sustainably, in line with the goals of the Mayor's Transport Strategy (MTS). This includes increasing the attractiveness of public transport and making cycling and walking safer, easier and more convenient. We work with many partners, including London's boroughs, businesses, the police, local communities and consumer organisations to achieve the MTS objectives.

Scorecard

Figure 1: Quarter 3 2021/22 Scorecard

Measure	Unit	Q3 Target	Q3 Actual
People killed or seriously injured in road traffic collisions per million journey stages	Killed or seriously injured per million journey stages	0.45	0.32
People killed or seriously injured in road traffic collisions in or by a London Bus (per million surface journey stages)	Killed or seriously injured per million journey stages	0.020	0.022
Customer all injuries per million passenger journeys	All injuries per million journeys	2.52	2.71
Workforce all injuries	Number of workforce injuries	425	322

The table sets out the relevant scorecard metrics and accompanying targets and actual performance. Below are brief explanations of the performance of each measure. More detailed explanations, with accompanying graphs are set out in the relevant sections of this report.

Road safety measure

Working towards our Vision Zero ambition to eliminate death and serious injury on the roads, our aim in 2021/22 is to reduce the number to fewer than 0.45 people killed or seriously injured on the roads per million journeys. Our Quarter 3 result was 0.32 people killed or seriously injured on the roads per million journeys.

Bus safety measure

Our ambition is that no one is killed or seriously injured on, or by, a bus. In Quarter 3, our aim was to have no greater than 0.020 deaths or serious injuries per million journey stages. In Quarter 3 there were 0.022 deaths or serious injuries per million surface journey stages. This is marginally above our central target (of 0.020), but below our floor target of 0.024.

Public transport customer safety measure

Working towards our Vision Zero ambition to eliminate deaths and injuries to customers travelling on our public transport network, our aim in 2021/22 is to have fewer than 2.52 injuries to our customers per million journeys. In Quarter 3, the result was 2.71, unfortunately missing this target. This does represent an improvement on performance in Quarters 1 and 2 and reflects the continued growth in passengers travelling on our network. However, we also saw a seasonal peak in intoxication-related customer injuries in the lead up to Christmas.

Workforce safety measure

Working towards our Vision Zero ambition to eliminate deaths and injuries to our workforce, in Quarter 3 our aim was to have fewer than 425 workforce injuries. In Quarter 3 there were 322 injuries sustained by our workforce. This is a positive result, but a reminder we must strive for continuous improvement towards Zero Harm when it comes to the safety of our workforce.

Safety

This section summarises our safety performance across London's roads, public transport, capital delivery activities and work-related violence. It provides an overview of key trends for the year and the areas we are targeting for improvement.

Road safety performance

Quarter 3 2021/22 involved different circumstances to Quarter 3 2020/21, which was dominated by the reintroduction of restrictions in the winter lockdown. This year we saw near normal levels of travel activity which meant more people were out on the network, until the prevalence of the Omicron variant curbed activity.

In 2020, we experienced significantly suppressed levels of traffic at key periods, but in 2021 levels of traffic were near pre-pandemic levels and more stable. It is helpful to keep this in mind when comparing Quarter 3 2021/22 results with 2020/21, and so at the end of this section, Quarter 3 2019/20 is used as a comparison as a more "normal" year.

Quarterly performance

Figure 2: Number of people killed on London's roads

Transport Mode	Q3 2019/20	Q3 2020/21	Q3 2021/22*
Pedestrian	15	16	8
Pedal cycle	1	2	2
Powered two wheeler	8	3	4
Car	5	2	2
Bus or coach	1	1	0
Taxi	0	1	0
Private hire	0	0	0
Goods vehicle	0	0	1
Other vehicle	1	0	0
Total	31	25	17

**Quarter 3 2021/22 figures are provisional and subject to change.*

17 people were killed on London's roads in Quarter 3 2021/22, which is lower than the 25 killed during the same period in 2020/21. Additionally, the number of people seriously injured also decreased. The majority of this reduction comes from eight fewer pedestrian deaths. Conversely, there was sadly one more death of someone riding a powered two wheeler and a person travelling in a goods vehicle.

Figure 3: Number of people seriously injured on London's roads

Transport Mode	Q3 2019/20	Q3 2020/21	Q3 2021/22*
Pedestrian	331	267	266
Pedal cycle	153	225	193
Powered two wheeler	200	224	193
Car	120	99	111
Bus or coach	14	19	17
Taxi	1	2	3
Private hire	3	3	3
Goods vehicle	12	3	11
Other vehicle	3	25	19
Total	837	867	816

*Quarter 3 2021/22 figures are provisional and subject to change.

The number of people seriously injured on London's roads decreased compared to Quarter 3 of last year (816 serious injuries in 2021/22 compared to 867 in 2020/21). Within this, serious injuries occurring to people using both pedal cycles and powered two wheelers reduced by 14 per cent. More people were seriously injured while driving cars (an increase of 12 per cent), and goods vehicles (8 more people seriously injured). There were 6 fewer serious injuries among the other vehicle category which includes the illegal use of private e-scooters on public highways.

It is useful to compare this to Quarter 3 2019/20 data, as that was more reflective of a "normal" year than 2020/21. Fewer people have been killed in Quarter 3 2021/22 than Quarter 3 2019/20 (a 54 per cent reduction), and fewer have been seriously injured (a 3 per cent reduction). There have been notable increases in people killed or seriously injured cycling (an increase of 21 per cent), with the caveat of increased ridership since 2019, and we have seen a reduction in the number of people killed or seriously injured riding a powered two wheeler (a reduction of 3 per cent). E-scooter usage has risen since 2019/20, which has led to more user injuries (recorded in the 'other vehicle' category).

Emerging trends from 2021

Early analysis of the 2021 calendar year shows that the number of people killed or seriously injured on a motorcycle has dramatically fallen. In 2021, fatalities were over 60 per cent lower than pre-pandemic levels (2017-2019 average). Previously there had been between 22 and 31 fatalities each year, compared to 10 in 2021.

The reduction in fatalities has been greatest among riders of large motorcycles (over 125 cc). Serious injuries have also fallen by around 15 per cent compared to pre-pandemic levels, driven again by a reduction in larger motorcycles involved in collisions causing serious injuries, but also roughly 10 per cent fewer collisions causing serious injuries for motorcycles under 125cc. However, slight injuries have risen by 16 per cent overall, driven by a 39 per cent increase in slight injuries among people riding small bikes under 125cc.

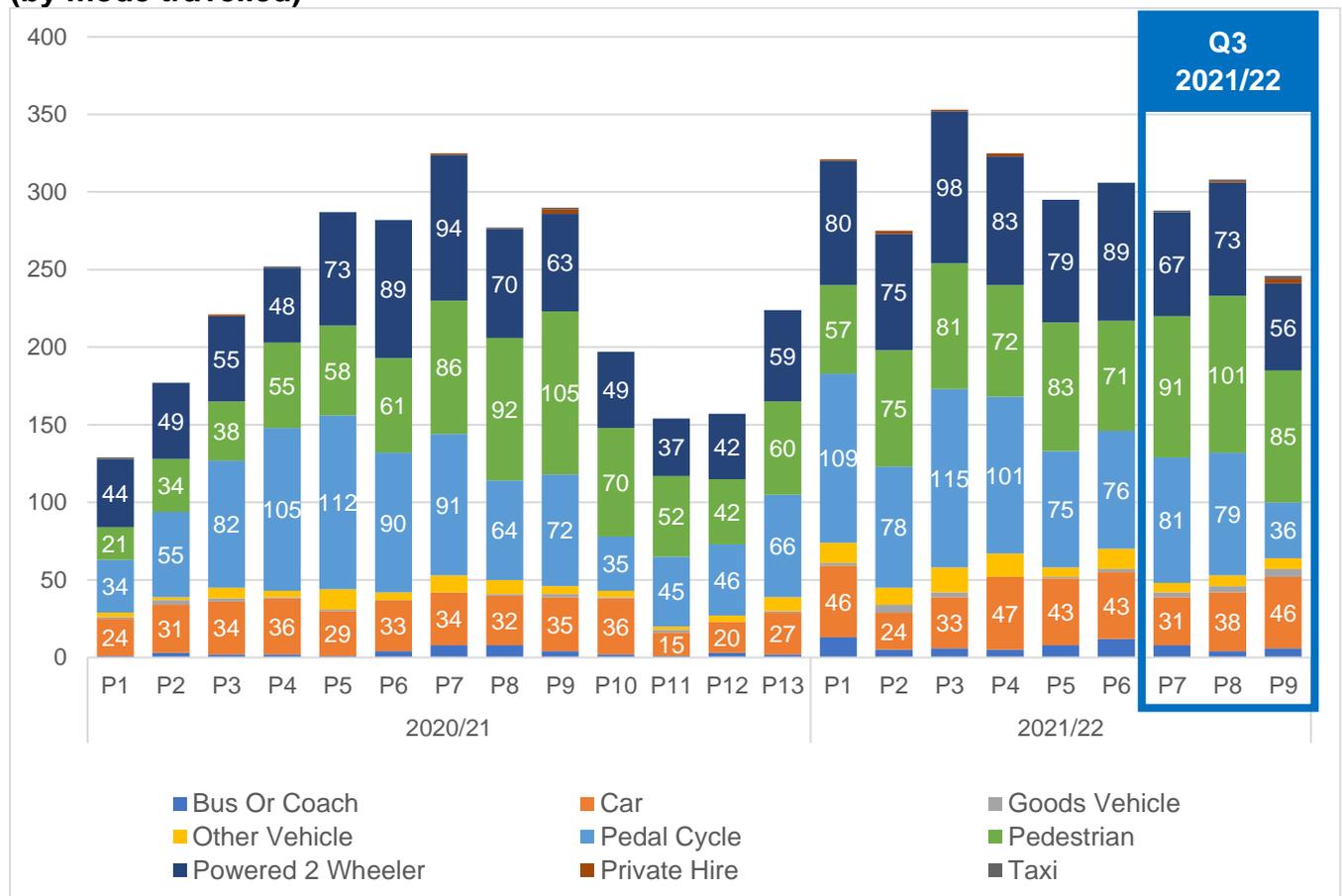
Our early hypothesis to explain the reduction in harm to people motorcycling is that prior to the COVID-19 pandemic, most people were killed on big motorcycles (over 125cc), on A-roads in outer London at peak times. Many of these were longer commuting journeys, which have greatly reduced this year, with the wider adoption of working from home.

The pivot to online shopping and the growth of the food delivery economy has led to an increase in new small motorcycle (under 125cc) registrations in London, driven by many more people riding for work. Despite this, fewer people on small motorcycles have been killed or seriously injured in 2021 than before the pandemic (though more have been slightly injured). Our early hypothesis is that this may be due to three reasons: firstly, fewer people are commuting on outer London high speed A-roads, where conflicts are likely to result in greater harm. Secondly, delivery riders are making more journeys on small local roads and congested high streets, with lower speed limits and more motorcycles, bicycles and pedestrians around (so drivers are potentially more cautious of their surroundings). Finally, delivery riders may be using smaller, lower power motorcycles (e.g. limited to 30mph).

Although the number of people killed or seriously injured fell, the combination of more journeys for work, poor regulation of smaller motorcycles, and the proliferation of higher risk vehicles are a concerning trend. We need to continue to partner with the industry and with Government to address this. Smaller motorcycles can be ridden with completion of the one-day Compulsory Basic Training (CBT) course, which can be taken at age 16 and has no theory element. 125cc motorcycles can be ridden at speeds up to 80mph and motorcycles are disproportionately involved in collisions which kill or seriously injure other vulnerable road users. We are working with Government to strengthen the CBT course to reflect this risk and talking to delivery companies about how we and they can best protect their riders. To further reduce motorcycle collisions, we are updating design guidance for motorcyclists to reflect current best practice and developing and piloting a motorcycle safety review tool, tested with stakeholders, to improve safety on corridors with the highest harm.

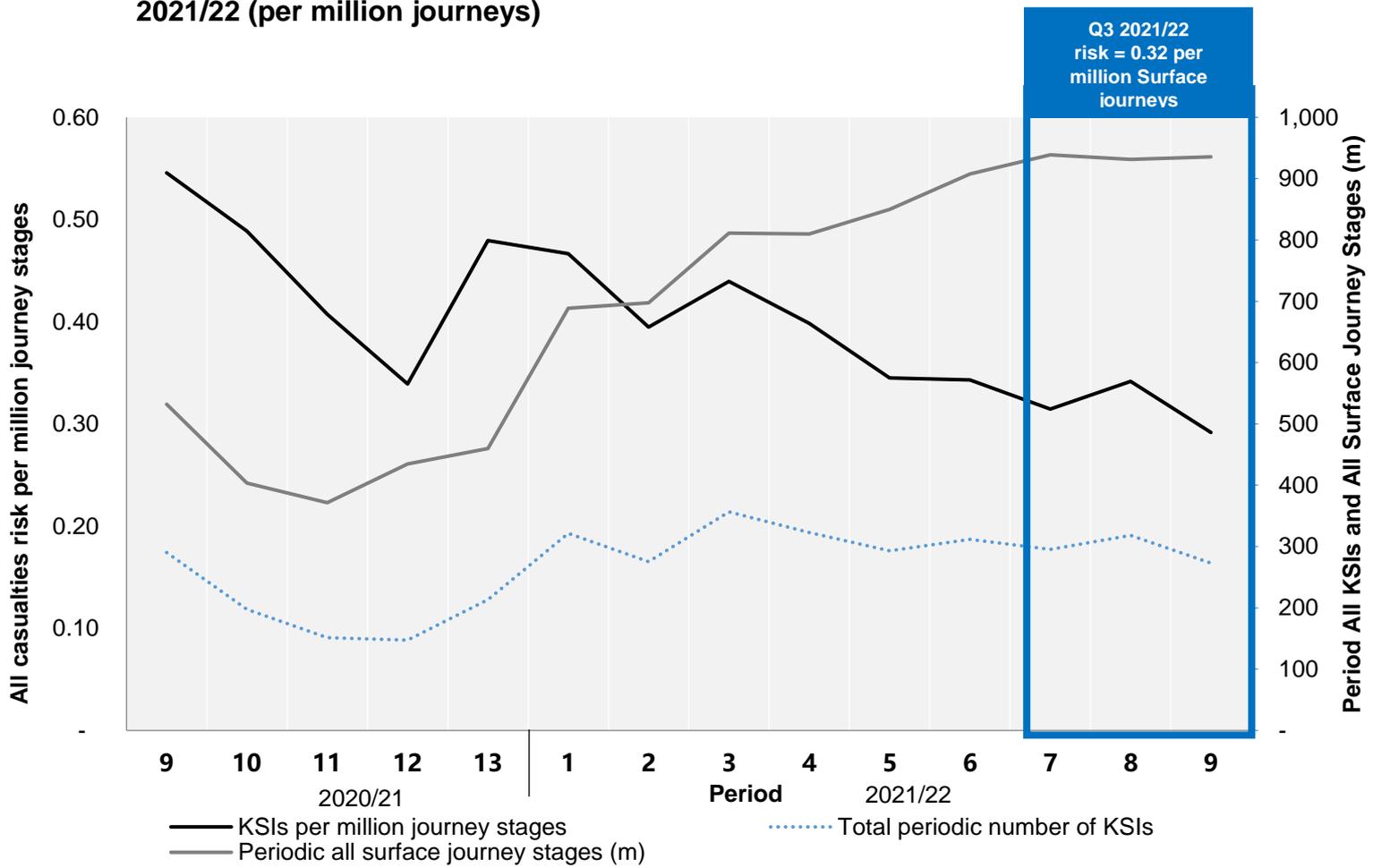
Provisional data for the whole of the 2021 calendar year suggests that fatalities of people walking are very low – we believe that this is largely due to increased working from home where, especially before June 2021, we saw far fewer journeys made by foot for trips relating to work (e.g. walking to get public transport, walking from transport to the office, walking between office locations etc). In addition, there have been significantly fewer tourists walking in central London. Also, the reallocation of road space, pedestrianisation and low traffic neighbourhood schemes as well as the expansion of 20mph limits have contributed to making walking safer.

People killed or seriously injured on London's roads in 2020/21 and 2021/22 (by mode travelled)



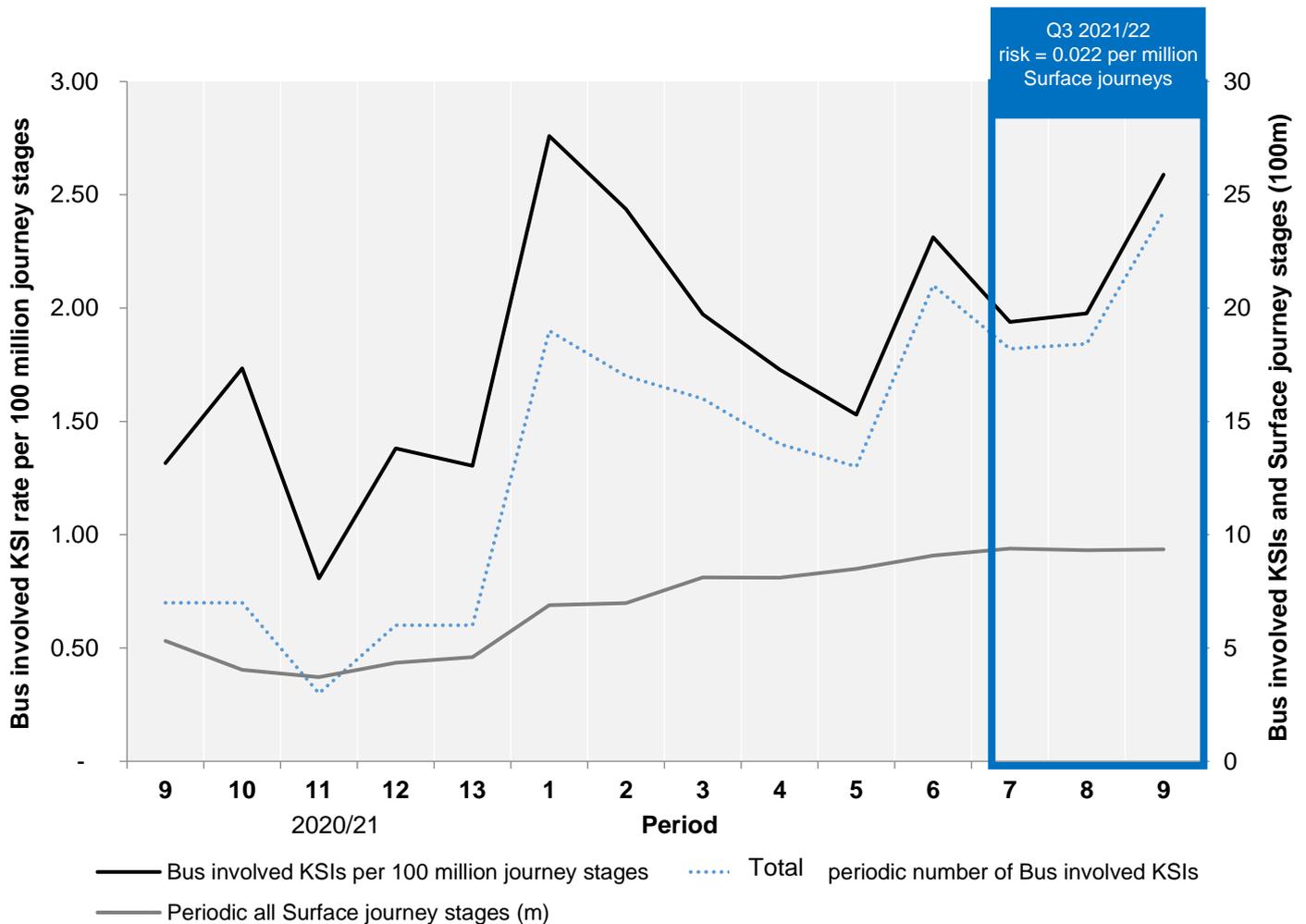
In Quarter 3 2021/22, 833 people were killed or seriously injured on London's roads. This represents a 10 per cent reduction compared to the previous Quarter (926 people). These changes have been driven largely by a reduction in people killed or seriously injured on pedal cycles and powered two wheelers. Compared to the previous Quarter, there was an 18 per cent increase in people seriously injured while walking, but a 29 per cent reduction in people killed or seriously injured on a pedal cycle and a 29 per cent reduction in people killed or seriously injured while riding a motorcycle.

