

Board

Date: 17 March 2016

Item: Cycling Vision Portfolio – 2016/17

This paper will be considered in public

1 Summary

- 1.1 The Cycling Vision Portfolio was approved by the Board on 5 February 2014. This is an annual progress report on delivery of the Cycling Vision Portfolio, which is submitted to the Finance and Policy Committee and the Board. The portfolio has a budget of £913m under the TfL Business Plan. The Cycling Vision Portfolio is not seeking any further authority.
- 1.2 The approach for developing and delivering the Cycling Vision Portfolio received approval from the Board on 5 February 2014. The individual projects and programmes comprising the Vision Portfolio have been progressing within their own lifecycles, seeking the necessary approvals according to their estimated final costs.
- 1.3 On 2 March 2016, the Finance and Policy Committee endorsed the recommendations in this paper.

2 Recommendation

- 2.1 **The Board is asked to note the progress made to date on delivering the Cycling Vision Portfolio and the progress made in the last twelve months against the programme.**

3 Overview

Approvals

- 3.1 The individual projects and programmes have been progressing within their own lifecycles, with sponsor teams seeking the necessary approvals in accordance with their allocated budgets. A progress update against each of the projects and programmes is provided in section 5 of this paper.
- 3.2 The authority and arrangements for the Cycle Superhighways (CS) and Better Junctions programmes were approved by the Board on 5 February 2014 as follows:
 - (a) CS – Authority was granted for the development of the new CS routes to Pathway Stage Gate 4 (end of detailed design) with a requirement to return to the Board for approval to proceed with construction, and associated Project Authority. Approval for construction for CS3 (East West), CS6 (North

South), CS2 Upgrade, CS1, CS5 inner and upgrades to CS7 and 8 was granted by the Board on 4 February 2015.

(b) Better Junctions – Authority was granted for the development of the schemes being delivered directly by the Better Junctions programme (i.e. those not within the scope of other programmes).

3.3 The portfolio has a budget (financial authority) of £913m under the TfL Business Plan.

General progress

3.4 Following the launch of the Cycling Vision in 2013 and Board approval in February 2014, TfL is into the delivery stage of the Vision.

3.5 This period has seen a strong growth in cycling, with some roads in London now experiencing their highest-ever recorded cycling levels. TfL's annual report on travel trends, *Travel in London 8* (December 2015) reported 645,000 cycle journey stages in London on an average day in 2014, representing a 10.3 per cent increase on 2013 levels.

3.6 Cycling is now a major mode of transport, with daily trips equating to 10 per cent of all bus passenger trips in London, or one fifth of all tube passenger trips. This is just less than the number of trips on the DLR and Overground combined.

3.7 In conjunction with this growth in cycling, the past 12 months have seen TfL demonstrate its strongest delivery yet of Cycling Portfolio interventions.

3.8 The core Portfolio infrastructure schemes are now physically transforming London's streets, with all the major infrastructure programmes – CS, Quietways, Central London Grid, Mini-Hollands and Better Junctions – being delivered on the ground (see section 5 below for more details). CS 5 Inner and sections of CS6 (North-South) and CS3 (East-West) have been opened, along with the introduction of innovative junction layouts and cycle signals.

3.9 Alongside the infrastructure delivery, the Vision's behaviour change interventions are now well into their second year of operation, with key successes including cycle training for adults and children, successful delivery of major events such as RideLondon and the 2014 Tour de France, and engagement of businesses through Cycling Workplaces. In addition, TfL has delivered a wide range of projects across all modes that further break down barriers to cycling, in particular the Safer Lorries Scheme that went live in September 2015.

3.10 Cycle safety remains a key concern for TfL. In 2014, there was a 12 per cent reduction in the number of cyclists killed or seriously injured (KSI) in London compared to 2013. This reduction in serious and fatal casualties has contributed to meeting the Mayoral target of a 40 per cent reduction in KSIs on London's roads 6 years ahead of the 2020 target.

- 3.11 The unprecedented and transformational scale of cycling infrastructure delivery this year has presented a range of challenges, which TfL has worked hard to address. In particular, we recognise there have been impacts on other road users arising from the construction work to build the new infrastructure.
- 3.12 The network impacts of the cycling programme need to be seen in their wider context. London is experiencing unprecedented growth in its population, which is forecast to rise by 1.4 million people to 10 million by 2031. This growth means that we are seeing a huge amount of development taking place, with developers, boroughs and utility providers building additional homes, shops, public places and infrastructure.
- 3.13 The roadworks associated with the cycling improvements on the Transport for London Road Network (TLRN) and borough roads are part of the much larger programme of renewal and improvement of London's road network. This includes TfL's Road Modernisation Programme (RMP) which, at £4 billion up to 2020/21, is the largest ever investment in London's roads and streets to modernise London's road network. The RMP includes significant investment by TfL and the boroughs to renew ageing highway assets; improve the quality and safety of the TLRN; and borough Local Implementation Plan (LIP) schemes designed to improve local transport choices, safety and public spaces. The public utilities are also undertaking a substantial programme of asset renewal and developers and landowners are engaged in a major programme of new building as part of London's wider growth.
- 3.14 To mitigate the disruption caused by the Cycling Vision and the wider RMP infrastructure works, and to minimise adverse impacts on other modes including buses, TfL has implemented a range of measures including:
- (a) managing London's road network more intensively via its 24/7 traffic control centre, using traffic signals to dynamically manage congestion in real time, respond to incidents and protect critical bus corridors;
 - (b) managing the bus network and implementing temporary scheduling and service control measures to preserve journey times;
 - (c) tasking Roads Policing Units to incidents and congestion hot spots;
 - (d) working with the freight industry to retime deliveries to avoid the busiest times;
 - (e) delivering a 'London 2012 Games-style' campaign to communicate the benefits of the RMP and keeping all those affected updated with useful travel advice. This is being done through radio, press, roadside message signs and social media in addition to the TfL website and regular emails;
 - (f) leading engagement with stakeholders to raise awareness of the works associated with the RMP, plan appropriate mitigation and encourage planning ahead. Schools, businesses, community groups and faith groups affected by the works are identified, engaged and offered support. TfL has engaged with 44,000 businesses and 2,000 faith groups across Greater London as well as 100 per cent of schools in the impacted areas; and

- (g) developing and using a database of over 360 cycle clubs, cycle cafes and retailers to ensure these cycling contacts are aware of the works. As well as informing these groups of the works and helping them plan around the disruption, the database enables TfL to promote the new cycling infrastructure to that audience once complete.
- 3.15 Londoners should start seeing a reduction in delays from early 2016 as individual schemes complete and the benefits of the RMP are realised. Conditions are then expected to continue to improve through to early 2017 when key schemes of this phase of the RMP are due to finish.
- 3.16 As set out in the Vision Business Case, the Portfolio delivery is starting to realise a significant range of benefits for London, including health, better places and economic benefits (see section 8 for details of benefits). A full benefits realisation plan is scheduled for completion in 2016 to ensure that all of these are captured and lessons learned.
- 3.17 The 2015 Integrated Assurance Review of the Portfolio provided a positive endorsement of the Portfolio delivery undertaken by TfL in 2015. No critical issues were identified, and the six recommendations will be taken forward by TfL as actions to further improve the delivery of the Portfolio into 2016.

4 Background

- 4.1 In March 2013, the Mayor's Vision for Cycling set out a comprehensive portfolio of measures to deliver the outcome of *'More and safer cycling: enabling more people to cycle, more safely, more often'*. The Vision comprises four key delivery elements:
 - (a) a Tube Network for the Bike: a network of direct, high-capacity, joined-up cycle routes;
 - (b) more People Travelling by Bike: to 'normalise' cycling, making it something everyone feels comfortable doing;
 - (c) safer Streets for the Bike: streets and spaces will become places where cyclists feel they belong and are safe; and
 - (d) better Places for Everyone: improvements will help all Londoners, whether or not they have any intention of getting on a bicycle.
- 4.2 The Cycling Vision aims to deliver 1.5 million cycle journeys per day by 2026, as agreed by the Board in March 2015. It equates to the original target set out in the Mayor's Transport Strategy, 2010 (MTS) to deliver a 400 per cent increase on 2001 cycling levels.
- 4.3 This growth ambition is based on TfL analysis which demonstrates that enhanced investment in cycling infrastructure would not only improve the "level of service" for existing cyclists, but also ensure that cycling – as a very cost-effective form of "mass transit" – would help to meet the wider growth in demand on London's transport system.

