

Date: 2 March 2022

Title: Air Quality and Environment Programme

This paper will be considered in public

As provided for under section 100B(4)(b) of the Local Government Act 1972, the Chair is of the opinion that this item should be considered as a late item. The reason for urgency is that Members need to consider the paper and the information was not available at the time the papers were published.

1 Summary

Air Quality and Environment (AQE) Programme				
Existing Financial Authority 2017/18 – 2022/23	Estimated Final Cost (EFC) 2017/18 – 2025/26	Existing Programme and Project Authority	Additional Authority Requested up to 2022/23	Total Authority 2017/18 – 2022/23
£ 608m	£1007.3m	£457.1m (**) £6.8m (***) £463.9m (****)	£54.5m	£518.4m

Table 1: Summary of AQE Authority

(**) Existing cumulative Programme and Project Authority approved by the Committee in December 2020

(***) Programme and Project Authority transferred from Silvertown Tunnel to AQE Programme in Oct 2021

(****) The updated total Programme and Project Authority within AQE Programme

* Financial Authority is based on the 2021 TfL Budget and Business Plan. Financial Authority beyond 2022/23 will be considered as part of future Budgets and Business Plans.

- 1.1 This paper is the fifth submission of the Air Quality and Environment (AQE) Programme to the Committee, detailing a request for additional Programme and Project and Procurement Authority for the 2022/23 financial year.
- 1.2 The focus of this paper is to:
 - (a) provide an update on the AQE Programme’s success in delivering projects, since the previous submission to the Committee in December 2020,
 - (b) request £54.5m of additional Programme and Project Authority for AQE Programme delivery in 2022/23; and

- (c) request additional Procurement Authority for AQE, to the value set out in the paper on Part 2 of the agenda.
- 1.3 A paper containing exempt information is included on Part 2 of the agenda. The information is exempt by virtue of paragraphs 3 and 5 of Schedule 12A of the Local Government Act 1972, in that it contains information relating to the business affairs of Transport for London (TfL) and legally privileged advice. Any discussion of that exempt information must take place after the press and public have been excluded from this meeting.

2 Recommendations

- 2.1 **The Committee is asked to note the paper and, the exempt supplementary paper on Part 2 of the agenda and:**
- (a) approve the additional Programme and Project Authority of £47.8m to support the delivery of the Air Quality and Environment Programme for 2022/23;**
 - (b) approve additional Procurement Authority, in the sums requested in the exempt supplementary paper on Part 2 of the agenda, to extend the contracts with Capita Business Services Limited and Siemens Mobility Limited to continue activities in support of road user charging;**
 - (c) approve Procurement Authority, in the sums requested in the exempt supplementary paper on Part 2 of the agenda, to commence contracts with third party suppliers to enable activities in support of road user charging; and**
 - (d) note that the matters for which Authority is sought above include commitments that extend beyond the period of the Business Plan and Budget noted by the Board on 8 December 2021 and provision will, therefore, need to be made for those commitments in future Business Plans and Budgets.**

3 Background of Air Quality and Environment Programme

Finance and Authorities

- 3.1 In December 2020, the Committee approved additional Programme and Project Authority of £16.8m to support the delivery of the AQE Programme from 2020/21 to 2022/23, increasing the total authority secured from 2017/18 to £457.1m.
- 3.2 The Committee approved the transfer of £6.8m Programme and Project Authority to the AQE Programme in October 2021 from the Silvertown Tunnel programme, for tunnel user charging.
- 3.3 The spend forecast for the AQE Programme in 2022/23 is £158.6m. This paper requests approval for additional Programme and Project Authority of £54.5m to bring the total Authority for the AQE Programme to £518.4m (between 2017/18 and 2022/23).

- 3.4 The AQE Programme has agreed a £1.3m contribution from the Greater London Authority (GLA) to continue the Mayor's Air Quality Fund in 2022/23. Discussions are underway to secure third-party funding for the Electric Vehicle Infrastructure Delivery project over multiple years. For 2022/23, it would include £0.2m from the Office of Zero Emissions (subject to formal approval) and £0.5m from the GLA.