**Scorecard measure: People killed or seriously injured in road traffic collisions
2021/22 (per million journeys)**



Working towards our Vision Zero ambition to eliminate death and serious injury on the roads, our aim in 2021/22 is to reduce the number to fewer than 0.45 people killed or seriously injured on the roads per million journeys. Our Quarter 3 result was 0.32 people killed or seriously injured on the roads per million journeys.

Scorecard measure: Rates of fatal or serious injury experienced by people in collision with buses



Our ambition is that no one is killed or seriously injured on, or by a bus. The risk of a bus being involved in a collision that kills or seriously injures either a bus passenger or someone else on the roads remains extremely low.

In Quarter 3, our aim was to have no greater than 0.020 deaths or serious injuries per million journey stages. Our aim for bus safety is more stretching than the general road safety aim, to reflect our ability to more directly influence bus services. In Quarter 3 there were 0.022 deaths or serious injuries per million surface journey stages. This is marginally above our central target but below our floor target of 0.024.

Road safety updates

Vision Zero Action Plan Progress Report Publication

We came together in 2018 to publish our first Vision Zero action plan, setting out ambitious short, medium and long-term targets towards eliminating road deaths and serious injuries by 2041.

Three years on, we have published a [progress report](#) which outlines achievements so far and commits to new, tougher measures to ensure we meet these targets.

London has made significant strides since committing to Vision Zero, with road deaths and serious injuries falling faster than the national average. However provisional data from 2021 suggests that 74 people were killed, and 3,434 people suffered serious injuries on our roads, evidence that continued action is needed to achieve the Mayor's Vision Zero goal.

Emerging road danger reduction trends are increasing the challenge, with the volume of motorised traffic remaining high, journey planning apps increasing such traffic on residential roads, and the number of journeys driving for work rising.

The Vision Zero action plan progress report reiterates our focus on actions that contribute to creating a Safe System:

- Safe speeds: lowering speeds to reduce the severity of collisions
- Safe streets: redesigning streets to reduce conflict between road users – which is integral to our Healthy Streets approach
- Safe vehicles: allowing only the safest vehicles to use our roads
- Safe behaviours: engaging and educating people about travelling safely and enforcing road rules
- Post-collision learning and justice: learning from collisions and better supporting the people who have been involved.

We also set out a range of new activity which, with appropriate funding, will help us reach our Vision Zero target. This includes:

- Accelerating the rollout of the 20mph speed limit programme on TfL roads
- Delivering a significant increase in speed enforcement capacity undertaken by the Metropolitan Police Service (MPS) to tackle the risk and harm caused by speeding
- Improving safety for people motorcycling
- Publishing analysis showing how deprived communities and some ethnic groups suffer road injuries at a disproportionate rate
- Responding to new trends in road danger; including increased use of smartphones, driving apps and in-car entertainment systems and more home delivery traffic.

As London recovers from the COVID-19 pandemic, we believe this is the right time for TfL, the MPS and London borough councils to renew our commitment to place Vision Zero at the heart of what we do. We are working with Government to secure the necessary funding to enable us to continue this journey and to avoid progress stalling.

Safe Speeds

Lowering Speed Limits Programme

Lowering the speed of vehicles in London is key to reducing both the likelihood of a collision occurring and the severity of the outcome.

The second phase of the programme is underway. We aim to accelerate the delivery of our 20mph speed limit programme so that, by 2024, 220km of the TfL Road Network (TLRN) will be a 20mph zone. To date we have introduced a 20mph speed limit on 80km of TfL roads, and 19 of the 33 London Boroughs (including the City of London) have committed to a 20mph default limit.

In 2021 we reduced the speed limit on 14km of TfL roads, including a new 20mph speed limit on A3220 Battersea Bridge and A3212 Chelsea Embankment. There is a further 17km in detailed design, with the programme continuing in 2022, subject to funding. By working with London's boroughs, nearly half of London's roads now have a 20mph speed limit. We have also reduced the speed limit on all our roads within the central London Congestion Charging zone to 20mph. This includes 20mph town centres in:

- Whitechapel
- Archway
- Brixton

Construction has started on reducing the speed limit to 30mph on the A10 Great Cambridge Road between White Hart Lane and Great Cambridge Roundabout in LB Haringey and LB Enfield respectively.

This quarter, we have continued to engage with the emergency services (London Ambulance Service, London Fire Brigade and the MPS) on the upcoming phase two Lowering Speed Limits programme. The new 'Have Your Say' webpage has helped local stakeholders to engage with the whole programme over the three-year delivery period and is proving useful for developing the programme further. Our programme will be supported by marketing activities, including advertising and radio promotion, to coincide with the launch dates.

Safe Streets

Safer Junctions

Work to address 43 of the 73 Safer Junctions locations is now finished, following the completion of new pedestrian crossings and cyclist safety improvements at Camden Road/Camden Street.

Design work continues on the remaining 30 junctions, including detailed design of York Road roundabout and Holloway Road/Drayton Park, with these schemes delivering essential motorcycle and pedestrian safety measures, and - subject to funding - construction expected to begin in Spring and Summer 2022, respectively.

Subject to funding, we propose to engage on 10 further Safer Junctions by 2024, which would then progress to delivery, depending on the outcome of engagement with local stakeholders.

Safe Vehicles

Fleet Operator Recognition Scheme (FORS)

Making vehicles safer is a vital part of our Vision Zero commitment to eliminating death and serious injury on the transport network. FORS, which was created by TfL in 2008, is an accreditation scheme recognising freight and fleet safety and environmental standards.

The voluntary scheme audits fleet operators and awards bronze, silver, and gold accreditations by asking them to demonstrate exceptional levels of best practice in safety and efficiency. It commits fleet operators to achieve high vehicle and driving standards relating to road safety, and environmental performance.

In October 2021, TfL signed a new contract with Sopra Steria to run the FORS fleet recognition scheme, which works to make vehicle fleets across the UK safer and greener. The new contract began in January 2022 and will last for five years, with Sopra Steria taking over from the current administrators AECOM.

Encouraging fleet operators to take part in the FORS scheme is an important part of the Mayor's Vision Zero goal to eliminate death and serious injury on the transport network and his commitment for London to become a zero-carbon city by 2030.

Electric Scooters

On Monday 13 December 2021, we announced that all privately-owned e-scooters and e-unicycles, including those that can be folded or carried, were banned from being transported on London's transport network. This is the result of safety concerns about these items following recent fires on TfL premises and services. Customers in possession of such devices will not be permitted to enter any premises on TfL's network or travel on any of its services, including on the Tube, buses, Overground, TfL Rail, Trams and the Docklands Light Railway, under our Conditions of Carriage.

In the first month of the ban, TfL enforcement officers had to intervene with 258 customers who were attempting to bring their vehicle onto services. Those customers were prevented from travelling with their e-scooter. Two customers were reported for prosecution for a byelaw offence for failing to comply with an officer's instruction. Feedback from the enforcement teams suggests that, despite the ban being in place for a relatively short period of time, compliance is improving. The situation is being monitored closely.

Whilst privately owned e-scooters remain illegal to use in public spaces, they are widely available for purchase. We do not know the number of privately owned e-scooters being used on London's roads but, based on police data, we have begun to build a picture of some emerging themes that may provide implications about the safety of the use of e-scooters on our network.

We have considered the number of e-scooter riders killed or seriously injured in London over the same period as a percentage of all people killed or seriously injured in London. From our data, it is clear that e-scooter riders are forming an increasing proportion of London's total number of people killed or seriously injured, from one person seriously injured in 2017 to 101 people killed or seriously injured (3 per cent of the total number of people killed or seriously injured) in the 2021 calendar year up to 20 December 2021.

Safe Behaviours

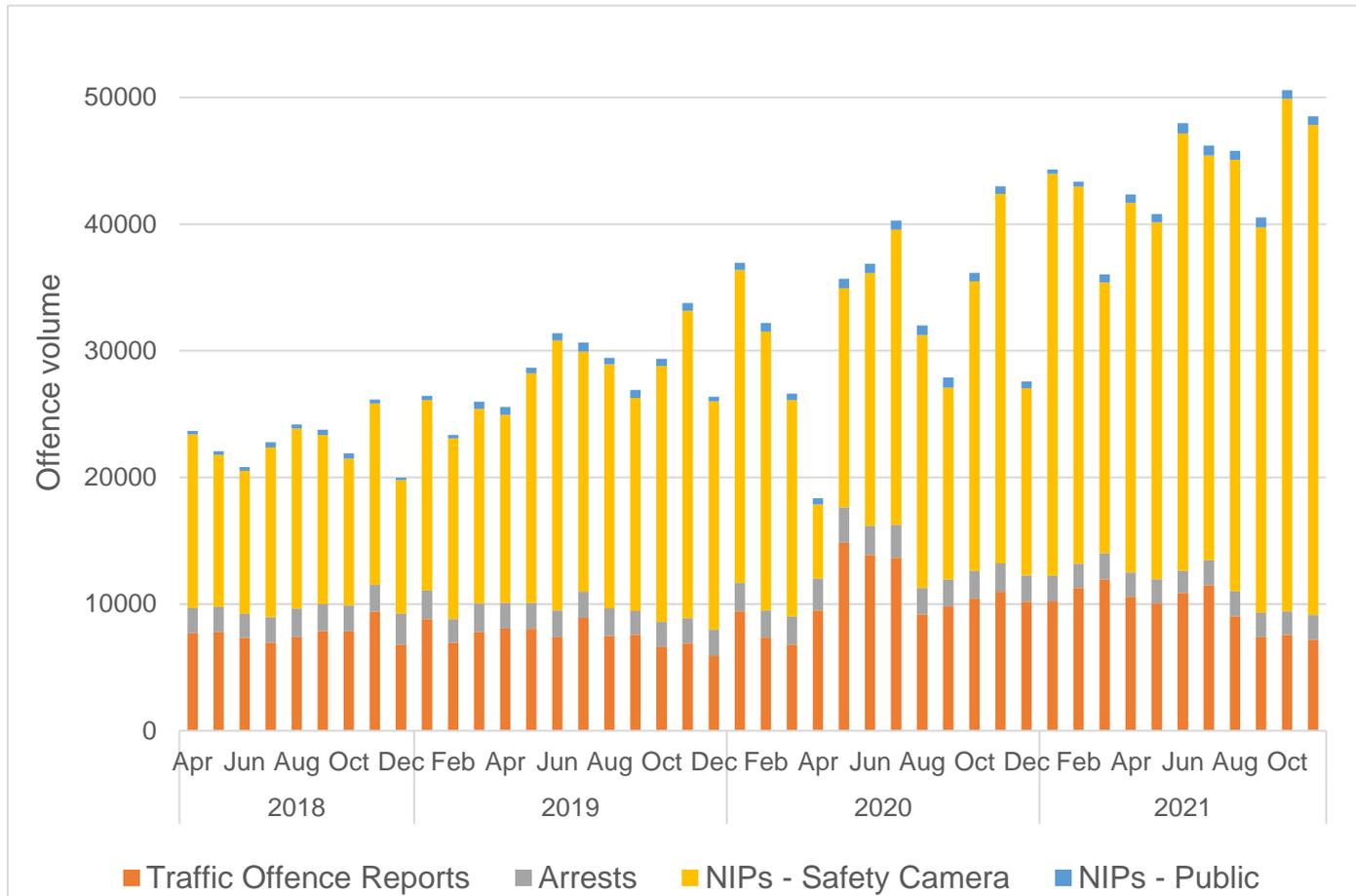
Enforcement

The Metropolitan Police Service (MPS) undertakes significant and wide-ranging activity to reduce road danger and prevent harm to all road users. This includes prevention and intelligence gathering activities, problem-solving to tackle the root causes of problems, community engagement and education initiatives and actively monitoring and targeting high risk vehicles and drivers.

Going forward, we will report on notable progress against enforcement actions in the Vision Zero Action Plan Progress Report and key operational activity.

Total offences volume from 2018-2021

*NIP = Notice of Intended Prosecution



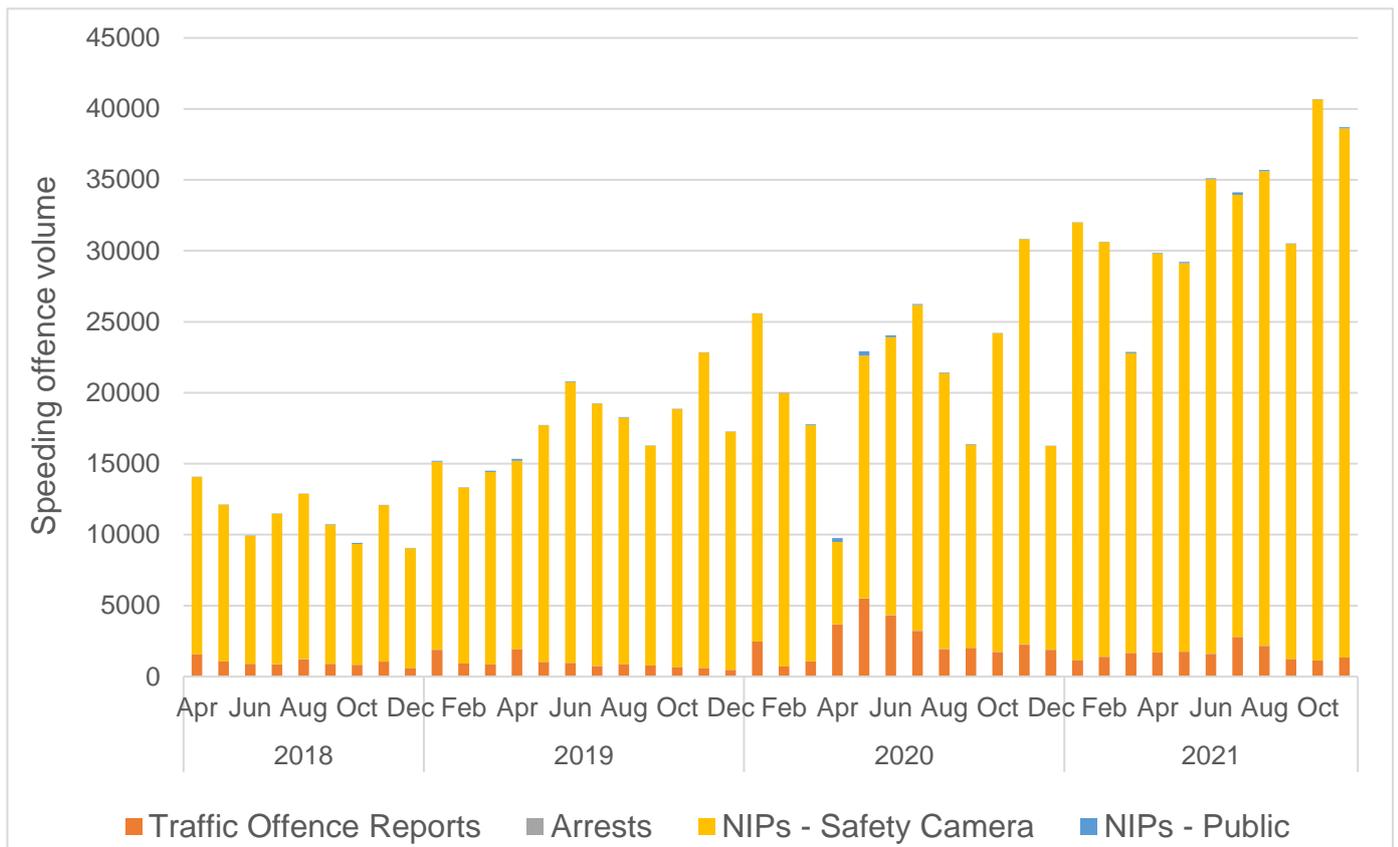
The MPS dealt with 362,731 road traffic offences through enforcement action between April and November 2021. This was 34 per cent higher than same period in 2020, an additional 92,519 offences dealt with.

Enforcement action includes Traffic Offence Reports which are issued by police at the roadside, arrests or Notices of Intended Prosecution for offences enforced through safety cameras or evidence provided members of the public (e.g. through headcam or dashcam footage).

The MPS prioritises its enforcement on the offences that cause the greatest risk and harm on London's roads. This includes speeding, mobile phone offences, driving under the influence of drugs and alcohol, red light offences, careless or dangerous driving, driving without a licence or in an uninsured vehicle or driving while disqualified. During this period, around 90 per cent of all road traffic enforcement action taken by the MPS was for priority offences. Speed enforcement accounted for 76 per cent, reflecting the risk and harm this causes, with the majority of offences identified through safety cameras and on-street enforcement (95 per cent and 5 per cent of all speeding offences respectively).