- 4.4 The Vision is not just about the number of cycling journeys, but also the normalisation of cycling, to make cycling a mainstream mode of transport, attracting people of all ages and backgrounds to cycle in every London borough. Improving safety is key to this.
- 4.5 The Vision was developed using robust transport planning analysis to target investment to where it would have most impact and attract a wide range of new cyclists.
- 4.6 The approach for developing and delivering the Cycling Vision Portfolio received approval from the Board on 5 February 2014. As part of that approval it was agreed that progress reports on portfolio delivery would be brought back to the Board on an annual basis to ensure ongoing overview of the entire portfolio and agree any substantial changes to the base programme.
- 4.7 The Annual Update to the Board is informed by an annual Integrated Assurance Review (IAR). Since its inception in 2013, the Cycling Vision Portfolio has been subject to an IAR every year, in which all Portfolio-level activities are reviewed by External Experts and the Independent Investment Programme Advisory Group (IIPAG). The 2015 review was completed in November 2015.
- 4.8 The key outputs from the IAR are advice and recommendations that guide TfL in enhancing future Portfolio delivery. Section six of this paper sets out the progress made on addressing the November 2014 IAR recommendations, and TfL's proposals for addressing the additional recommendations raised through the November 2015 IAR. No 'critical issues' were identified in the 2015 review, however a series of recommendations were put forward by the External Experts and IIPAG (see section 6 and Appendices 2 and 3).
- 4.9 In summary, TfL has made significant progress against the Portfolio delivery plan and high-level Vision target in 2014/15, as well as addressing the recommendations of the 2014 IAR.
- 4.10 The rest of this paper reports on the delivery that has supported the growth in cycling, as well as emerging challenges and TfL's proposals to address the latest set of IIPAG recommendations.

5 Annual Progress

- 5.1 Considerable progress has been made in the last year on the delivery of cycle infrastructure schemes, supported by behaviour change programmes and other measures to break down barriers to cycling. The Cycle Vision portfolio and cycling in London has gained a high profile through extensive consultation works, engagement programmes and events. TfL has worked closely with delivery partners and other stakeholders to scope projects and develop these through feasibility and design, and into delivery.
- 5.2 This section sets out the progress to date in developing the programmes that comprise the Cycle Vision portfolio. It also tracks progress in achieving the overarching objectives of the portfolio: to increase cycling and deliver the four key elements set out in paragraph 4.1 to help overcome the key physical, cultural and personal barriers to cycling.

- 5.3 The next Cycling Vision Portfolio annual progress update will be provided in early 2017.

A Tube Network for the Bike

Cycle Superhighways (CS)

- 5.4 The CS programme has £193m committed from the Cycling Vision portfolio.
- 5.5 CS routes, a key element of the Cycle Vision Portfolio, are high capacity routes that provide safe, fast, direct, continuous and comfortable ways of getting into and across central London by bicycle along recognised commuter routes. The CS programme plays a central role in realising the benefits of the Portfolio both geographically – by covering areas with high demand – and also in terms of attracting people who do not currently cycle for safety reasons.
- 5.6 The CS have been developed in line with both the ‘Love London, Go Dutch’ principles and the ‘Mayor’s Vision for Cycling in London’, and in consultation with a large number of key stakeholders along the proposed routes. The routes target corridors which lack facilities for cyclists and which already have some of the highest cycle flows in central London, and where there is a potential for significant growth in cycling.
- 5.7 Dutch cycling infrastructure is famous for its high quality, which makes cycling an attractive and suitable choice for a wide range of users. Ahead of the 2012 Mayoral Election, the London Cycling Campaign called upon the Mayoral candidates to commit to a ‘Love London, Go Dutch’ pledge. The five leading candidates made this commitment, which included ensuring that London’s CS met the high standards of Dutch design.
- 5.8 Safety, or the perception of safety, is often the main reason both would-be and existing cyclists give about why they do not cycle, or do not cycle more¹. The segregated nature of the majority of the CS infrastructure – with separation from other road users in time and space on both links and at junctions – breaks down these significant barriers: the perception that cycling is unsafe, and that there is a lack of specific infrastructure for cyclists. There is a clear transport planning rationale underpinning this approach:
- (a) evidence from elsewhere supports segregation to address cyclist safety, for example Copenhagen’s cycle tracks which have been introduced over the last 25 years are mostly segregated and over the same period the risk of a cyclist being involved in a serious collision reduced by 72 per cent per cycled kilometre²;
 - (b) segregation is being introduced on CS routes that have undergone extensive consultation with the public and key stakeholders, and where the nature of the road and volume of traffic have highlighted segregation to be necessary; and

¹ Identified through various research including annual Attitudes to Cycling surveys; Cycling in London (2008) and Cycling behavioural survey (2010)

² Copenhagen Cycling Strategy, 2011-2025

- (c) the segregated facilities have been designed in accordance with both the Mayor's 'Go Dutch' pledge and the high quality standards set out in 'London Cycle Design Standards' (which itself is based on international best practice).
- 5.9 In February 2015 the Board approved construction of four new CS and upgrades to the existing four CS routes to be delivered by the end of 2016. This included additional £95.1m project authority and £77.5m procurement authority for:
- (a) East-West CS3 (Phase 1): Tower Hill to Westbourne Terrace;
 - (b) North-South CS6: Elephant & Castle to King's Cross³;
 - (c) CS5 Inner: Oval to Pimlico;
 - (d) CS1: Tottenham to the City;
 - (e) CS2 Upgrade: Bow to Aldgate; and
 - (f) upgrades to CS3, CS7, and CS8: various locations (rolling programme of minor projects).
- 5.10 Since the last update to the Board, significant progress has been made on the delivery of the CS programme and works remain on schedule. Sections of cycle track have already been opened for use, including sections of flagship routes CS6 (North-South) and CS3 (East-West). This also includes the introduction of new cycle friendly junction layouts that use innovative features to protect cyclists from other traffic.
- 5.11 Of particular note, CS5 Inner between Oval and Pimlico was completed and officially launched by the Mayor in November 2015. Initial monitoring shows the cycle track is well used with cyclists making up approximately 40 per cent of total vehicle traffic on Vauxhall Bridge during the peak periods, alongside positive feedback from cyclists of the transformative change the route has brought to the area. This initial monitoring also shows that 93 per cent of evening peak cyclists travelling along the CS5 route are using the new segregated track instead of the main carriageway. This high usage of segregated facilities is consistent with observations elsewhere in London. For example London Borough of Camden introduced a trial of temporary wider segregated cycle tracks in Bloomsbury in November 2015 and initial monitoring from Camden has shown that during a 12 hour period, over 98 per cent of cyclists cycled within the segregated tracks.
- 5.12 Despite the good progress made on the CS programme, a number of risks have materialised during the current construction programme, including late design changes from key stakeholders, difficulties and cost increases in diverting utilities, and unplanned changes to traffic management or construction phasing. These are being addressed through robust risk management processes.

³ Subsequently split into two phases, with construction of phase one (Elephant & Castle to Stonecutter Street) underway

- 5.13 Public consultation has started on proposals for the next phase of CS, including:
- (a) East-West CS (Phase 2): Westbourne Terrace to Acton;
 - (b) North-South CS (Phase 2): Stonecutter Street to King's Cross; and
 - (c) CS11 (Phase 1): Swiss Cottage to Portland Place
- 5.14 Subject to the results of the consultations, it is currently anticipated that requests will be submitted to the Board in summer 2016 seeking additional project and procurement authority to commence construction. Proposals for further phases of the CS programme are continuing to be developed, subject to technical feasibility and public consultation following the Mayoral election.