AQE Programme Overview

- 3.5 Air pollution is one of the most significant challenges facing London, affecting lung development in children and increasing the risk of strokes, heart and lung disease. A study from Imperial College London stated in 2019 that over 4,000 Londoners died prematurely because of the impact of toxic air.
- 3.6 The Coroner Report published in April 2021 into the tragic death of nine-year-old Ella Adoo Kissi Debrah delivered an historic verdict by concluding air pollution 'made a material contribution' to her death. The Coroner said levels of nitrogen dioxide (NO₂) near Ella's home exceeded World Health Organisation and European Union guidelines. The Mayor of London called the result a 'landmark moment' and he stated lessons from the Coroner's ruling must be learnt.¹
- 3.7 Research has indicated people living in the capital's most deprived areas are, on average, exposed to about a quarter more NO₂ pollution. A further study found of the schools in the highest polluting areas of London, around 80 per cent were defined as being 'deprived'. The probability is London's poorest people will benefit the most from measures that tackle poor air quality.²
- 3.8 TfL and partners have made significant progress towards developing a mature, diverse AQE Programme that is at the forefront of how a strategic transport authority can deliver solutions to air quality and urban health issues that are being increasingly experienced globally. The value of the portfolio is evident:
- (a) Ultra-Low Emission Zone (ULEZ) compliance has increased from 40 per cent in February 2017 to 90 per cent in January 2022. There are now 44,000 fewer of the most polluting vehicles driving in the zone daily;
 - (b) the Mayor's Air Quality Fund has realised over 433 tonnes in NO_x savings and over 25 tonnes in PM₁₀ savings (4.5km of new walking routes, 20 clean air routes, 339 electric vehicle chargers); and
 - (c) the number of schools in areas exceeding legal limits for NO₂ has fallen by 97 per cent from 455 in 2016 to 14 in 2019.
- 3.9 The AQE Programme comprises three sub-programmes (see figure 1). The Road User Charging sub-programme was previously named Air Quality Systems and has been amended to reflect the wider scope of the current sub-programme.

¹ [Regulation 30: Action to Prevent Future Deaths \(judiciary.uk\)](https://www.judiciary.uk/news/regulation-30-action-to-prevent-future-deaths/)

² [GLA - Mayor's action on air quality will benefit poorest the most - Transport for London \(tfl.gov.uk\)](https://www.tfl.gov.uk/news/2020/07/gla-mayors-action-on-air-quality-will-benefit-poorest-the-most/)

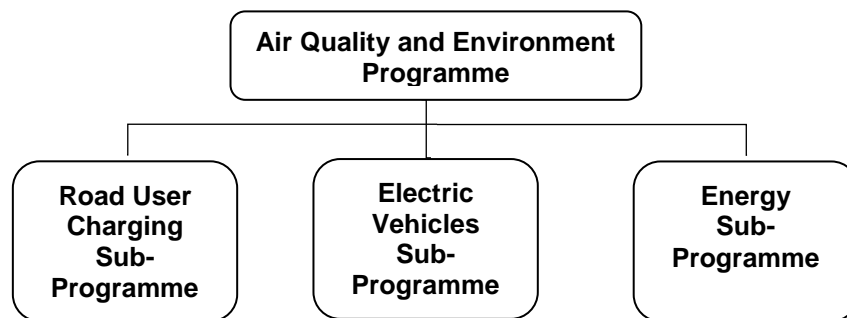


Figure 1: Sub-Programmes within the AQE Programme

4 AQE Sub-Programme Performance

- 4.1 Despite the coronavirus pandemic, the AQE Programme has managed all aspects of programme delivery and governance effectively, aligned with TfL’s Pathway project management framework and Standing Orders. Appendix 1 provides headline performance information and key achievements in 2021/22 are below.
- 4.2 **Low Emission Zone (LEZ) Tightening:** The objective of the LEZ Tightening project was to improve London’s air quality by raising the Euro standard of the scheme, requiring heavy goods vehicles (HGVs), buses and coaches to meet Euro VI (NOx and PM) emissions standards or pay a daily charge of up to £300.
- 4.3 Given the impact of the coronavirus pandemic, the Mayor requested that the introduction of the new standards be deferred from 26 October 2020 to 1 March 2021 to allow industry more time to implement the measures. The project scope was delivered in full to enable ‘go-live’ on 1 March 2021. In October 2021, the Mayor was able to report that 95 per cent of HGVs were complying with the stricter standards, double the number since the scheme was announced in February 2021. Independent research shows that benefits of the scheme have been felt across the country, improving air quality for an extra 18 million people beyond London. The original EFC was £12.7m and the current EFC is £10.4m, resulting in a £2.3m efficiency saving enabled by risk release and mitigation.
- 4.4 **Ultra-Low Emission Zone (ULEZ) Expansion:** The objective of ULEZ expansion is to help further reduce harmful air pollution emissions by expanding the zone by 18 times to the North and South Circular Roads.
- 4.5 The project scope was delivered in full to enable ‘go-live’ on 25 October 2021. Four million people live in the expanded zone, measuring 380km² and covering one quarter of London, making it the largest zone of its kind in Europe. Initial data shows that the scheme has been highly effective at driving reductions in the numbers of older, more polluting, vehicles on London’s roads. The compliance rate of vehicles detected in the zone during the first month was 92 per cent; an increase of 53 percentage points since 2017. Compliance with the standards on boundary roads was at 88 per cent, an increase of four percentage points since the scheme went live. Compliance with the standards in the rest of London outside the zone was at 82 per cent, an increase of two percentage points since the scheme went live, demonstrating the wider air quality benefits of the scheme beyond its boundary. The original EFC was £121m and the current EFC is £115m,