Speeding offences volume 2018-2021

*NIP = Notice of Intended Prosecution



In-line with our commitments in the Vision Action Plan Progress Report, we have been working with the MPS to increase the level of police enforcement to tackle speeding and the harm it causes. This has included a programme of activity to increase the effectiveness of the safety camera operation, working towards having the capacity to enforce up to one million speeding offences by 2024/25. We have also been working to introduce new mobile safety camera capability (five lasercam devices) that will be operated by Roads Policing Police Community Support Officers. This capability will complement police roadside enforcement activity and the fixed safety camera network. It will enable us to deal more effectively with emerging issues and being more responsive to local community concerns. The new enforcement capability will launch early in Quarter 4.

Behaviour Change Campaign

On 17 November 2021, we launched the TV advert for our ‘See their side’ campaign. The aim of this campaign was to challenge the sometimes divergent nature of London’s road culture and to encourage all road users to be more empathetic when travelling.

Since the launch of this campaign we have received feedback from some of our road safety stakeholders and as a result of which we took the decision to pause the ‘See their side’ advertising campaign. We remain committed to improving the road culture in London and reducing road danger.

Cycle Training for Adults and Children

Face-to-face cycle training continued to be delivered across London boroughs in Quarter 3. The 2021/22 budget is £2.55m, of which £576,000 was equally distributed to boroughs for use between July and September 2022 (excluding the City of London).

This distribution of funding has allowed 4,227 children to be trained to Bikeability Level 2, and 3,650 adults to be trained.

Since the beginning of the financial year a total of 19,645 children have been trained to Bikeability Level 2, and 9,775 adults have been trained.

Post-collision learning and criminal justice

Road Danger Dashboard

In December 2021, we updated our online Road Danger Dashboard. The interactive dashboard lets the user explore the locations and details of published collisions in London.

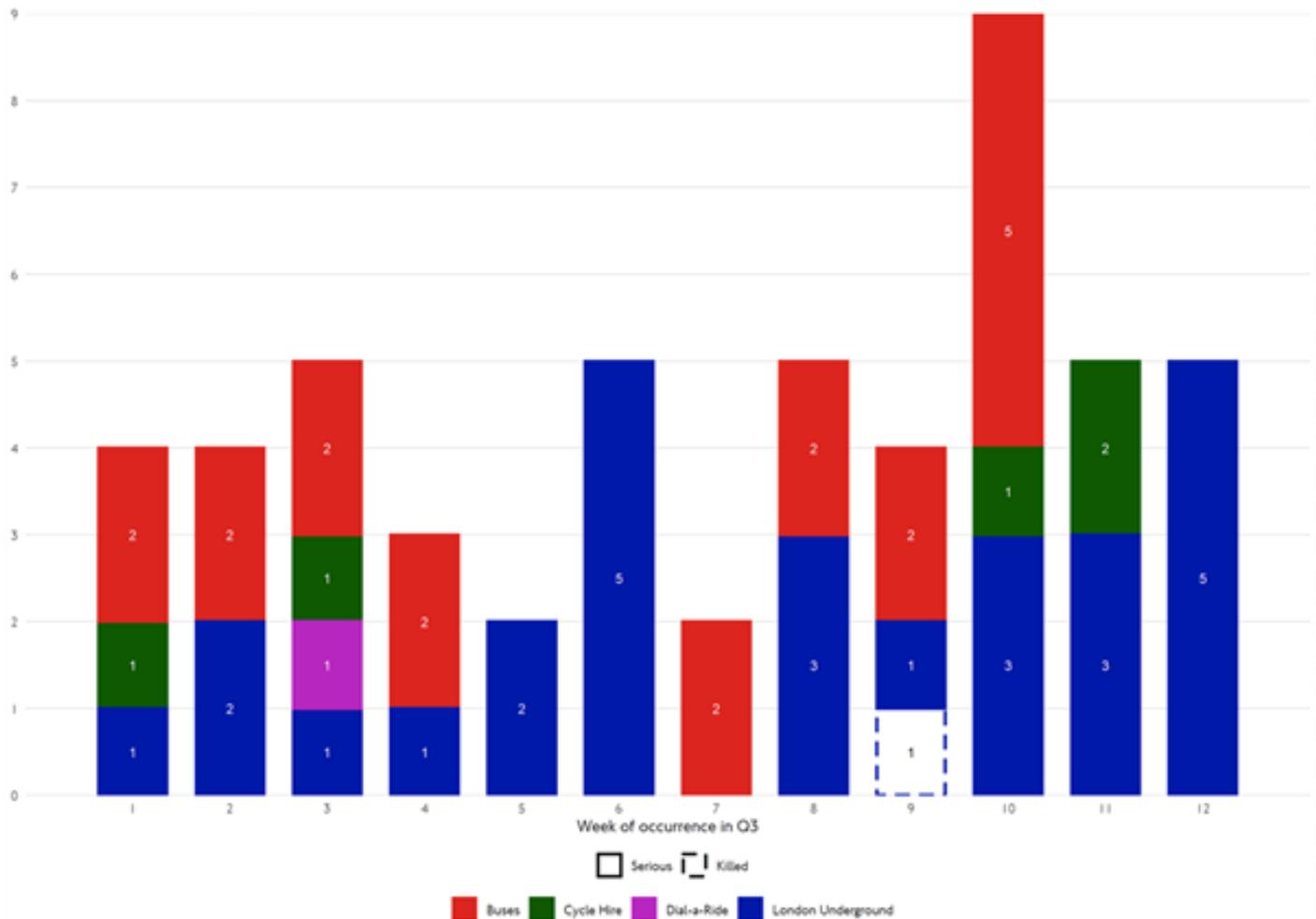
What has changed?

- Collision data can be made available to the public more quickly because we have made significant technical and process improvements in the way we process collisions data received from the police.
- Additional functionality has been added to the online dashboard. Users can now search by location. Some transport modes that were aggregated have now been separated out.
- As set out in our Vision Zero action plan and progress report we are committed to promoting a culture of transparency internally and across operators, and publishing data wherever possible.

Public transport safety performance

Quarterly performance

Customers killed or seriously injured per week in Quarter 3 (by mode)



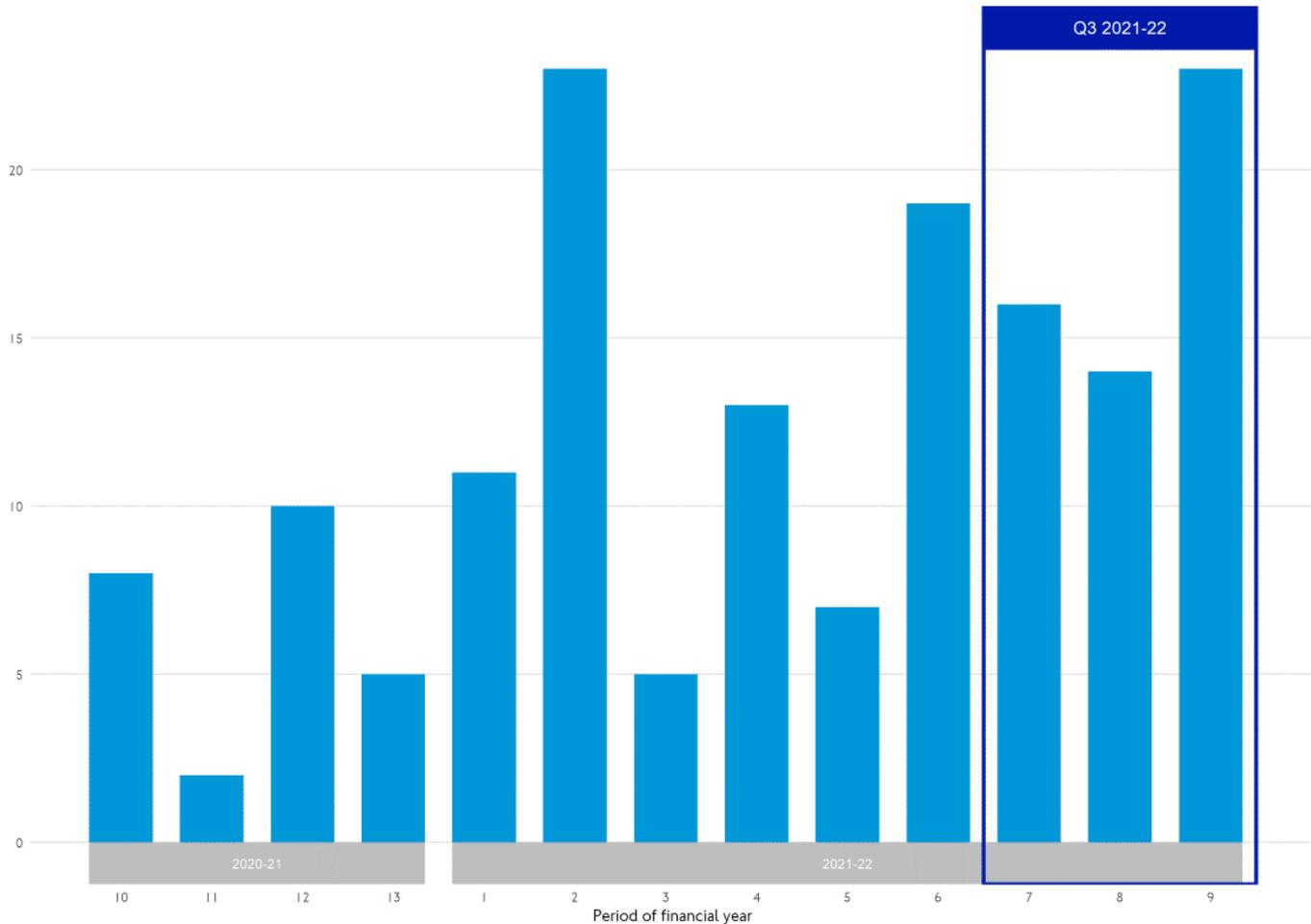
Sadly, one customer was killed on our public transport network during Quarter 3. This incident involved a person at Farringdon London Underground station whose head collided with the front corner of a train, resulting in their subsequent death.

In Quarter 3 there were 52 customers seriously injured whilst travelling on public transport.

Overall, there were 13 more customers killed or seriously injured than Quarter 2; this is the highest total of deaths and serious injuries of any Quarter since the beginning of 2020/21, when the COVID-19 pandemic began. This increase, driven by more serious injuries on our network, can largely be explained by growth in the number of customers travelling, and a seasonal peak in intoxication-related injury in the lead up to Christmas.

Most deaths and serious injuries occurred on London Underground (53 per cent) and Buses (36 per cent), as these modes carry the most passengers. However, there were also five customers seriously injured using our Cycle Hire service, and one customer seriously injured using our Dial-a-Ride service.

Customers killed or seriously injured per period this year (total)



Intoxication was mentioned as a possible factor in 15 (28 per cent) of the deaths and serious injuries sustained by customers on our public transport network this quarter. Intoxication-related deaths and serious injuries on our network mainly occur on London Underground (LU), where intoxication was reported as a contributory factor in 50 per cent of deaths and serious injuries. This compares to Buses where intoxication was reported as a contributory factor in 5 per cent of serious injuries on the Bus network.

Tackling intoxication on our public transport network

LU's intoxication strategy aims to reduce customer injuries, assaults on our staff and help our customers feel safe. The strategy takes the four E's approach to behaviour change: Engagement, Education, Encouragement and Enforcement. The key to tackling intoxication on the front line is through consistent staff

engagement to support and assist our more vulnerable customers. Activity during Quarter 3 included:

- **Team London Bridge 'Safe Space' initiative**

Following a successful trial pre-pandemic, 'Safe Space' involved a mobile team of medics, funded by Southwark Council, who patrolled London Bridge LU and Network Rail station and Canada Water LU station on Thursday to Saturday evenings over the festive period. Medics assisted intoxicated and vulnerable customers, preventing accidents, and treating injuries should they occur. Medics also worked with staff to share best practice on how to look out for and support vulnerable customers.

- **Behaviour Change Workshop**

The first workshop was delivered at King's Cross, one of our intoxication hotspots. The workshop explored drivers of customer behaviours and worked with station staff to implement interventions tailored to challenges at King's Cross. Further workshops are planned at other hotspot stations.

- **Intoxication and safety announcements**

Announcements were recorded by the London Ambulance Service and broadcast at hotspot stations all day from 13 December 2021 – 5 January 2022 to raise awareness of safety risks and the importance looking after yourself and others over the festive period.

Over the festive period, we know that an increase in intoxicated people walking can create additional risk of collisions or harsh braking events for bus drivers. During Quarter 3, two of our bus operating companies, Go-Ahead and Abellio, ran seasonal campaigns targeted at their bus drivers to promote awareness of these risks and to ask drivers to take care and watch out for intoxicated people walking.

On London Underground, the most common causes of customer serious injuries were:

- falls on stairs (43 per cent)
- falls on escalators (18 per cent)
- falls at the platform train interface (14 per cent)

Intoxication was the most frequently mentioned contributory factor; however, other factors linked to serious injury outcomes included customers rushing, not holding onto handrails, and being weighed down by their baggage.

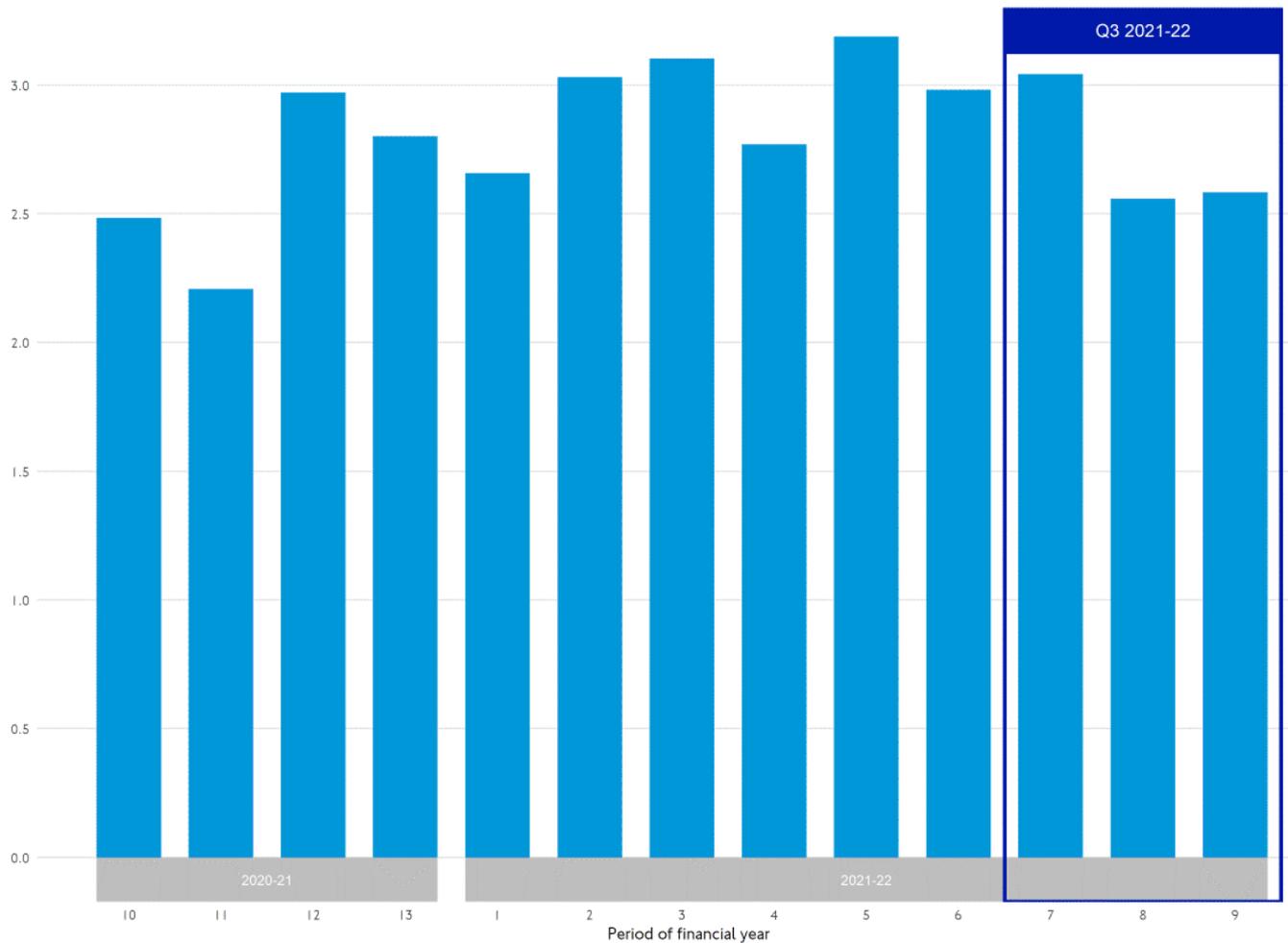
On Buses this quarter, approximately a third of serious injuries to customers were sustained because of bus drivers braking harshly or unexpectedly. Bus drivers frequently report the action of other road users, such as people driving or walking, as prompting a need to brake suddenly to avoid a collision. However, drivers braking for

pedestrian crossings and traffic lights were also mentioned as reasons for harsh braking events which led to serious injury.

Aspects of the Bus Safety Standard - such as improved direct and indirect vision, and the use of collision avoidance technologies - are intended to help bus drivers anticipate other road users' movements and allow sufficient space to brake smoothly. In addition to these improvements to buses, our bus driver training includes content on anticipation, to promote safe driving behaviours.

Other causes of serious injury to customers on Buses this quarter included bus drivers pulling away too early, and the incorrect operation of the doors such as closing the doors before customers had boarded or alighted properly. As part of work being done to look strategically at the causes of slips, trips, and falls on buses, further analysis into bus driver behaviour, and opportunities to target safety-related bus driver training are being explored.