Quietways

- 5.15 The Quietways programme has a budget of £123m to create a network of radial and orbital cycle routes across London. They will be well-signed, linking key destinations that follow direct back-street routes, and may include parks or waterways.
- 5.16 Quietways are designed to appeal to non-cyclists as well as existing cyclists; providing quieter routes away from main roads for cyclists who wish to travel at a more leisurely pace. They also include orbital routes between outer London town centres, to target trips that are currently being made by car.
- 5.17 Potential Quietways routes were identified with individual London boroughs using the following assessment criteria to provide the rationale for route selection: directness and cohesion; attractiveness; traffic composition and impact on other users; buildability; political support; network prioritisation and phasing.
- 5.18 The Quietways programme is divided into two phases to prioritise and stage delivery:
- (a) Phase 1 consists of seven routes, due to complete in 2016; and
 - (b) Phase 2 consists of 30 routes and three large interventions, split into three delivery phases:
 - (i) Phase 2.1: 13 routes due to be delivered by August 2018;
 - (ii) Phase 2.2: nine routes due to be delivered by November 2018; and
 - (iii) Phase 2.3: eight routes with funding for design and project management only.
- 5.19 In March 2014, seven pilot Quietway routes were selected in the first phase of the programme. Phase 1 routes meet the Quietways criteria, including buildability by 2016. They include both orbital and radial routes across 16 London boroughs; demonstrate differing Quietway characteristics; complement existing and planned infrastructure; and also represent a good geographical spread across London.

5.20 The first two pilot Quietways Quietway 1 (Waterloo to Greenwich) and Quietway 2 (Bloomsbury to Walthamstow) will be launched in spring 2016 and December 2016 respectively. Both routes have experienced programme delays. This has been due to route realignment and resourcing levels and contractor delays in the boroughs. Both TfL and the boroughs are working hard to address these issues and lessons learned will be taken forward to mitigate risks to the rest of the programme. Construction has already commenced on Quietway 3 (Regents Park to Gladstone Park) and Quietway 6 (Aldgate to Hainault). All seven Phase 1 routes are due to be completed in 2016. The remaining routes not listed above are:

(a) Quietway 4 (Clapham Common to Wimbledon);

(b) Quietway 5 (Waterloo to Croydon); and

(c) Quietway 7 (Elephant and Castle to Crystal Palace).

5.21 Following a competitive procurement exercise in December 2014, Sustrans was appointed as the delivery agent to assist with the management and coordination of the Quietways programme across the boroughs. Sustrans also provides detailed design and stakeholder engagement resource for the boroughs to develop future routes as these are determined.

5.22 Since the 2015 Cycling Vision update, the second phase of Quietways routes has been defined. Phase 2 consists of 30 routes and three large interventions (one to feasibility stage only). Large interventions are discrete high value schemes that will address severance and unlock the potential of the surrounding cycle network.

5.23 Inception meetings have been held with all delivery partners and route rides carried out on all 13 Phase 2.1 routes. Feasibility work is now in progress for the three large interventions; two cycle/pedestrian crossings of the A406 in North West and East London and the study into a crossing over the River Darent in Bexley. These new bridges will create new cycle links between inner and outer London, unlocking the potential for growth in cycling trips in these areas.

The Central London Grid

5.24 The Central London Grid (the Grid) has a budget of £54m to create a dense network of routes on borough and TfL roads within Central London, linking to existing and planned CS. The programme is being delivered by TfL and its delivery partners (nine inner London boroughs, the Royal Parks and the Canal and River Trust).

5.25 The highest concentration of potentially cyclable trips is in the centre of London, in the area covered by the Grid. The Grid will provide a connected network of routes between multiple origins and destinations, complementing other cycling programmes such as the CS, Better Junctions, Cycle Hire and cycle parking programmes. Surveys on the proposed Grid network, undertaken in autumn 2015, show that there was an average daily cycling mode share across the network of 21 per cent.

- 5.26 In December 2013, TfL published a consultation map showing 200km of potential Grid routes developed by the partners for stakeholder feedback. Of these routes, 100km have been agreed for completion by the end of 2016. The prioritisation process for the network considered a number of criteria including: Grid objectives and level of service; highway consents; deliverability; and stakeholder engagement feedback.
- 5.27 Construction is now in progress, with 39 of the 126 schemes now in construction or complete. This equates to 18kms of route. Designs for 105 of the 126 schemes have been received from boroughs, of which 93 have been approved by TfL (figures correct as at 18 February 2016).

Mini-Hollands

- 5.28 The Mini-Hollands is a £100m programme to transform three outer London town centres – Kingston, Enfield and Waltham Forest – and make them as cycle-friendly as their Dutch counterparts. It is the only infrastructure programme in the Vision being entirely delivered in outer London.
- 5.29 The Mini-Hollands programme delivers a variety of infrastructure and behaviour change schemes in the three outer London boroughs. The measures are focused around main and secondary town centres and are aimed at shifting trips currently made by motorised modes to the bicycle; especially the high number of short car trips. The work will also deliver wider benefits, including improved pedestrian environments and is being delivered by the three Mini-Holland boroughs and TfL (TLRN and signals elements). In total, the Mini-Holland programme delivers 101 projects (96 infrastructure schemes and five supporting measures projects).
- 5.30 Since December 2014, all three Mini-Holland boroughs have commenced construction. Waltham Forest has completed two pilot schemes, Walthamstow Village Trial and Ruckholt Road cycle route, and has opened a new cycle/foot bridge on Lea Bridge Road and three cycle hubs. Construction has started on Enfield's main Quietway route from Enfield Town to Meridian Water and three out of the four major cycle corridor schemes have been consulted on. Construction is well underway on Portsmouth Road, one of the major corridor schemes in Kingston.
- 5.31 The transformative nature of the changes has provided some challenges and there has been some opposition in the Mini-Holland boroughs. However, through careful stakeholder management and support from TfL, the boroughs are overcoming these challenges to deliver their programmes.
- 5.32 Delivery of the supporting measures has started in all three boroughs. Initiatives range from cycle training to wayfinding and promotional work, to encourage more people to cycle and support infrastructure measures.
- 5.33 All Mini-Holland infrastructure projects are progressing well. Within each of the three Boroughs, the following progress is expected by the end of 2016:
- (a) Waltham Forest will have all schemes complete or under construction (the Lea Bridge Road major scheme will continue construction beyond the end of

2016);

- (b) Enfield will have 14 out of 51 schemes complete or under construction including some of their major corridor schemes; and
- (c) Kingston will have six out of 17 schemes complete or under construction.

Wayfinding Strategy

- 5.34 The Cycle Wayfinding Programme will deliver a range of innovative navigational and promotional tools to ensure that the 'Tube Network for the Bike' is used and understood by all existing and potential cyclists.
- 5.35 New and improved cycle signage has been developed for the Quietways and will be implemented on the first two pilot routes launching in 2016. The signage has been developed with the London boroughs and other delivery partners and the design has been shaped by detailed customer testing. Further customer testing will take place following delivery on the pilot routes, before the signage is rolled out across all remaining Quietways and the Central London Grid.
- 5.36 A comprehensive 'Cycle Infrastructure Database' (CID) is being created to provide a detailed and maintainable record of all cycling infrastructure across London (for example cycle parking and cycle lanes). On-street data collection for the database will take place in 2016. Once complete, the CID will inform and enhance the content of all future Cycle Guides, online route mapping, the TfL Journey Planner and third party cycle wayfinding apps/maps.
- 5.37 A batch of 250,000 Santander branded Cycle Guides have been designed and printed. A comprehensive distribution strategy is being undertaken to provide these guides to members of the public via online orders, cycle shops, schools, workplaces, universities and libraries.
- 5.38 The TfL Journey Planner has been upgraded to include a series of improvements and new functionalities for cyclists. Further phases of development will take place throughout 2016 and beyond.
- 5.39 Cycle Hire docking stations will be updated to include the alignments of all surrounding CS and Quietways on both the glass panel maps and electronic screens. This approach will first be trialled in summer 2016 as part of a scheduled update to on-street Legible London mapping products.