Scorecard measure: Customer all injuries rate (per million passenger journeys)



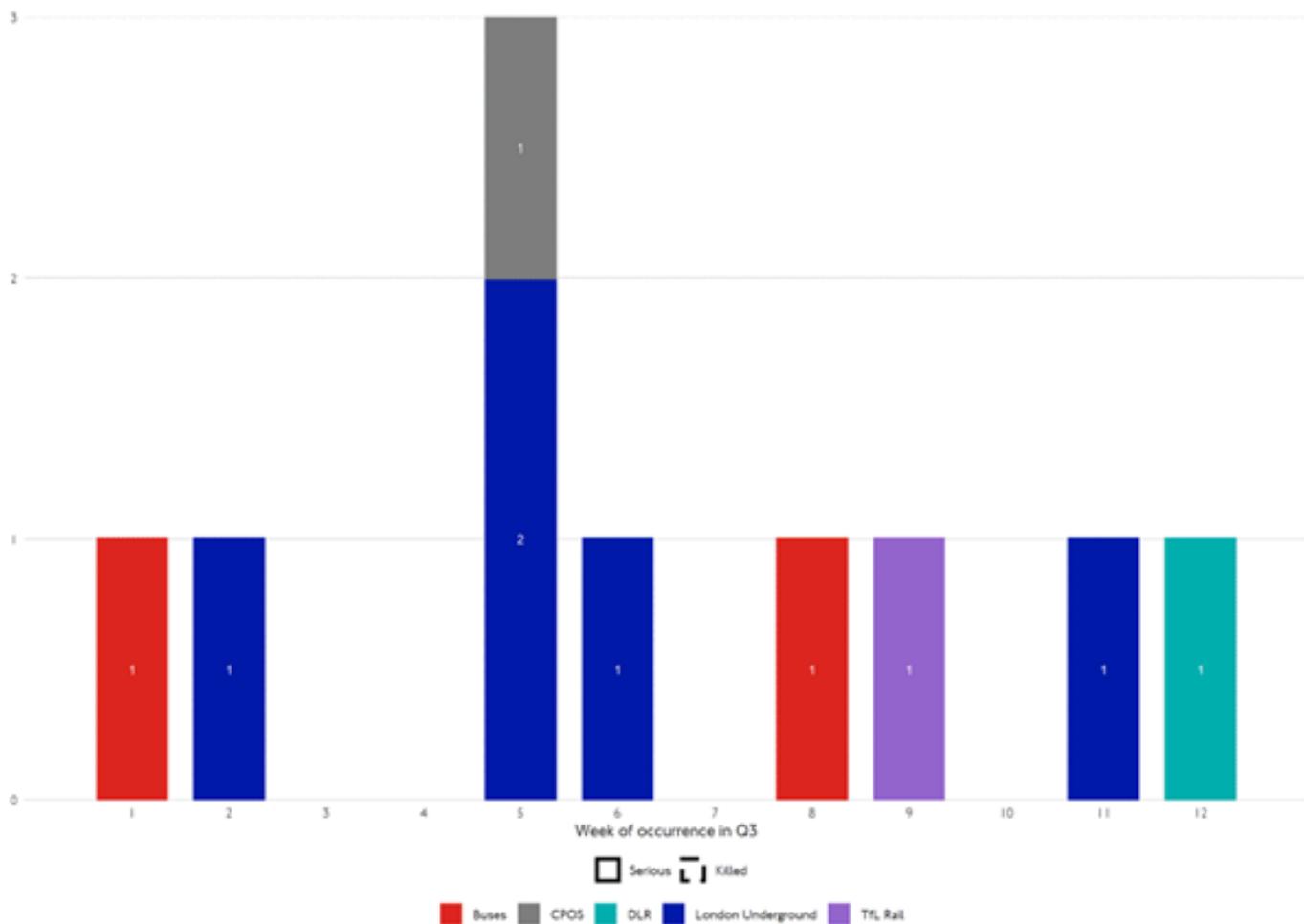
The number of customer injuries per million passenger journeys has decreased this quarter, to 2.71. This is despite the seasonal increase in the number and rate of intoxication-related customer injuries. This is a lower customer injury rate than Quarters 1 and 2 this financial year, but unfortunately remains above our target for 2021/22 of 2.52 injuries per million passenger journeys.

This decrease in customer injury risk is reflected across our most common causes of injury except intoxication. This includes a decrease in risk of customer injury relating to slips, trips and falls, injuries on both stairs and escalators, injuries sustained boarding or alighting vehicles, and injuries as a result of collisions or sudden braking (on relevant modes).

A continued return of customers to our public transport network, when travelling to work or school following the summer and continued pandemic easing up until Plan B measures were announced by the Government in December 2021 helped to reduce risk. These journeys are not as associated with known causes of injury as travel for retail, recreation and hospitality which saw a more immediate recovery in the summer months during Quarter 2.

So far, we are seeing a leisure and weekend-led recovery to travel, and an acceleration in pre-pandemic trends around working from home and online shopping reducing the need to travel (see TfL's Travel in London report 14). This could cause a shift in the make-up of journey purposes on public transport, with a greater proportion of journeys for leisure, recreation, and hospitality. These journeys are more associated with known risk factors such as intoxication. An increase in the share of these journeys, and a decrease in the share of commuting trips, could result in the number of customers injured per million passenger journeys increasing. However, long-term trends in post-pandemic travel demand are yet to be reached.

Workforce killed or seriously injured per week in Quarter 3 (by mode)

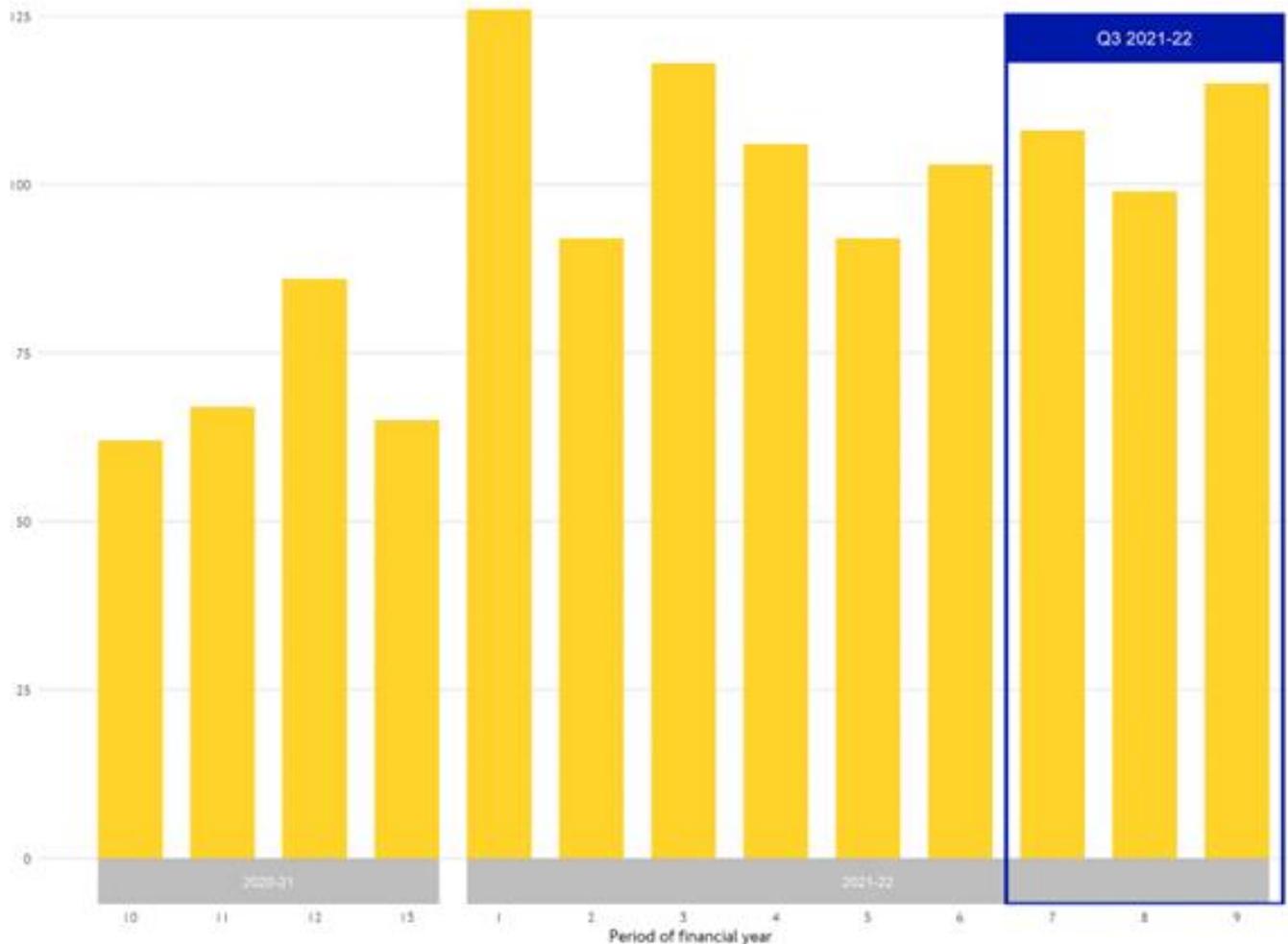


No one was killed whilst working on our public transport network in Quarter 3. Unfortunately, ten members of our workforce were seriously injured. This compares to four serious injuries sustained by our public transport workforce in the previous quarter. These included:

- Trips on stairs (four serious injuries involving LU staff - two carrying out maintenance duties, and two Train Operators)
- Slips in garages and depots (three serious injuries across Buses, Docklands Light Railway (DLR) and LU)
- Physical assaults (two serious injuries within Buses and TfL Rail)

- Struck body part (one serious injury in Crime, Policing, Operations and Security team)

Scorecard measure: Workforce injuries



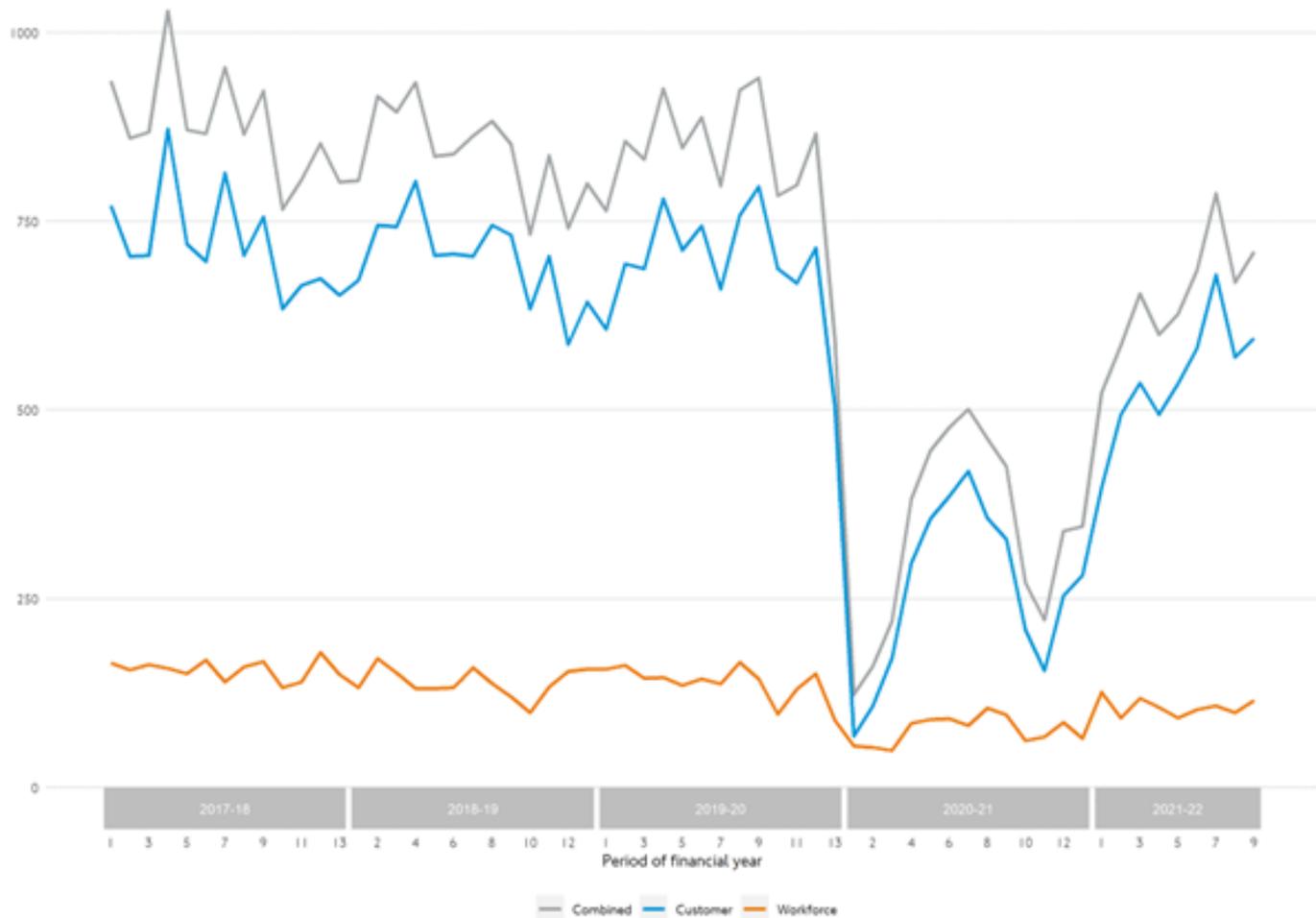
In Quarter 3, 322 members of our workforce were injured. Everyone who works for us should go home safe and healthy every day. Our Vision Zero ambition is to significantly reduce all injuries sustained by our workforce by 2030 and eliminate death and serious injury by 2041. Whilst it is disappointing that 322 people who work for us were injured whilst doing their job this quarter, this represents significantly fewer injuries than our scorecard target of 425 injuries and is a step towards eliminating harm.

Total workforce injuries remain below pre-pandemic levels. Trends vary by injury type, for example, assaults remain below pre-pandemic levels. This may be linked to fewer people travelling, but we have also made improvements to prevent workplace violence and aggression. These include the deployment of Transport Support and Enforcement (TSE) Operational Officers across our stations to prevent and tackle the common triggers of workplace violence and aggression, the roll out of body-worn

cameras, and refreshed customer communications campaigns. In contrast, other workforce injury types have largely resumed to pre-pandemic levels, such as slips, trips and falls, particularly on stairs.

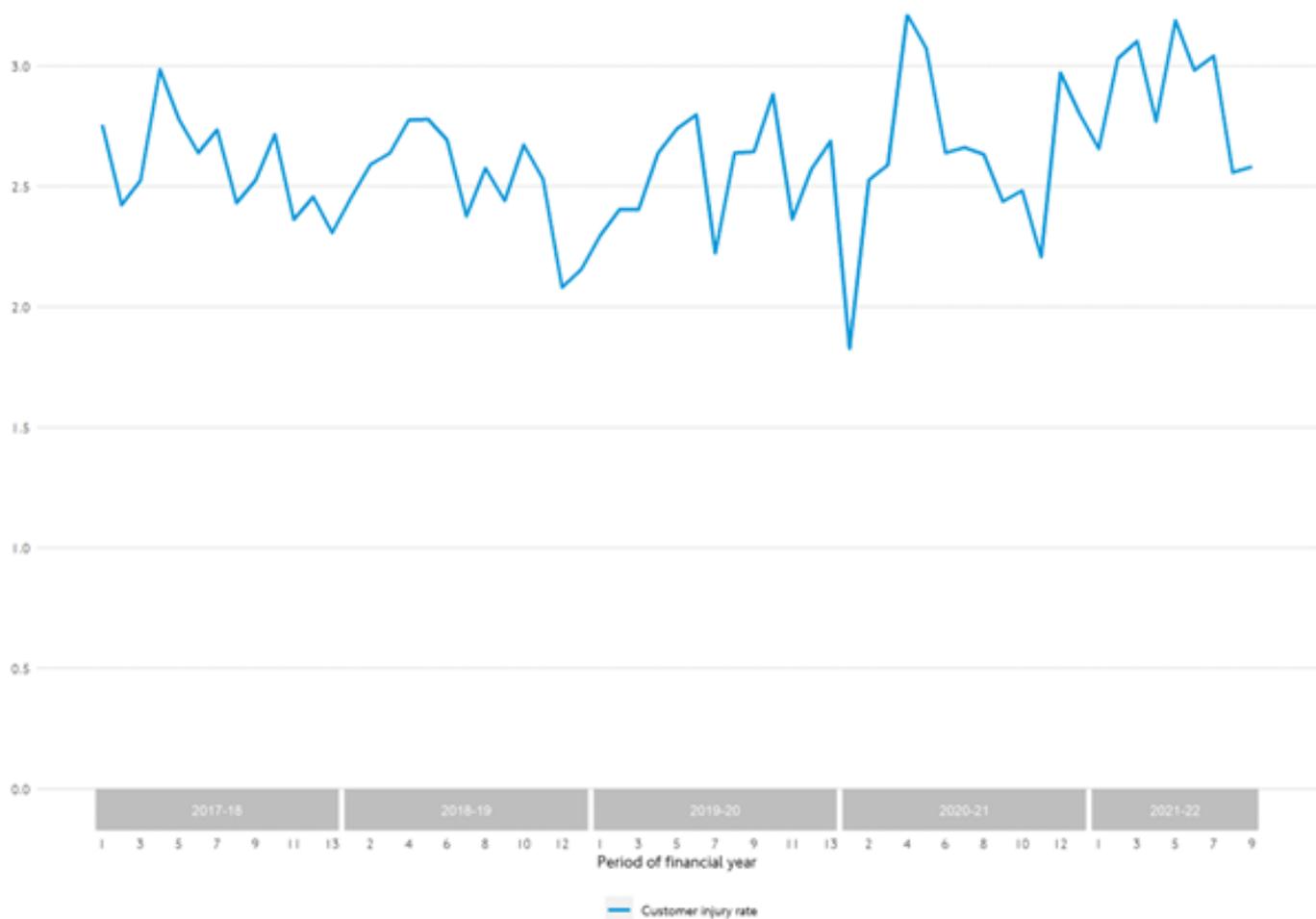
Long term trend

Customer and workforce injury numbers per period since 2017-18 (total)



Since the beginning of 2021, customer injury numbers have been climbing steadily, reflecting the easing of lockdown restrictions throughout the year, and the return of customers to our network. The long-term trend in workforce injuries has been more stable, with injuries also remaining below pre-pandemic levels despite our workforce headcount remaining more stable than passenger numbers. Workforce injuries have increased over the past four quarters however, likely reflecting a return to business as usual for a larger number of roles.

Customer injury rates per period since 2017/18 (total)



Since the start of the pandemic, and particularly this financial year, the number of customers injured for every million passenger journeys has been higher than the pre-pandemic average between 2017/18 and 2019/20. In the most recent two periods of Quarter 3 (periods 8 and 9) we have seen a fall in our customer injury rate, to around pre-pandemic levels. It is too early to understand if this decrease in risk will be sustained, and in the Quarter 4 report we will be able to see if the plan B restrictions and Government guidance to work from home impacted the growth in passenger numbers from commuting trips.

Public transport safety updates

Safe Track Access

The Safe Track Access (STA) Programme aims to provide improved tools, training and approaches to safely access the London Underground (LU) track environment during Engineering Hours, to minimise the risk of injuries to themselves and others working in this environment. While none of our colleagues or contractors have been seriously hurt while working in the LU track environment in recent years, the tragic

accidents on the Network Rail network, and some near miss incidents on our own network, underline the importance of the STA Programme.

This will be achieved through cultural and behaviour change and by building new infrastructure and technology to mitigate the two main risks when accessing the track:

- Coming into contact with live traction current.
- Being on the track before the passage of the last train.

The Safe Track Access Programme is divided into two main workstreams:

1. Infrastructure:

- Track Signage: installation of signage on track at traction current gaps, adjacent to live roads in depots and sidings and at complex junctions.
- Permanent Current Rail Indicator Devices (PCRIDs): development and installation of PCRIDs at platforms and traction current gaps across the London Underground network.
- Protecting Workers on Track (PWT) Safe Access System: development of mobile application used by the PWTs that provides additional safety information when accessing track.
- PWT Competency Management System (CMS) : review the current processes for assessing PWT competence to ensure that these staff members, who play an important role in track safety, have the right training and knowledge to carry out their role, and that we have reliable information about their competence which will help us drive further improvements in track safety.

2. Culture and Behaviour:

A continuous improvement programme, based on understanding the drivers of culture and behaviour when our colleagues and contractors are on the track, to reduce the number of serious incidents. This workstream includes:

- Listening sessions with our PWT staff: three night sessions were carried out in December where Directors and other members of our senior team listened to our PWT staff to understand their perspectives on safety. Action is being taken as a result of these sessions and further sessions are planned for Quarter 4.
- A regular communication programme with our PWT staff to ensure that significant incidents are shared with them and that they receive regular updates on the actions we are taking to improve track safety.
- Working with Network Rail to learn from their Track Safety Task Force.

- Improving our data and reporting systems – encouraging greater reporting of incidents and using this data to drive more focused action.
- Improved fair and just investigations – we introduced a new approach to investigations into high potential safe track access incidents in Quarter 3 and are now using it to ensure we carry out fair and robust investigations into all high potential safe track access incidents.

Suicide Prevention Programme

Year-on-year data comparison tells us that since 2018, our Suicide Prevention Programme has helped reduce the number of suicides by 44 per cent across the network.

We have trained 90 per cent of LU station staff in suicide prevention so far. In Quarter 3, we made 100 life-saving interventions, bringing the total over the last few years up to 1,700.

Capital delivery safety performance

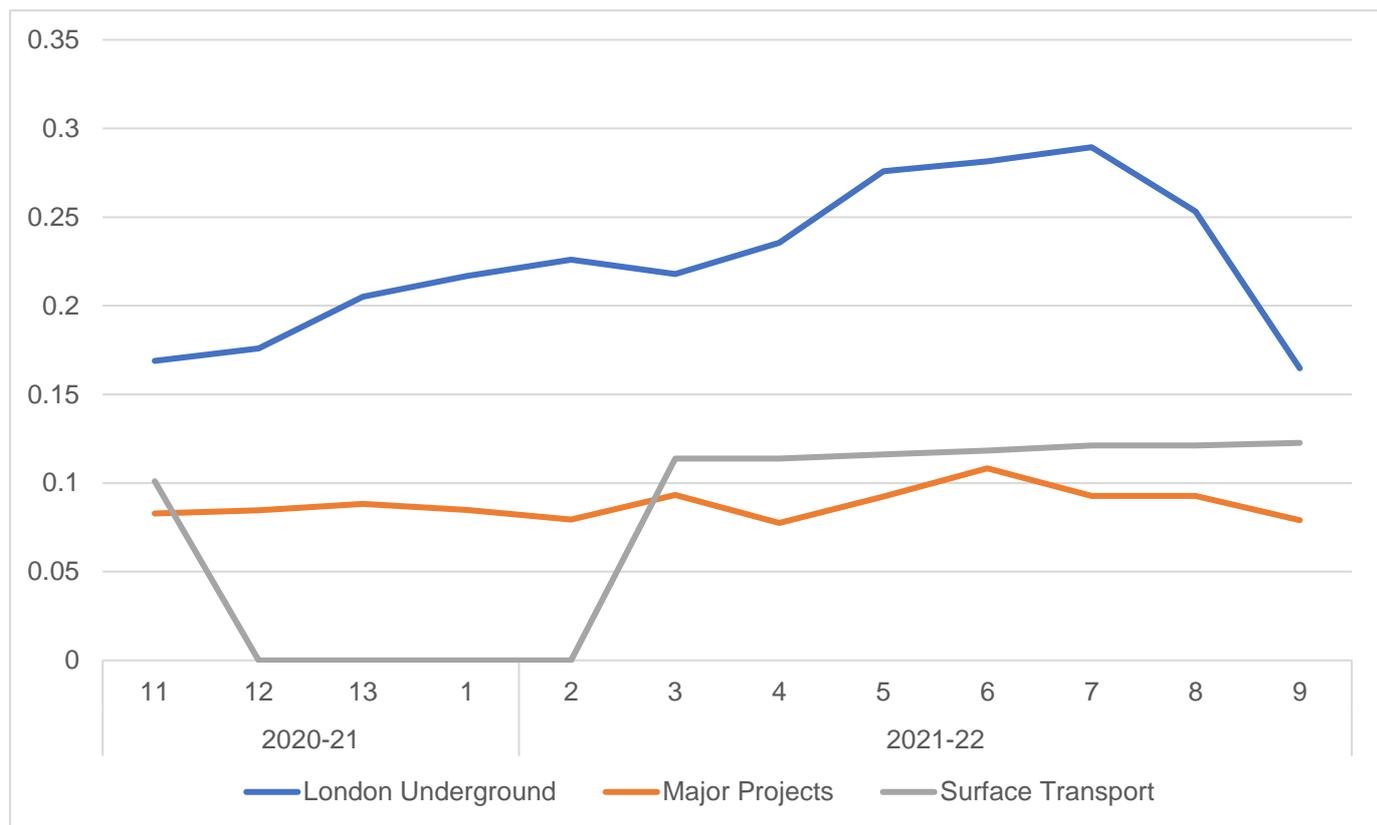
Within TfL, Capital Delivery works cover a broad range of activities across the Major Projects Directorate, London Underground Capital Delivery and Surface Transport Project and Programme Delivery. Some are essential asset renewals and maintenance to keep our frontline service operating efficiently. Other activities represent new and significant investments to improve existing infrastructure. Within the Capital Delivery area, teams comprise employees from both TfL and supplier organisations. Likewise, worksites may be managed by TfL or by suppliers acting as our Principal Contractor. We do not distinguish between TfL or supplier hours worked or incidents within this section of the report.

During Quarter 3, the capital projects area workforce completed 2.2 million hours of work. Whilst this is slightly below the previous quarter, hours worked are now beginning to stabilise as our sites return to a greater level of normality. Furthermore, COVID-19 risk reduction measures continue to be deployed across our sites. While the Government's Plan B guidance was in place, we limited visits to those that were essential only, such as those required for core SHE and assurance activities. In addition, enhanced virtual visits and monitoring provision were implemented to ensure our workforce remain supported.

Quarterly performance

To enable accurate analysis of data, some of our key measurables are quoted as a frequency rate per 100,000 hours worked. Frequency rates are calculated using a moving annual average based on performance over the previous 13 periods.

RIDDOR accident frequency rate (per 100,000 hours worked)



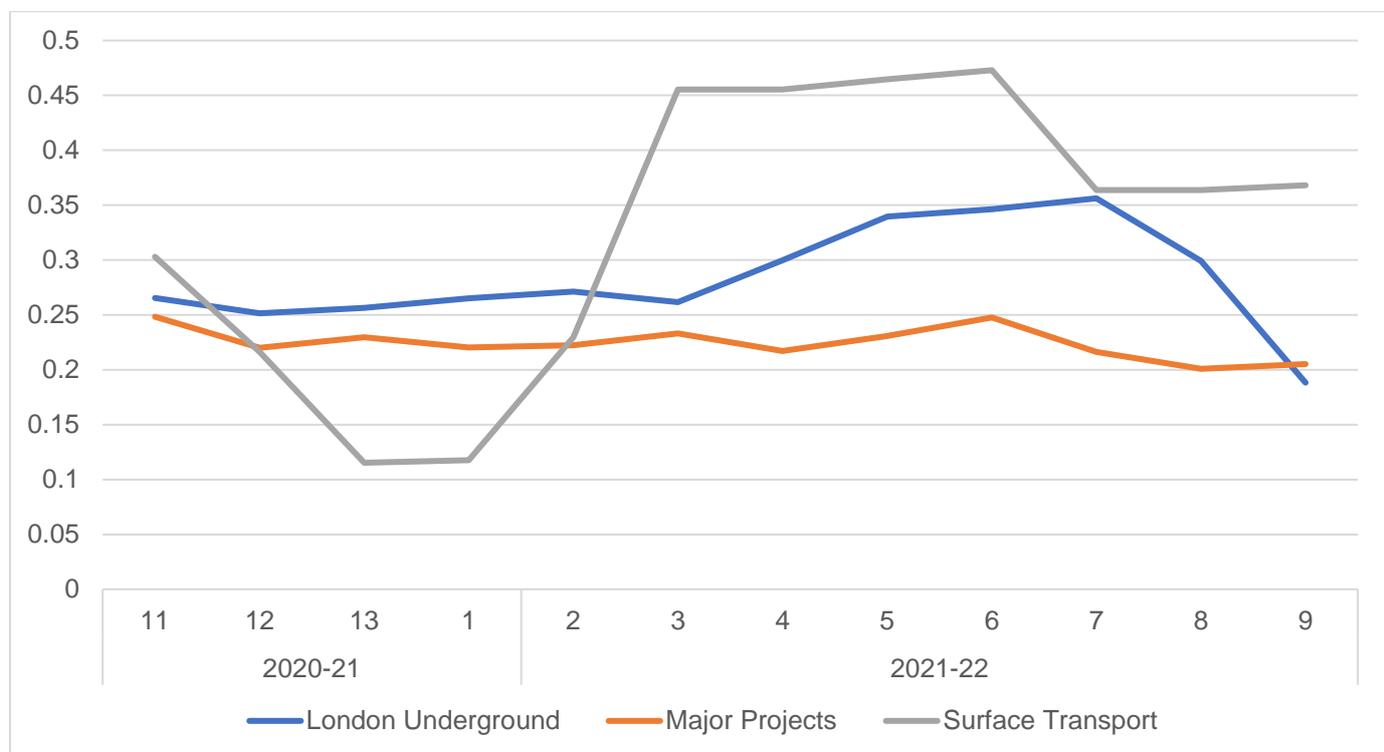
In Quarter 3, there were no accidents or incidents reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) in our Capital Delivery teams. As a result, the accident frequency rate fell sharply within London Underground (LU) to end the quarter at 0.17, slightly above the floor target (threshold) of 0.15. Surface Transport and Major Projects saw performance remain relatively stable and both with their respective floor targets (thresholds) of 0.15 and 0.10.

The significant reduction in RIDDOR reportable accidents not only demonstrates an improvement on previous quarters during 2021/22, but also a marked improvement on last year's performance where there were eight RIDDOR reportable accidents across our Capital Delivery teams during Quarter 3. A notable highlight has been the achievement of 4 million hours worked on the Four Lines Modernisation Programme without a RIDDOR reportable incident and 1.5 million hours worked without a Lost Time Incident (LTI).

Whilst hours worked were around 35 per cent higher in Quarter 3 2020/21, there have been a number of successful mitigations and interventions put in place this year to avoid the recurrence of similar incidents, with a broadly increased focus on site-level controls during the pandemic. It is also important to recognise the greater level of stability in 2021/22 in terms of the number of people on site compared with 2020/21, and in terms of the progress of some of our capital projects which are now in full flight and benefitting from the detailed level of planning, design and risk-mitigation that took place during their early stages.

The reduction in RIDDORs in our Capital Delivery teams is positive news in terms of progress towards our long-term ambitions, but there were several significant near misses during Quarter 3 that had the potential to result in serious harm to our colleagues. These included two incidents involving the incorrect use of telehandlers and another involving the incorrect erection of a mobile scaffold tower, influenced by failures to follow safe instructions and correct procedure. Close attention is also being paid to address recent increases in incidents caused by attempted violence and assault on colleagues. High potential or significant near misses are treated in the same way as serious injuries, with full investigations completed, findings shared between across TfL Capital teams (and wider industry where appropriate) and mitigations put in place to prevent harm from occurring.

Lost time injury frequency rate (per 100,000 hours worked)

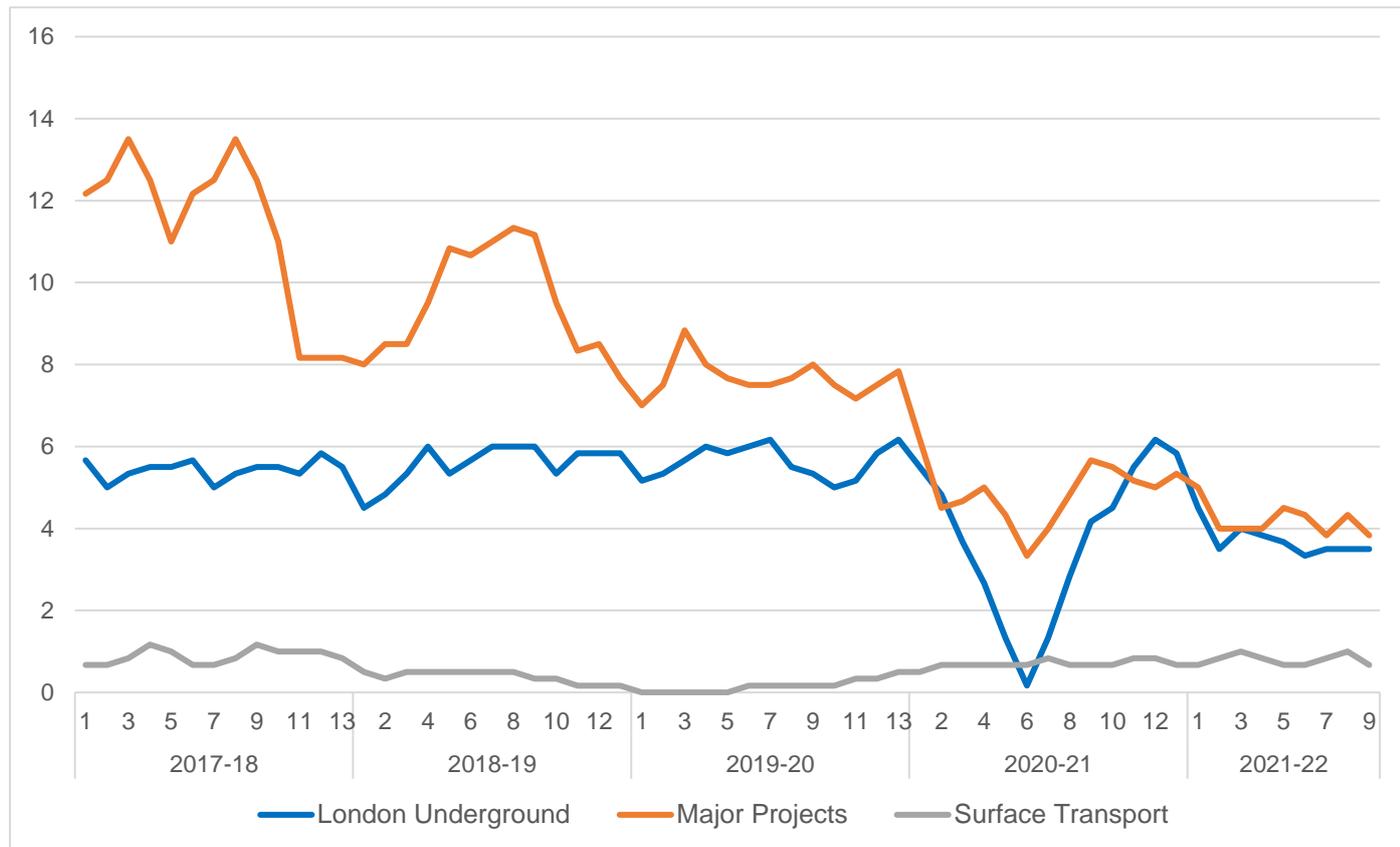


Lost time injuries (LTIs) are injuries which cause an employee to be absent for one or more shifts. There was only one LTI reported in our Capital Delivery teams during Quarter 3, a significant decrease on the previous quarter. Consequently, the lost time injury frequency rates fell across London Underground, Major Projects and Surface Transport against floor targets (thresholds) of 0.20. However, annual performance remains above the floor targets (thresholds) and will continue to be closely managed during Quarter 4 as we approach the end of the financial year.

The LTI that occurred resulted from a contractor spraining their ankle while working on the Bank Station Capacity Upgrade within our Major Projects team.

Long-term trend

Total capital delivery workforce injuries (six-period average since 2017/18)



There were 22 injuries across our Capital Delivery teams during Quarter 3, demonstrating a slight decrease on the previous quarter, in-line with the reduction in hours worked. Injuries across our Capital Delivery teams remain well below pre-pandemic levels and continue the overall trend of long-term decline since 2017/18. This remains the case when hours worked are taken into context, which have seen a lesser decline over the same period.

We are now seeing signs that the number of injuries is beginning to plateau. This trend is likely to continue over coming quarters, as hours worked on site stabilise.

We will closely monitor our safety performance data and adapt our risk management approach accordingly.

Capital Delivery SHE Improvement Initiatives

SHE Capital Delivery & Maintenance Strategy

To improve performance, we continue to deliver the Safety, Health & Environment (SHE) Capital Delivery and Maintenance Strategy which launched earlier this year. In Quarter 3, we published detailed plans and programmes for each of the strategy's workstreams, outlining the improvements we will be making over the next five years.

This includes a roadmap to improving our data and reporting, which enable us to more closely monitor and improve our safety, health and environment performance. In Quarter 4, we will develop our pan-Capital improvement plan which will provide a basis for consistent and strategic improvement plans to be established across our capital delivery teams ahead of the new financial year.

Piccadilly Line Upgrade

The Piccadilly Line Upgrade programme is the first within TfL to adopt a Carbon Dashboard, to not only quantify baseline carbon emissions, but also identify and measure whole life carbon reduction savings in areas such as Materials, Transport to Site, Construction Activities, Operational Material Replacement, and Operational Energy.

Sharing Lessons with our Suppliers

We held a Zero Harm “Sharing Event” on 11 November 2021. These are a new series of quarterly events to support the annual Zero Harm conference and keep our SHE conversations focused all year round.

Facilitated by us, these events provide a platform for our supplier community to share lessons from incidents and good practices. Each event is themed dependant on the performance trends of the quarter and comprised of an information share followed by discussion and an opportunity for a question and answer session.