More People Travelling by Bike

Expanding and improving Cycle Hire

- 5.40 The programme to intensify the Cycle Hire network's coverage has delivered approximately 300 docking points into operation with a remaining 600 to be live by the end of March 2016. By May 2016, up to 1,000 new docking points will have been delivered since January 2015.
- 5.41 Expansion of the scheme to the Queen Elizabeth Olympic Park (QEOP) was launched in February 2016. A further three docking stations will be installed in

QEOP over 2016 as part of local developments.

- 5.42 The Cycle Hire App launched in May 2015 and has been downloaded 150,000 times, with more than 300,000 cycles released through the app. The Cycle Hire spring/summer marketing campaign was live through to October 2015. The focus of the campaign was on increasing hires through the app and encouraging lapsing members to re-join. Cycle Hire business accounts are now fully live after a soft launch in the summer. A full promotional campaign will be undertaken in spring 2016 to maximise likelihood of uptake in fairer weather.
- 5.43 Scheme satisfaction and advocacy remains high among members and is continuing to rise among casual users. Casual users reported the highest ever levels of both satisfaction, and likelihood to recommend, and 85 per cent of members declared they will renew their membership, a peak score. It is also clear the scheme continues to meet the policy aim of introducing people to cycling, with 63 per cent of respondents stating Santander Cycles prompted them to start cycling in London.
- 5.44 Procurement is underway for the bike management and supply elements of the contract re-let. Bidders' responses were received in January for evaluation. Procurement authority has been granted for the integration of the on-street fixed asset maintenance services and systems into the Revenue Collection Contract (RCC) with Cubic.

Cycling Workplaces

- 5.45 Cycle safety training, awareness and cycle maintenance courses are being delivered for commuters through the Cycling Workplaces scheme which was awarded Best Cycling Scheme at the 2015 London Cycling Campaign Awards.
- 5.46 Between April 1 to 14 November 2015, 601 businesses have signed up for the scheme, with over 104,000 employees engaged. 50 cycle safety sessions have been delivered with 430 individuals attending these sessions, and a further 367 individuals have received one-to-one cycle training. In addition, over 1,300 cycle parking spaces have been delivered to workplaces to improve cycling facilities at the workplace.

Helping children cycle

- 5.47 The Schools Education and Training Programme has continued to encourage safe and active travel to school through a range of projects involving primary and secondary schools.
- 5.48 In June 2015, TfL awarded 1,475 schools Sustainable Travel: Active, Responsible, Safe (STARS) accreditation, representing 46 per cent of London schools, the highest proportion of schools taking part since the programme began in 2007. Schools at the highest level of STARS accreditation have an average two per cent increase in cycling to school. In partnership with the London boroughs, in the past year, TfL has offered cycle training to every school across the Capital through the LIP and Borough Cycling Programmes and is on track to exceed our target of 24,000 children trained to Bikeability Level 2 by year end.

- 5.49 In 2014/15 and 2015/16, TfL granted £361k of Cycle Grants for Schools to 110 schools in 23 London boroughs providing schools with cycle clubs, led rides, pool bikes, and other cycling promotion activities to encourage cycling to school. TfL has also worked with Sustrans to deliver Bike It Plus to 164 schools. Through Bike It Plus, schools are provided with staff support to create a cycling culture in the schools through a year of sustained cycling activities, doubling the numbers of children cycling regularly to those schools.
- 5.50 The Youth Travel Ambassador programme in secondary schools promotes active, safe and responsible travel through peer to peer campaigns. One campaign, that achieved a 158 per cent increase in cycling to school, was awarded a National Cycling Excellence Award in November 2015.

Community Engagement

- 5.51 In the past year TfL has awarded 31 community groups and not-for-profit organisations with grants of up to £10,000 each through Cycling Grants London (CGL). CGL offers funding and support to community groups such as residents' associations, charities and youth groups for projects that encourage people of all ages and backgrounds to cycle safely.
- 5.52 Twenty five community roadshows were delivered during summer 2015 to raise awareness of the Mayor's Vision for Cycling in London and encourage uptake of adult cycle training. The interactive stands attracted over 8,800 people at events across London.
- 5.53 Between 1 April and 31 December 2015 7,038 adult cycle training courses were delivered in partnership with London boroughs through the LIP and Borough Cycling Programme.
- 5.54 The third year of Prudential RideLondon was the busiest yet. On 1 and 2 August 2015 around 90,000 cyclists took to two wheels, watched by around 250,000 spectators. This was followed by the 2015 Aviva Tour of Britain which took place on a new route through central London in September. The event attracted a world class field and crowds in excess of 200,000, the highest experienced for the final stage in London since TfL began sponsoring the event in 2004.

Encouraging cycling through the boroughs and other partners

- 5.55 Since April 2014, over £17m has been made available under the Borough Cycling Programme across the 33 London boroughs over a three year period (2014/15 to 2016/17) to deliver a range of cycling measures. These include residential, on-street and station cycle parking; cycle training (for children and adults); Safer Urban Driving courses to reduce lorry, van and coach conflict with cyclists; and monitoring and support. The funding available is in addition to the LIP allocations.

Cycle Superhubs and Cycle Parking

- 5.56 A major Cycle Superhub is planned for delivery at Waterloo station in 2018/19 with parking spaces for thousands of cycles. A demand analysis study has been completed which shows demand for up to 8,000 spaces by 2026. TfL has been

working closely with the Department for Transport and Network Rail to secure the space for the Superhub.

- 5.57 A number of suburban hubs with parking for over a hundred cycles will be delivered at outer London stations. Hubs at Hounslow West and North Greenwich are on track to be delivered by March 2016. Further hubs are planned for Tottenham Hale, Abbey Wood, Barking and Romford in 2018/19.
- 5.58 TfL remains on track to meet the Mayor's target of 80,000 cycle parking spaces to be delivered by 2016.

Safer Streets for the Bike

Better Junctions

- 5.59 TfL is substantially redesigning 33 locations known as 'Better Junctions' including some of the largest, highest profile and worst performing junctions and gyratories for cyclists and pedestrians across London. The aim is not only to provide substantial cycling infrastructure improvements, but also to provide improvements for other vulnerable road users, to enhance the urban realm and create places where people will want to come and visit.
- 5.60 TfL has committed to delivering 10 junction improvements by summer 2016, with work currently on schedule. Following a public consultation that showed 80 per cent support, construction works began at Elephant and Castle Northern Roundabout in April 2015 to support one of London's biggest regeneration projects, replacing subways with wide pedestrian crossings, and provision of dedicated and direct cycle routes through the junction. The gyratory system was removed and two-way operation introduced in December 2015 which will enable the creation of a new public space.
- 5.61 As part of the Better Junctions programme, an extensive series of successful off-street trials have been completed to test various design innovations including cycle friendly junction layouts, low level bicycle signals, bus stop by-passes and different formats for segregating cyclists from other traffic. The results of these trials are now being used to bring innovative new features to schemes across the Cycling Vision Portfolio, including the 'UK first' junctions opened at Oval Triangle and on CS2 at Mile End Road, and the new roundabout design at Queen's Circus.
- 5.62 Construction work across the programme continues, with Oval Triangle, Stockwell Cross, and Aldgate Gyratory on schedule for completion in 2016, and Archway Gyratory due to commence main works in March 2016.
- 5.63 The remainder of the programme continues to be developed, with the proposal for Westminster Bridge South issued for public consultation in November 2015, including dedicated facilities on Westminster Bridge linking to the East-West Cycle Superhighway. A consultation for Hammersmith Gyratory is planned for early 2016.
- 5.64 Although the programme was revised to focus resources on the 33 identified Better Junction locations, TfL and the Mayor also committed to reviewing the

original list of 100 junctions. This is now complete. Funding has been allocated within the programme to ensure that where recommendations for improvements have been made, these will be delivered on an individual basis.