Our first session focused on people and plant interface and lifting operations due to high potential near misses experienced in the quarter.

The next Zero Harm conference will take place in February 2022 and places carbon, the environment and sustainability at the forefront of our desire to support our suppliers to share their sustainable innovations.

Shining a Light on Dark Corners

Asset Performance and Capital Delivery (APCD) introduced a "dark corners" survey in order to identify things that may not be immediately obvious as a safety risk, but could turn into one; or work areas or departments where safety control checks are not conducted or addressed regularly. The survey remains open and results are reviewed every four weeks by the dedicated Dark Corners team that works with the appropriate leadership teams to address concerns raised and provide feedback on actions taken.

Pathway and CDM Compliance

An internal audit was undertaken of our Project and Programme Delivery (PPD) team’s compliance with Pathway, our project management methodology, and the Construction Design and Management Regulations (CDM) 2015.

One of the projects audited that performed well was the A40 Westway flyover, with Costain commencing works on site during Quarter 3. The project is part of the Major Asset Renewal Programme and concerns 21 bridges over 4.5km, with its main objectives to:

- Maintain safe and operable assets on the TLRN.
- Bring the structure's critical elements up to a state of good repair.
- Minimise disruption during the works.
- Reduce- as low as reasonably practicable- the risks associated with the asset functionality, operation, safety, and environmental impacts.
- Optimise whole life costs within current our current asset renewals strategy, which requires assets to be safe and operable on the surface network".

Work-related violence and aggression

Work-related violence and aggression (WVA) towards our people and those of our operators and contractors is unacceptable. Concerted action is underway to tackle it.

Triggers of WVA incidents

Fare evasion remained the biggest trigger for WVA during Quarter 3, resulting in 28 per cent of all WVA incidents on London Underground (LU) and 39 per cent on the Surface transport network. This is a slight increase of 4 per cent on the Surface network.

This Quarter, we have seen an increase in WVA triggered by customers behaving in an antisocial or disruptive manner. On the LU network this has risen from 10 per cent of all incidents in Quarter 2 to 19 per cent in Quarter 3, and on the Surface network from 20 per cent of all incidents in Quarter 2 to 32 per cent in Quarter 3. These incidents are often fuelled by intoxication or young people travelling in groups.

There has also been a rise in the number of WVA incidents on the LU network involving a customer with an e-scooter, from seven in Quarter 2 to 13 in Quarter 3. A ban on e-scooter use due to fire risk was introduced at the very end of Quarter 3, and operational officers and frontline staff are educating customers. Initial feedback from operational teams suggests that compliance is improving.

Hate crime incidents have decreased on both modes. On the Surface network they have reduced from 91 in Quarter 2 to 80 in Quarter 3 and account for 7.2 per cent of all reported incidents. On the LU network they have reduced from 90 in Quarter 2 to 75 in Quarter 3 and account for 6.9 per cent of all reported incidents.

Overview of risk and harm

As part of the WVA strategy, we have improved the way we analyse incident data from across TfL, our operators and policing partners to better understand the scale and nature of WVA incidents.

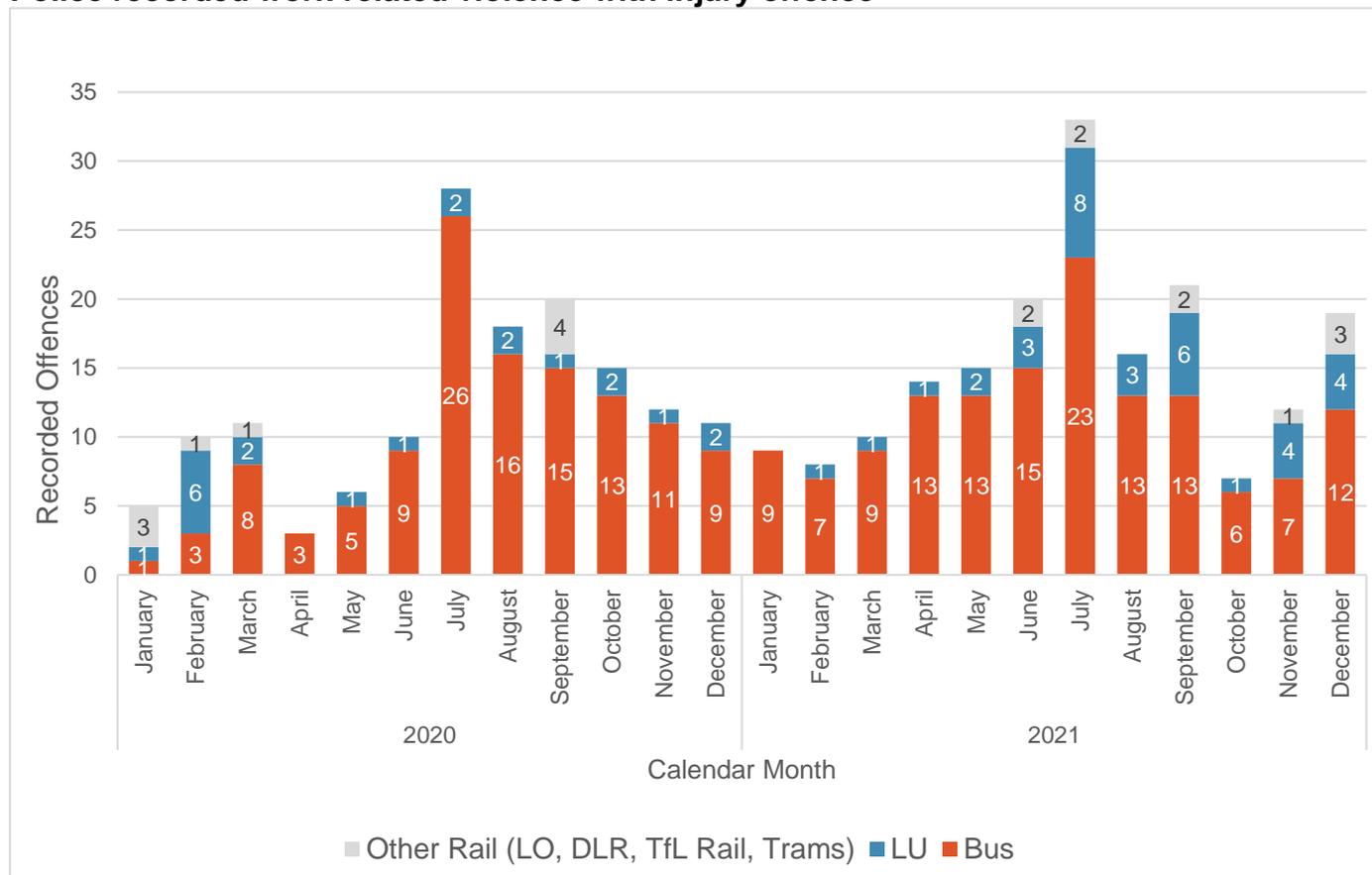
This change in the way we analyse data from different data sets was introduced in April 2020. As a result, we are unable to compare levels and trends before this date. This analysis compares data from different timeframes in 2020/21 and 2021/22. Due to the effect that reduced customer numbers had on WVA incidents, drawing comparisons and conclusions between the sets of data is difficult.

Volume of incidents in Quarter 3

In Quarter 3 2021/22, there were 1,078 incidents of WVA on the LU network. This is an 11 per cent increase compared to the previous Quarter (106 additional incidents). This is a similar percentage increase to the rise between Quarter 1 to Quarter 2.

In Quarter 3 2021/22, there were 1,017 incidents of WVA on the Surface networks (including Buses, roads, London Overground (LO), Docklands Light Railway (DLR), TfL Rail and Trams). This represents a small decrease of 2.4 per cent from Quarter 2 (26 fewer incidents).

Police recorded work-related violence with injury offence



We know from feedback from our workforce and trade unions that WVA is underreported, particularly verbal abuse. Changes in the reporting of incidents, compounded by the impact of coronavirus on overall crime levels, makes it difficult to draw clear conclusions about trends in offending. Our assumption is that violent offences that result in injury (actual bodily harm or grievous bodily harm) are more likely to be reported given that the staff member may require support, treatment or

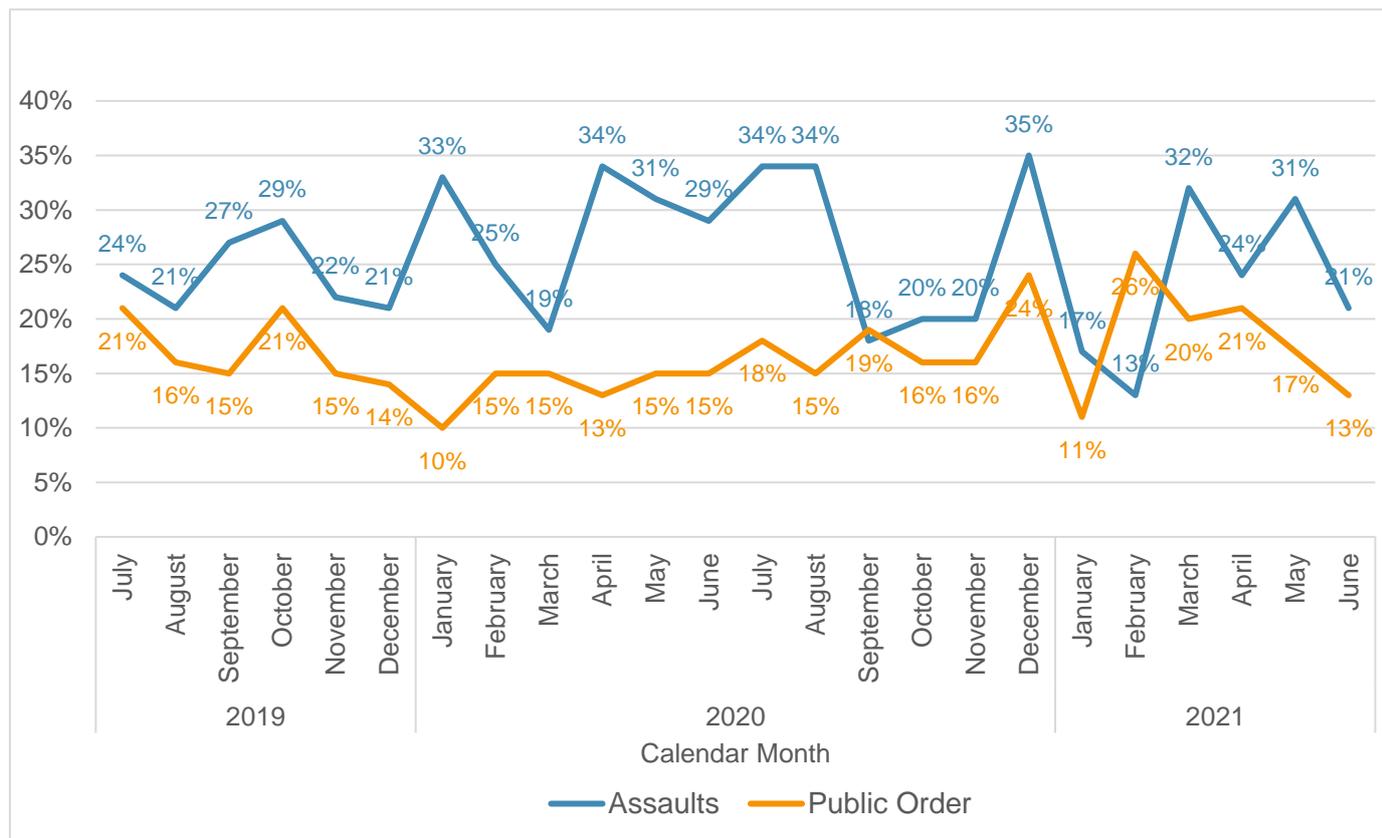
time off. Police data for violence with injury offences is a more reliable data source for monitoring trends. We have started a project to improve reporting of workplace related violence incidents to help our workforce stay safe.

The level of bus-related violence with injury offences was seven per cent higher when comparing April to December 2021 (115 offences) with the same nine months in 2020 (107 offences). In the same time period in 2021, crime levels increased in line with more passengers returning to the network.

Where contributory factors are recorded, 42 per cent of bus-related physical assaults (including spitting) reported to the police are linked to road rage. Road rage volumes were lower in 2020/21 due to lockdown and fewer road users (28 offences in 2020 Year-To-Date, 52 offences 2021).

Police data for LU and other rail modes (LO, DLR, TfL Rail and Trams) combined shows there were 42 violence with injury offences between April and August 2021, compared with just 16 for the same nine months in 2020. The lower offence numbers on the rail network in 2020 may reflect the lower levels of passenger journeys at this time.

Solved rate for WVA offences investigated by the police



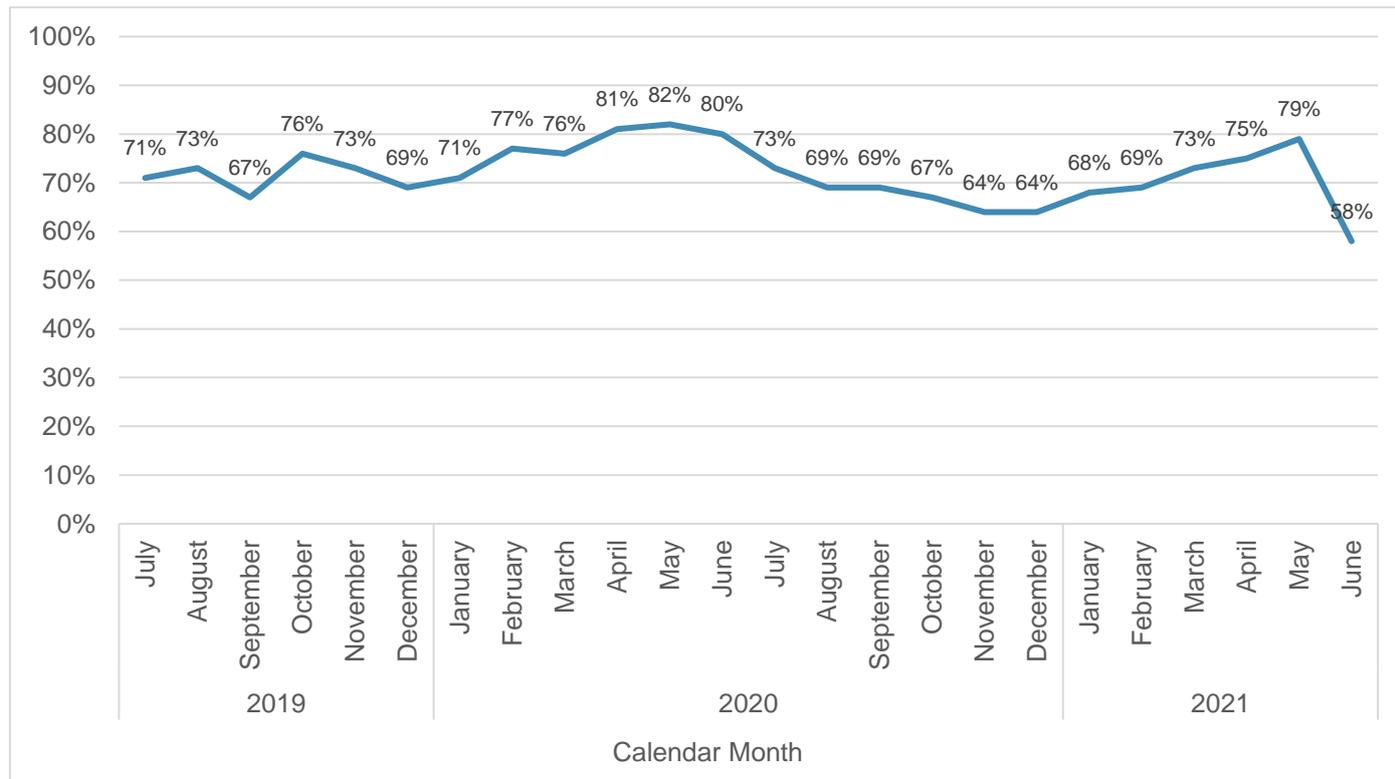
We are working closely with the police to improve the solved rate of offences. This includes prioritising the investigation of WVA incidents, rolling out body-worn video cameras and continuing to support police investigations by providing Oyster card and CCTV information and victim and witness statements.

The solved rate is the percentage of offences being investigated by the police that have resulted in action against the suspect e.g. charged with the offence, summonsed to attend court or a restorative justice outcome. Figures are reported six months in arrears to allow time for the police investigation to conclude and for cases to progress through the criminal justice process. This section compares figures for the 12-month periods, July 2020 to June 2021 (current), with July 2019 to June 2020 (previous).

During the current period the combined solved rate was 21 per cent for violence and public order recorded offences against our workforce – the same as the previous 12-month period.

The solved rate varied by mode during the current period, with a solved rate of 22 per cent for bus-related offences, 23 per cent for LU, and 15 per cent for all other rail modes combined. Across all modes, the solved rates increase in line with severity of incident. The solved rate is higher for violent offences (with or without injury) compared to public order (e.g. verbal abuse or threatening behaviour) as the police will allocate more resource to identifying and apprehending offenders for the former e.g. media appeals for information for violent incidents. The solved rate in the current 12-month period for violence (with/without injury) offences was 26 per cent compared with 18 per cent for public order offences respectively.

Percentage of Staff Willing to Support (all violence and public order offences)



A key factor in being able to bring offenders to justice is staff support for and consent to partake in the criminal justice process. As part of our strategy, we are working closely with the police to address staff concerns and improve the support that we collectively provide to them throughout the process.

Figures are reported six months in arrears to allow time for the police investigation to conclude and for cases to progress through the criminal justice process. This section compares figures for the 12-month periods, July 2020 to June 2021 (current), with July 2019 to June 2020 (previous).

During the current period, the percentage of staff willing to support a police investigation was 69 per cent for violence and public order recorded offences against staff, down from 75 per cent compared to the previous 12-month period. Due to changing customer numbers, bus drivers make up a greater proportion of staff victims and they are less likely to support police investigations, particularly public order offences. We are working to address this.

Progress against the 2021/22 annual action plan

The Safety, Sustainability & HR Panel (SSHRP) reports now include updates against actions within the WVA annual action plan. The plan was approved by the SSHRP on 30 June 2021.

Wherever staff are on our network, we are committed to their safety and preventing violence and aggression, tackling the causes and providing support to those who experience it. We operate across the whole of London, and it is not only those in customer facing roles that can be subject to violent or aggressive incidents. While incidents like these are rare, they happen. To tackle this, we have developed a new Urban Safety training course to keep our workforce who are working out and about in London safe.