Cycle Safety Action Plan

- 5.65 The most recent version of TfL's Cycle Safety Action Plan (CSAP) was published in November 2014. The CSAP contains 33 actions, all of which are on track, with substantial progress in delivering cycle infrastructure, cycle training and safer lorries on London's roads. Reducing traffic speed makes cycling safer and more attractive and so 20mph limits are a key tool in further reducing KSIs.
- 5.66 The CSAP recognises that HGVs are over-represented in fatal collisions with cyclists. As a result several HGV safety programmes were delivered in 2015, including the Safer Lorry Scheme introduced on 1 September 2015. Working with operators and manufacturers, TfL has also made significant progress in generating demand for trucks with much improved direct driver vision.

Marketing

- 5.67 TfL runs a number of marketing campaigns to improve cyclist safety through changing road user behaviour. Share the Road, the emotive campaign, launched in summer 2014, and ran through 2015 in cinema and on TV. The campaign engendered mutual understanding and respect between all road users, asking them to reconsider their attitudes. The Cycle Safety Tips marketing campaign also continued to run throughout 2015, both online and on street. The campaign addressed motorists and cyclists in an even-handed and balanced way.
- 5.68 TfL recently announced a new approach to road safety, refocused on ensuring our actions more effectively address the causes of road danger (including speed, distraction and risky manoeuvres). This approach has been used to inform a new road user behaviour campaign, launched in November 2015 as posters, online and on radio.

Safer Lorries Scheme

- 5.69 Heavy goods vehicles (HGVs) are over-represented in fatal collisions involving cyclists and pedestrians. In 2014, HGVs were involved in five out of 13 fatal incidents and provisional data for 2015 shows that to date, HGVs were involved seven out of nine fatal incidents. The Lorry Safety programme establishes a number of measures to ensure that the safest HGVs operate in London using buying power, industry collaboration and enforcement.
- 5.70 The Safer Lorry Scheme, launched on 1 September 2015, requires every heavy goods vehicle in London over 3.5 tonnes (with a few exemptions) to be fitted to European standards with:
- (a) side guards to protect cyclists from being dragged under the wheels in the event of a collision; and
 - (b) Class V and VI (close proximity) mirrors giving the driver a better view of cyclists and pedestrians around their vehicles.

- 5.71 The Safer Lorry Scheme requirements are being enforced by the Metropolitan Police, City of London Police and the Driver and Vehicle Standards Agency through the Industrial HGV Task Force. Non-compliance attracts a £50 fixed penalty notice or £1000 fine in the magistrates court. The most recent enforcement activity suggests that 97 per cent of vehicles checked are compliant with the scheme. The majority of offences relate to close proximity mirrors not being fitted or being poorly adjusted, with very few side guard offences identified.
- 5.72 TfL wants to build on the success of the Safer Lorries Scheme and further improve the safety of HGVs in London. As such, preliminary public consultation is currently underway (and due to end on 4 March 2016) on proposals to require HGVs operating in London to be fitted with a clear window panel in the passenger-side door, to improve driver visibility and cycle safety. The results will also inform the next Mayor's Transport Strategy.

Construction Logistics and Cyclist Safety (CLOCS) Programme

- 5.73 Over the past three years, TfL's principal initiative to influence HGV safety has been the CLOCS programme. CLOCS is leading a visionary change in the way the construction industry manages road risk. This is being achieved through three industry led workstreams:
- (a) improving vehicle safety through design and manufacture of safer new vehicles and fitment of appropriate safety equipment to existing vehicles;
 - (b) addressing the safety imbalance in the construction industry through ensuring road safety is considered as important as health and safety on site; and
 - (c) encouraging wide adoption of best practice across the industry through a common national standard and new cultural norm.
- 5.74 CLOCS was awarded the Prince Michael International Road Safety Award in November 2015. Building on the success of CLOCS, a Safer Trucks programme has been introduced. Safer Trucks aims to accelerate the development, supply and wider uptake of safer HGVs.
- 5.75 The next steps for the Lorry Safety programme will be to harness the momentum and success of the CLOCS, Safer Trucks and Safer Lorry Scheme to push for more enhanced direct vision lorries, where the basic design of the cab allows for much higher levels of direct visibility around the vehicle.

Awareness and Enforcement

- 5.76 TfL has a strong and successful partnership with the Metropolitan Police Service (MPS) through the Roads and Transport Policing Command (RTPC), launched in January 2015. Our shared emphasis is on improving road user behaviour through a balanced programme of education, engagement and enforcement, focusing on the key sources of danger.
- 5.77 The RTPC has a dedicated Cycle Safety Team made up of police officers on bikes who undertake proactive enforcement and engagement with cyclists and other road users to reduce risks on the roads across London. From December

2014, the number of MPS RTPC officers was increased to 50 dedicated officers. The team is also a 'centre of excellence' for the MPS on promoting responsible cycling.

- 5.78 The RTPC is responsible for delivering a number of commitments in the Cycle Safety Action Plan including Operation Safeway to improve road user behaviour and reduce collisions through high visibility activity at priority junctions and other locations. Operation Safeway takes place two days every month to combat seasonal casualty peaks and the last intensive phase took place in October and November 2015. The headline results from this phase include:
- (a) activity was undertaken at over 1,100 different locations across London;
 - (b) 7,202 officer deployments during morning and afternoon peaks over 20 days;
 - (c) officers engaged with almost 25,000 road users (including drivers and cyclists);
 - (d) 3,716 Traffic Offence Reports issued to road users (including drivers and cyclists); and
 - (e) 81 arrests were made.
- 5.79 With support from TfL and a dedicated lorry, the RTPC also runs Exchanging Places events. These events allow cyclists the opportunity to experience what a driver of a heavy goods vehicle or bus sees from the cab, and demonstrates how to safely share the road with these large vehicles.
- 5.80 To further encourage safer and more responsible cycling, the RTPC will soon offer Safe Ride Safe Road, an online educational course on responsible cycling for a reduced payment of a fixed penalty notice.

Better Places for Everyone

- 5.81 Through a programme of monitoring the implementation of the Mayor's Vision for Cycling, TfL is measuring the impact of investment on all users. This includes surveys based on the Healthy Streets indicator introduced by the 'Improving the health of Londoners' transport action plan. Projects such as the transformation of Orford Road in Walthamstow – part of Waltham Forest's Mini-Holland programme – show that improvements forming part of cycle network development have a great deal to offer to the quality of local places and vitality of local economies.

Developing best practice in cycle infrastructure design

- 5.82 Since publishing the revised version of the London Cycle Design Standards (LCDS) in 2014, TfL has been applying the new guidance to the Mayor's Vision for Cycling delivery programmes, including CS, Quietways, Central London Grid and Mini-Hollands. TfL provides design training for London's cycle infrastructure design practitioners. In 2015, the range of courses increased to include an in-depth five-day course, as well as the ongoing two-day LCDS course.
- 5.83 The Cycling Level of Service (CLoS) tool introduced by LCDS is being used widely as a way of assessing improvements for cyclists and comparing design options. It breaks down the key factors that contribute to the 'cyclability' of any street or cycle facility into 34 measurable components, allowing designers both to

give an overall rating and to identify specific strengths and weaknesses. LCDS and CLoS are promoted at the national level by the Department for Transport through its Cycle Proofing Working Group, and expertise developed in London is being shared with other UK cities seeking to improve their cycle networks.

6 Changes to the Cycling Vision Portfolio

2015 Integrated Assurance Review and TfL Management Response

- 6.1 This annual update is informed by an annual Integrated Assurance Review (IAR). Since its inception in 2013, the Cycling Vision Portfolio has been subject to an IAR every November, in which all Portfolio-level activities are reviewed by both External Experts and IIPAG. The most recent review was completed in November 2015.
- 6.2 The November 2015 External Experts' and IIPAG reports set out the main challenges for TfL in delivering the Cycling vision, and provides a series of recommendations to address these. Importantly, the 2015 review did not find any critical issues relating to TfL's ongoing management of the Portfolio. The external experts' report identified six recommendations, and the IIPAG report distilled this into the following three recommendations:
- (a) that a set of simple measures for valuing the work done against the budget expended are prepared for the more significant areas of expenditure within the portfolio. ***TfL will undertake this in the first half of 2016;***
 - (b) that the benefits produced by the portfolio are measured such that progress towards the planned number of cycle journeys can be reviewed and, if necessary, adjustments can be made to the portfolio going forward. ***To address this, TfL put in place a Monitoring Strategy in 2015 (see section 7) and will complete the benefits realisation strategy (see section 8); and***
 - (c) that the terms of reference for the Cycling Outcome Board (COB) are reviewed to ensure that the COB both effectively controls portfolio expenditure and monitors and influences the outcomes. ***TfL will undertake a review of the role of the Cycling Outcome Board in 2016 and update the terms of reference and processes accordingly.***
- 6.3 One of the main challenges highlighted in the review is that spending of the portfolio budget to date has been less than originally forecast at the inception of the Vision. This particularly applies to major infrastructure programmes.
- 6.4 Each of the Cycling Vision programmes (for example Quietways, CS and Mini-Hollands) report to individual programme boards and the reasons for the delays within these individual programmes are covered within this process. However, at a portfolio-wide level, the IAR identified that work being undertaken with or by some of the boroughs has caused most of the delays across the Portfolio in general, coupled with some continuing changes of scope arising following public consultation.

- 6.5 TfL has taken action to support delivery on borough roads by ensuring boroughs have sufficient delivery resource (particularly for Quietways, Central London Grid and Mini-Hollands) and necessary consents are in place for working on borough roads. As reported to the Board last year and earlier in this paper, Sustrans has been appointed as a Delivery Agent to coordinate this and centralise resources for the boroughs to draw on. In addition, the boroughs have recruited more staff. For example, each Mini-Holland borough now has a project team managing their programmes.
- 6.6 Despite the delay in spending, the review reports that there is now progress on the ground with visible results, and the non-infrastructure projects within the portfolio are proceeding satisfactorily. The review has noted that for the funding that has been spent, a range of measurable outputs have actually been delivered, even where the scheme is not yet complete. The external review further identified the challenges faced by TfL in demonstrating the impact of the projects in achieving the stated benefits, and the importance of communicating this.

2014 IAR and TfL Actions

- 6.7 The November 2014 IAR set out a series of recommendations to TfL, and these (alongside TfL's proposed management response) were reported to the Board in March 2015. Significant progress has been achieved in 2015 on delivering these actions.
- 6.8 Within these actions, the notable improvements to the Cycling Vision Portfolio governance arising from the 2014 IAR have been the following:
- (a) Monitoring Governance and Strategy – A full Monitoring Strategy has now been produced (see section 7) and a Vision Baseline Monitoring report is due in 2016;
 - (b) Cycling Analytical and Modelling Capability – The ongoing development of the Cycle Demand Evaluation Reponse (CYDER working group) has led to the maturing of the Cycling Potential Evaluation Tool (CYPET) and Cycling Network Model for London (CYNEMON) which are vital tools for analysing cycling potential demand in models and underpinning the future delivery of London's Cycling Network (see paragraphs 7.15 and 7.16 for a full explanation of these tools); and
 - (c) Benefits Realisation – A Benefits Map for the cycling Vision has now been established, with the full strategy due to be complete early in 2016 (see section 8).

Other Portfolio Level Risks and Challenges

- 6.9 Aside from the challenges and recommendations set out in the IIPAG report, TfL has faced further challenges across portfolio delivery, most notably the need to manage relationships with partner, business and community groups.

- 6.10 Public support of cycling schemes remains strong, but criticisms of transformational infrastructure projects such as the East-West and North-South CS – and some of the Mini-Holland projects – have been voiced by a number of stakeholders.
- 6.11 All programmes have been subject to extensive public consultation to ensure all concerns are heard, and mitigating measures put in place where appropriate to minimise any negative impacts whilst maximising benefits. The Mayor's Cycling Vision has led to some of TfL's biggest and most high profile consultations in recent years, generating thousands of responses informing the design process.
- 6.12 TfL launched 28 consultations in 2015 on schemes within programmes delivered as part of the Mayor's Vision for Cycling. This included CS 1, four consultations on sections of the East-West CS, and various Grid and Quietways schemes on and across the TfL road network. Consultation on the East-West CS generated nearly 9,000 direct responses, including from 341 stakeholder groups and businesses, representing a broad range of interests. Although 78 per cent supported or partially supported the proposals, a number of concerns were raised around some aspects of the proposals and their potential consequences. Subsequently changes were made to the scheme design, including reducing the traffic impacts and redesigning the route at Lancaster Gate to better meet the needs of cyclists and local stakeholders. Boroughs across London have also delivered consultations on large and small Vision schemes, including Mini-Holland schemes in Enfield, Waltham Forest and Kingston, and various Grid and Quietway routes.
- 6.13 Cycle safety remains a core concern for TfL. The numbers of cyclists killed or seriously injured in London in 2014 (432 KSIs) fell by 12 per cent from 2013 (489 KSIs) bringing the cycling casualty rate down to the lowest ever recorded. This is still regarded by TfL as too many, and the numbers of slight cycling casualties has also risen slightly from 4,134 in 2013, to 4,714 in 2014. The continuous improvement of safety for cyclists is a high priority for TfL as set out in the Cycle Safety Action Plan.
- 6.14 The mitigation of the impacts of cycling works on the wider road network, and the reallocation of road space to cycling from other modes has also been a challenge (see paragraph 3.14). TfL is delivering the Cycling Vision in a period of significant growth and development in London, with the combined delivery of new CS, Quietways, alongside other major schemes, catering for construction traffic, and accommodating utilities works.
- 6.15 In summary, a number of significant challenges have arisen this year in the delivery of the Mayor's Cycling Vision, however TfL has acted to address and manage these appropriately.

Planning for the future

- 6.16 Cost pressures arising throughout programme delivery are currently being managed within the overall portfolio budget. A forecast profile of the £913m Cycling Vision budget (as of Q2 2015/16) is provided in Appendix 1.

7 Measures of Success

- 7.1 Through the four key elements – Tube Network for the Bike, More People Travelling by Bike, Safer Streets for the Bike, Better Places for Everyone – the overall objectives of the Cycling Vision Portfolio are to deliver 1.5m cycle journeys per day by 2026, and to contribute towards a 50 per cent⁴ reduction in ‘killed and seriously injured’ (KSIs) on London’s roads by 2020.