Staff can complete the course on ezone, our internal training platform. The focus is on human behaviours and consists of four interactive modules and specially commissioned scenario-based films. It provides useful tools and insights on managing conflict and staying safe and we are recommending any of our workforce to complete it, if they are in a role that could bring them into contact with members of the public. Conflict management training is already in place for our other frontline, customer-facing teams which is relevant to their roles.

Tackling the key triggers is essential if we are to eliminate WVA against our staff. Fare evasion remains the biggest trigger for WVA and as part of our strategy we are recruiting 60 new Revenue Control Officers (RCOs) to help tackle fare evasion on the LU network. We started to recruit RCOs in Quarter 3. We are aiming to have 12 RCOs start per period and have this complete by April 2022.

We continue to work with our partners on targeted policing activity.

We are working with both the Metropolitan Police Service and the British Transport Police (BTP) to tackle specific issues at WVA hotspot locations. Although we have not had a serious WVA incident at Turnpike Lane, serious crime, including gang

activity, is a known issue in the local area and causing concerns for staff safety at the LU and bus stations. We are working closely with the local borough, Haringey Council, the new Metropolitan Police Wood Green Town Centre Team and the BTP on collaborative enforcement activity, alongside looking at our own safety equipment and procedures.

As part of our work at Turnpike Lane, we have included the station as a location for the BTP's Operation Steed. This ongoing operation aims to increase both staff and public confidence, improve feelings of safety, and bring offenders to justice. The BTP have been using several tactics to prevent and detect crime in the area, including the use of knife arches, drugs dogs, revenue operations, targeting prolific offenders, high visibility and plain clothes patrols. So far, six planned operations have resulted in two arrests, five reports, 58 stop searches, 47 stop and accounts, eight Community Resolutions and six intel reports.

Operation Steed deployments have also continued at East Ham, Upton Park, West Ham and Canning Town stations and a new priority location, Camden Town.

Examples of Successful Prosecutions in Quarter 3

Route W9

In May 2021, a driver of a route W9 bus operated by Sullivan's Buses was assaulted as he was about to exit the bus. Police were called and the suspect was arrested and charged with violent conduct. The suspect was found guilty, remanded on unconditional bail, given a community order, paid £150 compensation to the victim and ordered to attend a rehabilitation centre.

Route 427

In July 2021, a driver of a route 427 bus operated by Abellio was assaulted after a fare dispute. The suspect was charged with common assault and after being found guilty, was ordered to pay £100 compensation, given a community order, a rehabilitation order of 25 days and ordered to do unpaid community work for 100 hours.

Route 253

In August 2021, a driver of a route 253 bus operated by Arriva was assaulted over a fare dispute. The suspect spat at the driver and was arrested at the scene and charged with common assault and violent conduct. The suspect was found guilty and ordered to pay £234 compensation.

Vauxhall London Underground Station

In March 2021, an LU staff member informed a member of the public that Vauxhall LU station was closed. The LU member of staff was punched in the face causing him to fall down the stairs. Other members of LU staff detained the suspect and he was later arrested by the police for actual bodily harm. The suspect pleaded guilty and was sentenced to 12 weeks in prison, suspended for 18 months, and ordered to pay £600 compensation.

Hainault LU Station

In June 2021, a customer was asked to stop smoking in the station by LU staff. The suspect grabbed the body-worn camera of the LU member of staff and spat in their face. The suspect was identified, pleaded guilty and was ordered to pay £150 compensation and £85 towards Crown Prosecution Service (CPS) costs.

Whitechapel LU Station

In July 2021, a female customer was being assaulted on the platform. Three members of LU staff went to assist, one was pushed to the floor and all three were threatened with violence. The suspect was arrested and charged with breaching a restraining order, four assaults and a public order offence. They were found guilty and sentenced to 44 weeks imprisonment and ordered to pay a victim surcharge of £156.

Waterloo LU Station

In August 2021, a customer approached a LU member of staff and spat at him. The suspect was arrested for common assault. The suspect entered a “guilty” plea and was sentenced to prison for 18 weeks suspended for 24 months and ordered to pay a surcharge to victim services of £128 and CPS costs of £85.

Significant incidents

This section outlines significant incidents that have occurred during Quarter 3 and since the last report. It also provides an update to significant incidents of note.

Significant London Underground incidents

There were no Rail Accident Investigation Branch (RAIB) reports pertaining to LU published in Quarter 3.

RAIB report: Fatal accident at Waterloo Underground station – Published September 2021

On 26 May 2020, at Waterloo London Underground station, a passenger fell into the gap between the northbound Bakerloo line platform and the train from which he had just alighted.

The RAIB made three recommendations to LU. The first relates to the need to recognise and assess location-specific risks so they can be properly managed. The second recommends that LU review its quantified risk assessment. The third recommendation relates to the need for effective delivery of actions proposed by internal investigation recommendations.

We carried out an internal Formal Investigation into this accident which was published in January 2021. Many of the issues identified by the RAIB were addressed in the LU Formal Investigation Report (FIR) and in actions taken by LU

after the accident. The Office of Rail and Road (ORR) monitors the completion of the RAIB recommendations by TfL.

We wrote to the ORR in November 2021 setting out the action taken, and action planned, in relation to all the recommendations in the RAIB report. This includes installing new One Person Operation (OPO) cameras which are closer to the platform edge, providing clearer views of the train doors and platforms for the Train Operator. We will continue to update the ORR regularly to ensure it is satisfied that we are addressing the recommendations in the RAIB report.

An inquest into this incident has been listed to take place before a jury between 19 and 28 September 2022. We are assisting the Coroner.

TfL FIR: Monument Signalling Near Miss (19 March 2021)

The final Formal Investigation Report (FIR) has now been published, relating to the integration of a new signalling system alongside an existing legacy system, which led to the potential in certain very limited circumstances to increase the risk of a collision between Monument and Cannon Street if a signal had been passed at danger. Although the risk was quickly mitigated, the investigation examined a range of issues at the design, test and assurance stages. Recommendations range from the clarity of roles and responsibilities, to the technical design assurance required of such systems when being integrated during their introduction to the LU network. There has also been consideration of the possible impact of timescales and workload.

TfL FIR: Hammersmith Service Control Centre: UPS Failure (22 December 2020)

The final Formal Investigation Report has been published for an incident at Hammersmith where a complete power distribution failure affected all facilities at the Control Centre and caused major disruption to services on the Metropolitan, Hammersmith & City, Circle, District and Piccadilly lines. The five recommendations made in the FIR are aimed at addressing a broad range of topics: highlighting human factors, design processes, standards and supply-chain performance as contributory causes.

Significant incidents on the Surface transport network

London Overground Collision with Buffer Stop (12 October 2021)

On 12 October 2021 a London Overground train hit the buffer stops at Enfield Town at slow speed causing damage to the infrastructure and the first carriage of the train to partially derail.

The driver of the train was treated for shock and one passenger for minor injuries, neither of which required hospital treatment. Arriva Rail operates the London Overground services. The RAIB and the Office of Rail and Road (ORR) were notified

by Arriva Rail of the incident, and we worked closely with Arriva Rail and Network Rail (who is responsible for the track infrastructure) throughout the investigation, whilst having an ongoing dialogue with the ORR.

An investigation was completed by Arriva Rail on 22 December 2021 with a review panel consisting of all key stakeholders (including TfL and Network Rail) agreeing nine recommendations for action to be taken to prevent similar incidents occurring again. The RAIB has begun an investigation into this incident.

Sandilands Tram Derailment (9 November 2016)

Our thoughts remain with those who lost their lives, their family and friends, and all the other people affected by this incident, and we continue to offer support to those people directly affected as well as the wider community.

As reported previously, we received a Prevention of Future Deaths report from the Senior Coroner in respect of current tram stock and the risk of passengers falling through tram doors. We provided our response on 16 November 2021 in which we confirmed that we have been working with Alstom (formally Bombardier) to commission a fresh engineering study to look at whether it is possible to strengthen the existing door mechanisms on the CR4000 fleet. Alstom presented their report to us at the end of January 2022 for review, and we are working together to consider the next steps.

Since the conclusion of the Inquests, five of the families of those who lost their lives have written to the Attorney General to request that she considers using powers under section 13 of the Coroner's Act 1988 to apply to the High Court for an order seeking fresh Inquests. The Senior Coroner provided submissions to the Attorney General and we are awaiting the outcome of the request.

Engagement with regulators

This section looks at how we have engaged with our regulators on safety issues over the past Quarter.

Engagement with the Environment Agency

We report our progress on environmental issues to the Environment Agency. Polychlorinated biphenyls (PCBs) are substances that are toxic to humans and animals. There is legislation in England and Wales, as well as an international agreement, which bans their use. Some of the thousands of different types of electrical capacitor used in signalling, power, fleet and tunnel telephone systems on LU predate this legislation and therefore sometimes contain PCBs. LU's programmes for identification, replacement and removal of components that may contain PCBs continued in Quarter 3.

Engagement with London Fire Brigade

We meet the London Fire Brigade (LFB) every month to share progress of our Fire Safety Programme and to discuss any significant fire incidents in the previous months. As well as a joined-up response to incidents on our network, the LFB carry out a number of detailed inspection visits to review our approach to fire safety. These collaborative discussions have allowed us to share the detail of our fire risk assessment programme and training with the LFB, as well as sharing detail on how we manage and maintain our fire assets with the LFB inspectors. It has also allowed us to identify areas where we can work more closely together to ensure that we manage the risk of fire on our network.

In Quarter 3, we remembered the devastating King's Cross fire, which happened on the evening of 18 November 1987, tragically killing 31 people and injuring 100. Since both the King's Cross fire and the Grenfell Tower disaster in 2017, we have worked closely with the LFB, which has increased its levels of intervention on buildings – including ours – and we have worked on all its recommendations.

Engagement with the Office of Rail and Road

We continue to work closely with the ORR to ensure we manage health and safety effectively across our railway networks. We have regular discussions around our ongoing response to the coronavirus pandemic, as well as constructive open and honest discussions about any incidents on our network and our plans for improving how we manage safety and health on our railways. We continue to work closely with them to identify opportunities for improving how we manage health and safety. During Quarter 3, we had a number of constructive discussions with the ORR on how we manage issues such as long-term capital investment and asset management, our SHE Management System, fire safety and customer and workforce safety.

Health

COVID-19

Since the start of the coronavirus pandemic, our focus has been to protect the safety and health of our customers and workforce.

Deaths in service

Our sincere condolences remain with the families and loved ones of the 105 members of our workforce who have sadly passed away from COVID-19 as of 27 January 2022. Everyone at TfL pays tribute to the vital role they played in our fight against the pandemic.

The safety of all our staff and customers continues to be our top priority, and we are absolutely committed to doing everything in our power to keep everyone safe on our network.

Through articles on the intranet, we publicised the change in self-isolation rules to our workforce, as well as encouraging people to get their COVID-19 booster dose.

Face coverings on public transport

We welcomed the Government's decision to reintroduce national regulations making it a legal requirement to wear face coverings on public transport and other public places from 30 November 2021. Since the original national regulations ended on 19 July 2021, we continued to mandate face coverings under our Conditions of Carriage although our ability to enforce was limited as we could not prevent people who were not wearing a face covering from travelling on our network. The change to government regulations from 30 November 2021 meant that our enforcement teams, as well as our police partners, could once again issue Fixed Penalty Notices of £200 (first offence) or prosecute those who refuse to comply.

Between 30 November 2021 and 6 January 2022, our enforcement officers intervened with over 43,000 customers who were not wearing a face covering, prevented 2,195 people from travelling, directed 906 people to leave our services and reported 1,575 people for a Fixed Penalty Notice.

As part of the plan B COVID restrictions ending in England, the Government announced that it would no longer be compulsory for people to wear a mask on public transport and in shops from 27 January 2022. We have retained the requirement for face coverings under our Conditions of Carriage, which means customers will continue to be required to wear a mask when using our network.

COVID-19 testing schemes

We continue to offer employees our rapid COVID-19 testing services at our Palestra head office building. By mid-December 2021 we had carried out more than 7,700 tests, with the number of people testing positive averaging less than 0.6 per cent.

We have also taken action to ensure our staff have access to lateral flow tests. On 1 November 2021, we introduced a new 'mobile test assistants' initiative to enable the team to reach as many of our workforce as possible. The team are visiting depots, stations across all modes and remote offices with COVID-19 home testing kits, encouraging our staff to test regularly to help us ensure workforce safety.

We have also introduced a service to offer staff the ability to order a test kit for delivery to their work location or home, with more than 6,500 home test kits issued so far.

Together with Westminster City Council, we are continuing to offer Pfizer vaccinations to our staff through a series of pop-up clinics. Since 28 July 2021, six clinics have taken place at Victoria and Baker Street London Underground stations and our Palestra head office building. Those who attend can receive either a first or second dose of the vaccine.

Imperial College London sampling

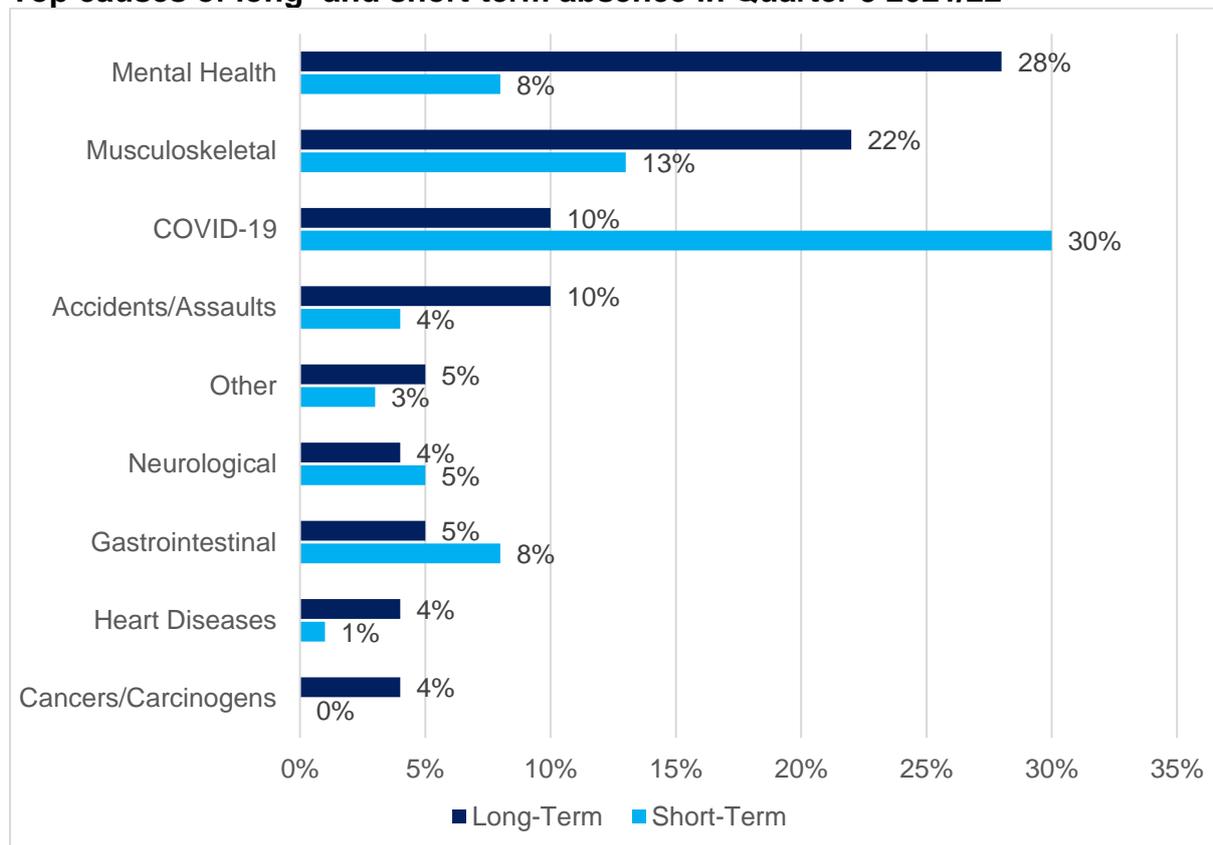
Air and surface sampling of customer areas by Imperial College London continues, with no trace of coronavirus found on the public transport network. This remains the case after the most recent testing was carried out in December 2021. Our Occupational Health team continues to liaise with academic institutions to ensure our approach to safety remains at the cutting edge.

Sickness absence data

When looking at our sickness absence data, short-term absence is any absence of less than 28 days and long-term absence is of 28 days or more duration.

By looking at the underlying causes of absence in detail, we gain meaningful insight into where we can best target preventative measures. Around 60 per cent of absences at any time are caused by long-term sickness.

Top causes of long- and short-term absence in Quarter 3 2021/22



In Quarter 3 of 2021/22, mental health remained the top cause of long-term absence, accounting for 28 per cent of all long-term absences. Musculoskeletal-related absence was again the second highest cause at 22 per cent. These two categories typically account for the majority of long-term sickness absence in the UK. Our Occupational Health team has several initiatives aimed at prevention of ill health but also to support those who become unwell, to return to work earlier.

In Quarter 3 of 2021/22, coronavirus remained the top cause of short-term absence at 30 per cent, a significant decrease from the previous Quarter (43 per cent). As with pre-pandemic, we are now seeing an increase in coughs and colds, with these making up 19 per cent of short-term absence, as would normally be expected for this time of year. All other absence types are holding fairly stable and are now close to the pre-pandemic rates.

Looking ahead, at the beginning of Quarter 4, the Government implemented plan B measures to curb the spread of the Omicron variant of COVID-19, which included the guidance to work from home where possible. Although the work from home instruction ended on 19 January 2022, this may still reduce the impact of COVID-19 on short-term absences.

Health updates

Health and Wellbeing Index

Our Occupational Health team are working closely with the Rail Safety and Standards Board (RSSB) to support the development of a cross industry health dashboard and a health and wellbeing index (HWI). This will allow benchmarking of health data across the transport sector. This is important as we know our employees are more likely to experience work-related ill health than work-related injuries. Reporting on safety has led to year-on-year improvements and cross-industry reporting on health should lead to similar improvements.

Well@TfL

Well@TfL Acton Pilot Project:

The first phase of the Acton pilot project has concluded, with over 100 staff taking up the offer to attend a 30-minute mini-health check. Staff could book themselves in for an appointment on a day or night shift, which gave them an overview of their health and wellbeing. These mainly looked at metabolic risk factors, such as cholesterol profile, blood glucose, body composition, blood pressure and QRISK3, which is the risk of a cardiac event in the next 10 years.