Cycling levels

- 7.2 The MTS target of 1.5m cycle journeys per day by 2026 is the Strategic Outcome Indicator for cycling and applies to all of Greater London. There has been strong growth in cycling in recent years, reflecting the investment taking place across London to tackle barriers to cycling and the high profile that cycling has recently enjoyed. In 2014 there were 645,000 journey stages per day, an increase of 10.3 per cent on the previous year⁵ indicating that strong growth in cycling towards the Mayoral target is continuing.
- 7.3 In order for growth in cycling to continue it is essential that interventions targeting under-represented groups, such as women, older people and Black Asian and minority ethnic people, are delivered. Without this approach to encourage harder to reach groups, cycling cannot become ‘normalised’ and cycling levels will fall below target. It is therefore crucial that infrastructure, marketing and behaviour change measures that appeal to these under-represented groups – particularly women – are delivered. This is being supported by the development of a Customer Strategy in early 2016 which seeks to understand the barriers to cycling that remain for certain customer groups and sets out an action plan to address these, including active marketing and addressing issues of social stigma.
- 7.4 TfL’s market research in 2015 shows that across all demographics safety and traffic concerns remain the key barriers to cycling or cycling more, with just 24 per cent of Londoners stating that they feel confident cycling on London’s roads. However, attitudes towards cycling continue to improve, reflecting recent growth and investment in infrastructure and engagement. 90 per cent of Londoners agree that cycling is becoming more popular and 81 per cent agree that cycling is enjoyable.⁶

Key Performance Indicators

- 7.5 The Surface Transport Outcome for ‘More and Safer Cycling’ is one of the 10 Surface Transport Outcomes. There are two Key Performance Indicators (KPIs) which measure progress against this outcome:
- (a) the Transport for London Road Network (TLRN) index, which measures the volume of cycling on the TLRN against a base year of 2001; and

⁴ Given the success of achieving the 40 per cent reduction in KSIs target early, this has now been revised up to 50 per cent by 2020. The Cycle Vision Portfolio will continue to contribute significantly to this through the programmes set out in section 5

⁵ Latest data from Travel in London 8

⁶ Attitudes to Cycling, March 2015

- (b) the Central London Metric which reports the daily average number of kilometres cycled on the central London cycling network and builds on the 2013 Cycling Census.
- 7.6. The most recent version of Travel in London Report (TiL8, December 2015), reported that cycling levels against these two KPIs continues to grow. The TLRN index has more than doubled in the last 10 years, whilst the Central London Metric shows a three per cent increase in cycling levels on the central London cycle network this year. Levels of cycling increased by seven per cent in the evening peak and by five per cent in the morning peak, indicating an increase in cycling commuting within central London.
- 7.7 The Cycle portfolio also contributes to the KPI for reduced numbers of people killed or seriously injured (KSI) on London's roads. The target of a 40 per cent reduction in KSIs by 2020 was met in 2014 and as a result the target has been revised to a 50 per cent reduction by 2020.
- 7.8 Data from TfL's AccStats database indicates a downward trend in cyclist KSIs on London's roads in recent years. In 2014 there were 13 pedal cyclist fatalities, 419 serious injuries and 4,714 slight injuries. This represents a 12 per cent reduction in fatal and serious injuries compared to 2013. Provisional data for 2015 is available for the period up to July and is subject to change. Since July 2015 there has been one further pedal cyclist fatality bringing the provisional total fatalities for 2015 to nine.

Year	Fatal	Serious	Total KSI
2011	16	555	571
2012	14	657	671
2013	14	475	489
2014	13	419	432
2015 (Jan to Jul)	8	229	237

Table 1 – Pedal cyclist KSI casualties, 2011 – July 2015

Strategic monitoring programme

- 7.9 The Cycling Vision strategic monitoring programme tracks progress towards strategic cycling targets. It also helps TfL to understand the characteristics of cyclists, the journeys they make, and the motivations and constraints applicable to cycling. The key components of the monitoring programme are:
- (a) cycling counts on all existing and proposed routes;
 - (b) surveying cyclists to understand trip purpose and characteristics;
 - (c) surveying current cyclists and non-cyclists to understand attitudes to cycling; and

(d) surveying pedestrians on their perceptions of the urban realm.

7.10 A monitoring strategy has been developed to inform the monitoring programme. Whilst the specific objectives of the programme are set out in Appendix 2, in summary it aims to:

- (a) ensure that Cycling Vision schemes are delivering TfL's objectives;
- (b) track performance against the key goals of the Vision;
- (c) provide a consistent and robust approach to measuring the impact of projects allowing schemes to be compared;
- (d) ensure that future policy making is evidence-led, and that investment can be targeted to greatest effect; and
- (e) ensure that the wider implications of developing cycling in London are understood.

7.11 The monitoring programme is overseen by TfL's Monitoring Advisory Panel (MAP). The MAP is a newly established governance body, formed on the recommendations of last year's external review of the Vision Portfolio, and comprises representatives from each of the programme and analysis teams that contribute to the Vision portfolio. Through collaboration with teams across TfL, the MAP has resolved resourcing issues, appointing a committed resource for the analysis of volumetric data and has mitigated risks to the reporting programme.

7.12 Baseline data has been collected for each of the infrastructure schemes ahead of construction work beginning. This will allow before and after comparisons of cycle trends to be made following completion of schemes. A baseline report showing the status of cycling before construction commenced will be available in mid-2016. Post-delivery comparisons and follow up reports will be available for each scheme several months after implementation.

7.13 Given the mixed public and political perception of recently opened cycle infrastructure the monitoring programme must be able to communicate effectively the benefits of the infrastructure and assuage concerns over traffic impacts and congestion. The MAP is working to provide robust evidence for the impact of each of the schemes, including the more challenging goal of disaggregating the wider traffic impacts attributable to specific routes or infrastructure. TfL is measuring the impacts of the new infrastructure on cycling and on other modes through traffic counts, journey time data and surveys with cyclists and other road users.

Further Analysis

7.14 In December 2010, TfL undertook research to understand the potential for increasing cycling in London. Work is now underway to update this 'Analysis of Cycling Potential' which will help to further define the target markets for schemes and inform prioritization for delivery. Complementing this is the revision of MOSAIC, the market segmentation analysis, which identifies those groups that are most likely to cycle and those that face more significant barriers.

- 7.15 As set out in paragraph 6.8, TfL is working on several innovative modelling tools which can be used to for testing the impact of proposed cycling schemes in London. The CYDER Working Group is leading the work on cycling demand analysis and modelling. It is responsible for the development and implementation of the CYPET which can be used for testing the impact of proposed cycling schemes in London and can help identify which interventions in which locations will have the greatest impact on the number of cycling trips and model the impacts of increased cycling
- 7.16 The CYPET tool has been used successfully for phase 2 of the Quietways business case, forecasting potential demand for each route and helping to demonstrate the case for investment. A model for forecasting trip patters and route choice – the Cycle Network Model London (CYNEMON) is also being developed. The progress made in the CYDER work stream will greatly help TfL to plan for and understand the impacts of increased cycling and will help to make the case for future investments.

8 Benefits

- 8.1 The Cycling Vision portfolio business case provides the rationale for investment in the range of programmes that comprise the Vision. The Cycling Vision has a very strong business case which clearly establishes the benefits of investment in cycling across London. The business case asserts that cycling supports London's growing population by making more efficient use of road space and easing pressure on the road and public transport networks by providing an alternative mode of travel for a large number of trips. Analysis of Cycling Potential demonstrates that 4.3m trips currently taken across London could be cyclable if barriers to cycling were removed. Increased cycling supports economic growth, has benefits for businesses and improves the environment and health of Londoners through reduced pollution, better air quality and reduced noise.
- 8.2 The business case identifies both the qualitative and quantifiable benefits and dis-benefits of increased cycling. The wider strategic and non-quantifiable benefits are articulated through an evidence-based narrative and analysis, whilst the monetisable benefits and dis-benefits are input into the benefit-cost ratio (BCR). The BCR is calculated by assessing the impacts of 1.5 million cycle trips a day, assumed to occur in 2026 and multiplied over a 15-year benefits assessment period.
- 8.3 The benefits and dis-benefits used to calculate the BCR for the Vision are listed below:
- (a) journey time: Savings from mode shift from motorised modes (car / bus / rail / taxi) to bike;
 - (b) journey time: Road users' additional congestion-related journey time (dis-benefit);
 - (c) safety: People killed or seriously injured (KSIs);
 - (d) vehicle operating costs avoided (private modes);

- (e) health: reduced mortality;
 - (f) reduced absenteeism; and
 - (g) other congestion-related dis-benefit e.g. increased journey time and emissions.
- 8.4 The Cycling Vision Portfolio BCR of 2.9:1 presented in the 5 February 2014 Board paper remains unchanged. While some programmes have modelled dis-benefits for certain road users these dis-benefits are mitigated when considering the portfolio as a whole. For example, the overall impact of the Cycling Vision on journey times was estimated to be positive, i.e. the journey-time savings to cyclists outweigh the worst-case journey time increases to other road users.
- 8.5 As set out in paragraph 8.2, the BCR is not the only element of a Business Case. There are several benefits of increased cycling for which we do not currently have the methodology to quantify or monetise – or it is not appropriate to do so – and so do not form part of the BCR. Nevertheless they are an important component of the case for cycling investment and the business case narrative remains an important means of assessing and communicating these benefits.
- 8.6 By way of example, the business case demonstrates that increased cycling benefits business and the economy and is key to supporting London's growth. Employees who walk or cycle are healthier and more productive taking up to 25 per cent fewer sick days. Increasingly, high profile businesses based in London are calling for more investment in cycling, recognising the benefits that cycling can have for their employees and London's economy. Evidence within the business case shows that cyclists and pedestrians spend more money in local retailers than drivers, supporting the economic vitality of London's high streets and town centres. Investment in cycling can also improve the urban realm and the environment, reducing air pollution and noise and creating better places for all. The Cycle Vision Business Case narrative was updated this year to reflect the re-prioritised programmes and to reflect developments in our understanding of the benefits and impacts of cycling schemes.

9 Conclusion

- 9.1 Since the update provided to the Board in March 2015, good progress has been made in the delivery of the Cycle Vision portfolio. Construction is progressing across each of the infrastructure programmes, with several high-profile interventions now launched (such as Cycle Superhighway 5 and Oval junction).
- 9.2 Alongside infrastructure delivery, behaviour change programmes and marketing measures are well into their second year of delivery, providing essential engagement, education and enforcement programmes, reaching communities and schools across London. Safety continues to be the biggest deterrent to cycling or cycling more for cyclists and non-cyclists alike. Key programmes such as the Safer Lorries Scheme, Cycle Training and Better Junctions have been delivered this year to improve cyclist safety.

- 9.3 The November 2015 External Experts' and IIPAG review did not find any critical issues with the portfolio and TfL is preparing to take forward the recommendations arising from this review. Good progress has been made in progressing the November 2014 recommendations including the development of the Monitoring Advisory Panel and the CYDER modelling work stream.
- 9.4 The publication of *Travel in London 8* in December 2015 demonstrated that there has been strong growth in cycling over the past year and attitudes towards cycling continue to improve. TfL will continue to deliver the range of interventions in the Cycle Vision portfolio to achieve the outcome of 'More people cycling, more safely, more often'.

10 Views of the Finance and Policy Committee

- 10.1 On 2 March 2016, the Finance and Policy Committee considered a similar paper and endorsed the recommendations in this paper. The Committee requested that future updates include a summary table on high level cycling statistics, to include cyclist numbers, journeys, distance travelled and the spend on cycling as a proportion of budget and modal share. Statistical information from the monitoring programme would also show the impact of Quietways and Cycle Superhighways against the baseline and targets in the original business case for each scheme.
- 10.2 The Committee also discussed how TfL responded to incidents on busy roads to keep traffic flowing, with particular reference to roads where space had been reallocated for segregated Cycle Superhighways. A paper on incident response on the Transport for London Road Network would be submitted to a future meeting of the Surface Transport Panel.

List of Appendices to This Report:

Appendix 1: Cycling Vision budget forecast

Appendix 2: Strategic objectives for the monitoring programme

List of Background Papers:

The Mayor's Vision for Cycling in London (March 2013)

Proposed Cycle Superhighway Schemes (February 2015)

Travel in London 8

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Cycling Vision re-forecast profile (as of Q2 2015/16)

			2015/16	2013-2022		
Cycle Vision Portfolio	Infrastructure	TLRN	Cycle Superhighways	77	193	
			Better Junctions	16	104	
			Cycle Hire expansion and improvements	10	82	
			TLRN improvement schemes	1	9	
			Wayfinding Improvements	1	6	
		TLRN Infrastructure Total			105	393
		non-TLRN	Greenways	0	6	
			Biking Boroughs	0	3	
			Mini-Hollands	21	100	
			Central London Grid	6	54	
	Quietways (non Grid)		14	122		
	Cycle to school partnerships		1	8		
	non-Infrastructure	Hireable E-Bikes	4	4		
		Cycle Parking and Rail Super Hubs	3	25		
Cycle Hire		13	110			
non-TLRN Infrastructure Total			61	432		
non-Infrastructure						
TfL led marketing and road events			2	27		
Cycle Safety initiatives			4	29		
Police and company E-Bikes trial			0	0		
Anti-Social Enforcement Ops			1	8		
Borough Staffing, Portfolio Management and Monitoring			3	23		
non-Infrastructure Total			10	88		
Overprogramming provision			[31]			
Total			145	913		

Strategic Objectives for the Monitoring Programme

Monitoring objective	Examples of indicators	Related key outcome*
Track progress towards strategic cycling targets from MTS	Change in cycle journey stages 2001-2026 (400% target) Cycle hire trip volumes and contribution to MTS target	3
Understand the potential 'market' for cycling and penetration achieved	Baseline evidence for forecasting demand Barriers specific to socio-demographic groups 'Market penetration' for potentially-cyclable trips Cycle mode share (of all journey stages)	3
Quantify cycle volumes on the principal networks/other London geographies	Kilometres cycled on each cycle infrastructure type and cycle hire Cycle volumes/mode shares at specific count locations Cycle trends on all roads (e.g. 'controls') Cycle hire trip volumes by Borough	1, 3
Understand the characteristics of cycle trips (length, purpose, etc.)	Origins/destinations Journey length, time, purpose etc. Relative use of/influence of infrastructure	1, 3
Understand the characteristics of cyclists and how this is changing (to "normalise" cycling)	Socio-demographic characteristics Level of experience as cyclist Process of behavior change and mode switching	1, 3
Understand the motivations and constraints applicable to cycling and how they change	Reasons for choosing to cycle in relation to alternatives Perceptions/experience of cycle safety Cycling propensity among different groups Understanding barriers to cycling	3
Track experience and satisfaction of cyclists	Cyclists' evaluation of the new infrastructure Recognition/impact of improvements under the Vision Evaluation of overall conditions for cycling in London Cycle Hire customer satisfaction surveys	2, 3
Understand attitudes of wider population to cycling	Evaluation of streetscape/urban realm improvements Attitudes of non-cyclists to cycling Perceptions of cyclist behaviour Awareness of and attitudes to Cycle Hire	3, 4

Monitoring objective	Examples of indicators	Related key outcome*
	scheme amongst cyclists and non-cyclists	
Cyclist safety – trends, understanding, mitigation,	Collision/KSI statistics - contribution to Surface Transport safety outcome Incremental impact of new infrastructure/initiatives Perceptions of safety	2
Understand impact on other transport modes and road users	Impact on other aspects of road network operation Modal transfer from public transport modes	4
Identify and apportion the incremental impact of specific schemes	Effectiveness of specific configurations, schemes and elements Networks vs. area-based schemes (eg Mini-Hollands) New cyclists vs. more trips by established cyclists Growth in Cycle Hire memberships and casual use	1
Better understand and quantify the wider impacts of cycling	Health impacts and benefits Impact of cycling initiatives on local economies Impact of cycling initiatives on the urban realm Economic vitality of town centres	1, 4

Key

*Related key outcome

1	A Tube Network for the Bike: a network of direct, high-capacity, joined-up cycle routes
2	More People Travelling by Bike: to 'normalise' cycling, making it something everyone feels comfortable doing
3	Safer Streets for the Bike: streets and spaces will become places where cyclists feel they belong and are safe
4	Better Places for Everyone: improvements will help all Londoners, whether or not they have any intention of getting on a bicycle