Each individual received a record card to keep track of their results and advice during the health check, as well as the option of a bespoke health report support their health goals. We will then be offering everyone that attended a three-month follow-up phone consultation to offer further support them and finally a six-month follow-up appointment to remeasure all their results. The response from the pilot project has been positive.

The team are currently reviewing the pilot project data. This data will help drive bespoke wellbeing initiatives to support our workforce's wellbeing, as well as to explore ways to move the project forward in the coming year.

Well@TfL Mobile Health Checks:

Since the Well@TfL project first launched in September 2021, 370 members of staff have received bespoke wellbeing support onsite and of those, 67 have received GP referrals based on their health metrics, which is a referral rate of 18.1 per cent. The mobile health checks are fully booked until the end of April 2022.

Research into operational staff's health and wellbeing needs

We have been awarded a grant from the Employer Health Innovation Fund to invest in staff health and wellbeing. We are currently working with the Design Council to understand and overcome the barriers operational staff have in engaging with technological health and wellbeing tools. The Fund will be used to implement solutions based on the research findings and recommendations.

RESET Health

Our Occupational Health & Wellbeing team has partnered with RESET Health to provide 50 staff members access to an individualised programme to provide support for those living with pre-diabetes, type 2 diabetes, or obesity. RESET Health is a 12-month programme, divided into 12-week cycles. It combines the concept of time-restricted eating, intermittent fasting and low carbohydrate diet regimes to support individuals to reset their metabolism. It provides 24/7 coaching and support by a multidisciplinary team of doctors, nurses, nutritionists, and mentors to help those taking part adapt to a healthier way of living. This is initially a pilot, and data will help us better understand the demands for this type of service.

Mini Health Checks for New Ways of Working Roadshows

To support the New Ways of Working initiative, on the 1, 9 and 14 December the Occupational Health (OH) Physiologist visited our three head office buildings at Palestra, Endeavour Square and Pier Walk to offer mini 'health checks'. A total of 36 staff signed up for the 15-minute health checks which included cholesterol, blood glucose and blood pressure checks, as well as height, weight, Body Mass Index, waist circumference measurements. The feedback was excellent.

World Aids Day

Our Occupational Health & Wellbeing team, in conjunction with the Outbound Staff Network Group, promoted World Aids day (1 December 2021) by sharing a candid anonymous blog from a member of staff on their experience of HIV/AIDS. A new [SharePoint page](#) was also launched to provide information on the support available within the organisation to those living with HIV and to those managing a colleague with HIV/AIDS.

Bus Driver Fatigue and Health and Wellbeing Challenge

The combined Fatigue, Health and Wellbeing Innovation Challenge was launched in late spring 2021 and over 50 companies responded with solutions. The challenge will enable us to trial a number of measures across eight London bus operators that will help to reduce fatigue and improve health and wellbeing of bus drivers. There was a total of ten successful bids, with eight London bus operators benefitting which includes three bids from partnerships between operators.

The projects will provide TfL and bus operators with:

- Independent evaluation of leading market innovations and how they can help the London bus industry.
- Evidence of whether specific measures can help to reduce bus driver fatigue and/or improve bus driver health and wellbeing.
- Guidance on how to roll out the measures where suitable, and any risks, issues, and opportunities in deployment.
- Tangible benefits and results for the drivers included in the trials.

The process for the Fatigue, Health and Wellbeing Innovation Challenge has been paused due to funding uncertainty. We continue to work with bus operators and suppliers of the successful bids to ensure robust project management of the bids and programme management of the whole Innovation Challenge is ready once funding is released.

Bus Driver Health Kiosks

We will support bus drivers through the provision of self-service health assessment kiosks or comparable health assessment across all ten bus operating companies. The rollout of these health assessments to bus drivers began during winter 2021/22. We will collect aggregated data to define and inform further activities for the Bus Driver Health and Wellbeing Programme.

Employer Health Innovation Fund

The Impact on Urban Health and Design Council have offered us a grant to deliver health and wellbeing assessments of bus drivers. The Fund will be used to identify user insights and opportunities for bus operator companies to meet the health and wellbeing needs of drivers and provide recommendations to improve or enhance existing standardised health assessment offers and initiatives. The study began in September 2021 and as part of this, interviews with individual drivers and bus operator staff across four companies have been conducted. The Employer Health Innovation Fund is funded by Impact on Urban Health and delivered by Design Council.

We will continue working with the Design Councils and Bus Operators to deliver health assessments to operators that currently do not use them. This will involve

utilising insight gathered from the research exercise for their implementation and management. A broader piece of work will concurrently begin on researching the broader non-clinical services to establish a working definition for 'assessments' and 'wellbeing checks'.

Environment

COP26

In November 2021, the UK hosted the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow. The COP26 summit brought parties together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change. It is essential that governments deliver on the Paris Agreement with robust and tangible plans and COPs are critical focal points for that on-going effort.

We supported Mayoral participation in COP26 through briefings and by taking part in several events, meetings and roundtables related to the discussions. We also undertook a range of internal and external comms activity related to the event, including a [promotional video](#) conveying the importance of London's transport and how we can play a leading role in helping the UK address the climate emergency. Additionally, we put in place management plans to support travel to and from the conference via London's rail terminals and our new all electric double decker buses designed for London were launched at the event and used to transport VIPs to the venues.

Ultra Low Emission Zone Expansion

On 25 October 2021, the Ultra Low Emission Zone (ULEZ) expanded to cover the area within the North and South Circular Roads. The newly expanded ULEZ is 18 times the size of the original central London zone, which the Mayor introduced in April 2019, and now covers almost four million people. It will bring the health benefits of cleaner air to millions more Londoners, both inside and outside the zone. The scheme operates 24 hours a day, every day of the year except Christmas Day (when there is no public transport). The ULEZ requires motorcycles, cars, vans and minibuses to meet strict emission standards or pay a daily £12.50 charge to travel in the zone. Heavy goods vehicles, buses and coaches must meet the same emission standards across Greater London under the Low Emission Zone.

In the first month of operation of the expanded zone, the compliance rate (percentage of vehicles detected in the zone that meet the strict emissions standards) was 92 per cent, more than doubling the 39 per cent compliance levels in 2017, when plans for ULEZ expansion were first announced.

On an average weekday, there were 47,000 fewer non-compliant vehicles detected in the expanded zone in the first month of operation, compared to the two weeks before the scheme was introduced. This is a 37 per cent reduction in non-compliant

vehicles. On an average weekday there were also 11,000 fewer vehicles driving each day in the zone. This is a one per cent reduction, although it will take more time for traffic patterns post launch to fully emerge. Initial monitoring suggests that total traffic on the boundary has also slightly decreased since the scheme expanded.

To support the transition to cleaner vehicles the Mayor invested £61 million in scrappage schemes to help low income and disabled Londoners as well as charities and small businesses to prepare for the ULEZ. Between them the scrappage schemes have so far helped remove over 14,800 older, more polluting vehicles from London's roads.

Adaptation Reporting Power

At the end of December 2021, we provided our third Adaptation Reporting Power submission to the Department for the Environment, Food and Rural Affairs (Defra). This preliminary report sets out our main climate risk governance, strategy and approach to risk management. The final report will be submitted later this year and will include a high-level asset climate risk assessment.

Sustainable Drainage at Elspeth Road raingarden



In November 2021, a raingarden capturing 500m² of surface water run-off was installed on the TLRN at Elspeth Road in Wandsworth, as part of our commitment to installing Sustainable Drainage Systems (SuDS) on London's road network. Water enters the SuDS from the footway via a perimeter kerb with drainage slots, and from the carriageway via three gullies connected to a perforated pipe in the foundation of

the SuDS. In addition to improving the visual amenity of the area, the raingarden planting will also help support local biodiversity. The raingarden installation is part of our scheme to improve safety for all road users at the junction of Lavender Hill and Elspeth Road.

TfL Sustainable Development Framework

Launched on 22 November 2021, the [TfL Sustainable Development Framework](#) (SDF) Handbook is our Property Development's approach to delivering social impact, driving economic development, and embodying environmental stewardship in all our projects. It sits alongside our [Design Principles](#) along with the following internal documents: the Community Engagement Handbook, Heritage Best Practice Note and Design Review Protocol to reinforce the quality and excellence of our work.

Covering the three pillars of sustainability (social, environmental and economic), the nine dimensions of the SDF form a holistic tool to measure and seek the continual improvement to the sustainability of current and future projects. Detailed guidance on the 97 Key Performance Indicators (KPIs) was shared on 3 December 2021 for external feedback in preparation for an open source Spring 2022 launch. It is currently on TfL's website and we also sent it directly to our development partners, industry peers, environmental organisations and the local authorities whose jurisdictions we are currently working in.

SDF and the London Recovery Programme

All nine dimensions support the missions of the London Recovery Programme. Three Health and Wellbeing KPIs measure air quality improvement and are supported by Climate and Ecological Resilience KPIs promoting green infrastructure. Additionally, Neighbourhood Investment KPIs focus on active travel, Electric Vehicle charging and reduced car use.

Local Prosperity KPIs set targets for apprenticeships, local jobs and work placements along with support for creative and cultural industries, local business, Small- and Medium-sized Enterprises, Social Enterprises and Start Ups.

Vibrant Places KPIs encourage design teams to score projects on Child and Age Friendly Design. There is specific emphasis on engagement with Seldom Heard Groups - including young people - in the design of play space which is designed for teenagers of all genders.

KPIs setting targets for healthy streets, active travel improvements and child friendly design recognise the disproportionate road danger and injuries that London's deprived communities and some ethnic groups can suffer. Neighbourhood Investment KPIs promoting community initiatives grants and community volunteering along with Social Cohesion KPIs promoting active public space support strong communities.

An 'Excellent' CEEQUAL award for the Northern Line Extension

The Northern Line Extension (NLE) project has been awarded 'Excellent' for Civil Engineering Environmental Quality Assessment & Award Scheme (CEEQUAL). This award was achieved by the hard work and commitment of the TfL and Ferrovial Laing O'Rourke teams, with the support from the many suppliers and sub-contractors involved.

CEEQUAL is a sustainability assessment awarded by the Building Research Establishment (BRE). The tool is used on Civil Engineering and Infrastructure projects to assess, improve and verify sustainability performance. Sustainability is at the heart of the Mayor of London's Transport and Environmental Strategies and the CEEQUAL assessment scheme ensures that we are delivering projects that align with this.

The NLE was a major project that involved the construction of two new Underground stations, two ventilation shafts and two 3.2km-long tunnels extending the existing Northern line to Battersea. The CEEQUAL framework was used to drive sustainable design and construction, and resulted in the following:

- Transporting more than 845,000 tonnes of excavated material by barge, from Battersea to Goshems Farm, where it was used to restore a Victorian landfill to useful arable land. This meant 46,965 wagons were taken off the streets and resulted in over 2,000 tonnes of CO₂ savings.
- Measures to reduce the energy consumption of the tunnel boring machine, such as reducing the thickness of tunnel linings and reducing the length of launch tunnels.
- Maximising offsite manufacturing of components such as concrete platforms, columns, beams, stairs, where possible, which helped minimise excess waste associated with in-situ concreting.
- Reducing packaging where possible, with reusable stillages and only high-quality pallets permitted, which were then collected for reuse.
- Selling the temporary infrastructure to other construction projects such as the Thames Tideway project.
- Offering surplus materials to local charities or returning them to the suppliers.
- Using local and recycled materials, and less than one per cent of waste going to landfill.
- Using another construction project's excavated material to fill voids around the new Battersea Power Station structure.

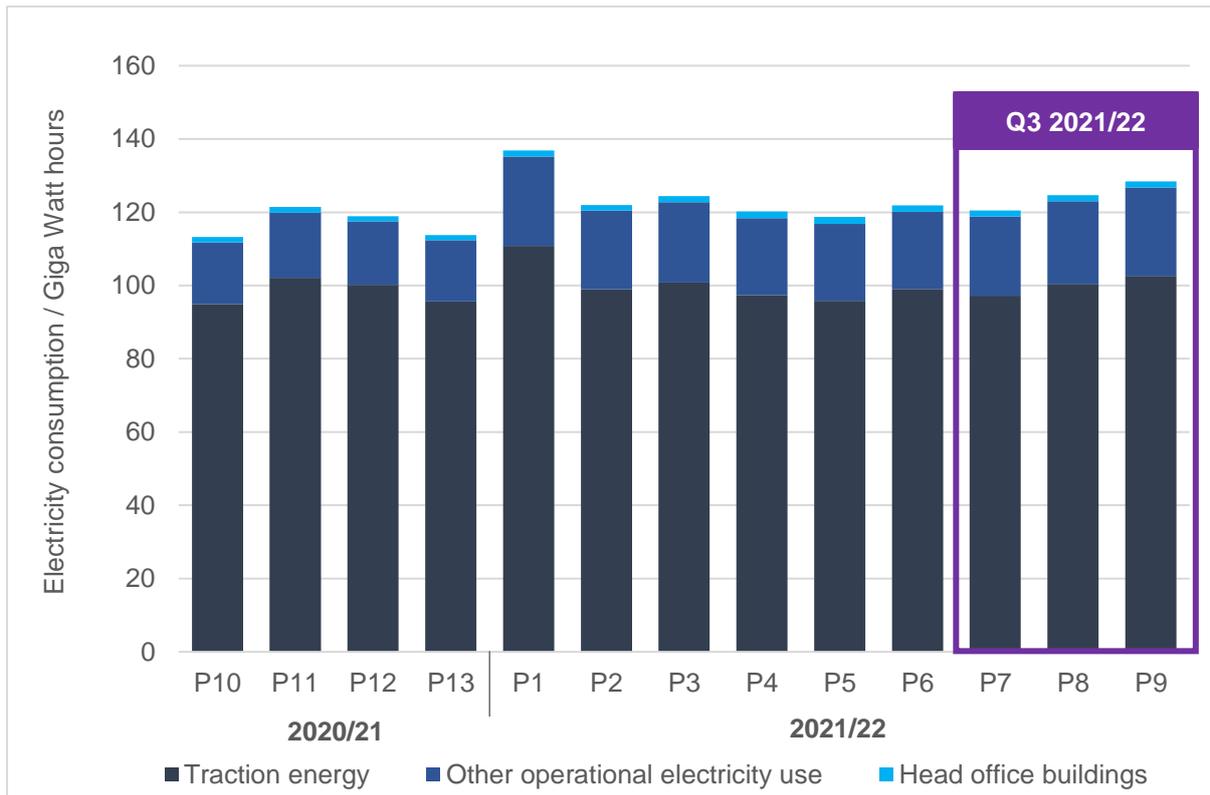
Energy consumption and carbon emissions from our operations

The coming years are crucial in our fight to prevent devastating climate change. The UK must make significant reductions in its carbon emissions if it is to meet its legally

binding goal of reaching net-zero carbon by 2050. The Mayor has set an ambitious goal of London becoming carbon neutral by 2030.

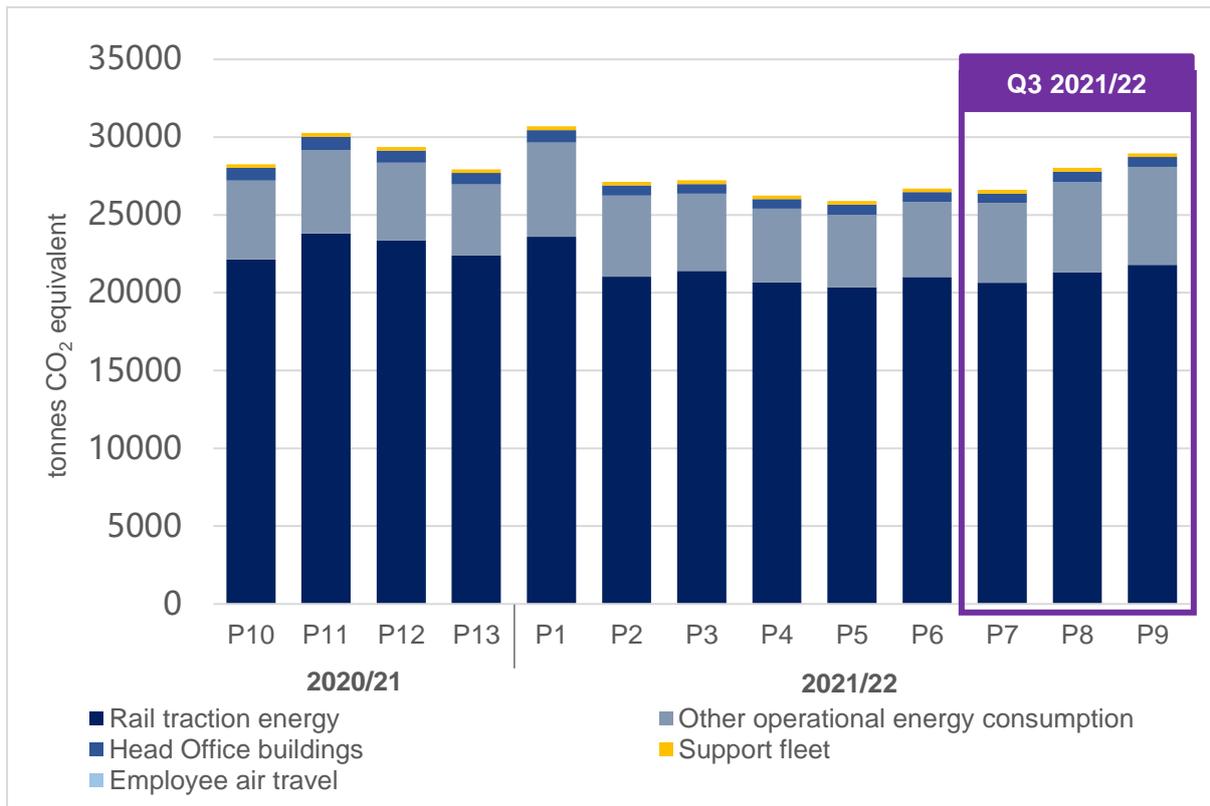
Transport is responsible for more than a quarter of London’s carbon emissions, and this share is increasing as other sectors decarbonise. We play a vital role in providing low carbon public transport to Londoners and in promoting walking and cycling. However, we must also lead by example and reduce carbon emissions from everything we do.

Electricity consumption - provisional (giga watt hours)



Electricity consumption in Quarter 3 saw a return to near pre-pandemic levels, being within one per cent of Quarter 3 2019/20, but a 5 per cent increase on last year, which is attributable to reduced service levels at that time.

CO₂ emissions, excluding buses (tonnes)



Carbon dioxide emissions from operations, excluding buses, track closely to electricity consumption. Despite overall electricity consumption increasing by five per cent compared to the Quarter 3 2020/21, carbon emissions reduced by four per cent as a result of grid decarbonisation.