showing potential for a £6m efficiency saving made possible through effective risk mitigation and savings achieved on fixed prices.

- 4.6 **Scrappage (in support of the ULEZ expansion):** The objective is to incentivise drivers to scrap their older, more polluting vehicles. A total of 14,297 older polluting vehicles have been scrapped, comprising over 8,900 cars, 5,236 vans and 133 HGVs. The total vehicles scrapped could be close to 15,000 once all applications are processed.
- 4.3 The original EFC was £48m and the current EFC is £61m. The £13.3m increase results from additional GLA grants totalling £9.6m and the transfer of £4m from the taxi liquefied petroleum gas fund to support van scrappage and the ULEZ Car and Motorcycle Scrappage scheme.
- 4.4 **Direct Vision Standard (DVS):** The introduction of the world's first DVS for HGVs was in response to the disproportionate involvement of HGVs in fatal collisions with people cycling (63 per cent) and pedestrians (25 per cent) despite HGVs only making up four per cent of the miles driven in London.
- 4.5 The scheme requires HGVs over 12 tonnes to hold a safety permit to operate in Greater London, unless exempt. Vehicles not meeting the minimum rating threshold, or which have not been rated under DVS, must demonstrate compliance with a defined safe system to improve overall safety. These vehicles are issued with Permits with 'safe system' conditions requiring mitigation.
- 4.6 The DVS was successfully launched on 1 March 2021, with the original planned completion date of 26 October 2020 deferred by the Mayor due to the coronavirus pandemic. This is the first step in dramatically improving lorry safety in London, with standards set to tighten further in 2024. Three months after launch we reported that 136,000 permits had been issued within the first three months, including more than 4,000 to 5-star vehicles, which provide the highest levels of direct vision. We also reported that 70,000 0-star HGVs had safe systems fitted, improving protection for people walking, cycling, or riding e-scooters or motorcycles. The original EFC was £5.3m and current EFC is £13.3m. The variance of £8m was a result of scope refinement resulting from a better understanding of requirements and supplier engagement and increases in resource costs. The variance will feed into lessons learnt and reviewed for future cost estimates.
- 4.7 **Congestion Charging (CC) Changes:** The primary objective of the CC scheme is to reduce traffic and congestion in central London; this also helps improve London's air quality. The changes to operational hours and days were implemented on 21 February 2022, and the daily charge remains at £15 in order to ensure that the CC scheme remains effective in meeting its objectives and furthering the aims of the Mayor's Transport Strategy (MTS).
- 4.8 The Committee granted delegated Programme and Project Authority of £1.0m in December 2020 to undertake a consultation on a package of proposals which were intended to ensure the scheme would continue to meet its objectives and further the aims of the Mayor's Transport Strategy. Consultation on the proposed changes took place from 28 July to 6 October 2021, with nearly 10,000 responses received. Following this, the changes were confirmed by the Mayor on 16 December 2021; aiming to strike a balance between reducing traffic, supporting London's economy

and residents and helping ensure London's recovery is a green and sustainable one.

- 4.9 The changes were introduced on 20 December 2021, with the exception of the charging hours which were changed on 21 February 2022. The original EFC was £7.3m and the current EFC is £5m meaning £2.3m in efficiencies have been achieved due to reductions in base cost (for example, staff cost reduced due to accelerated delivery).
- 4.10 **Go Ultra Low City Scheme (GULCS):** The objective is to work with London Boroughs to deliver projects to increase the uptake of zero emission vehicles. GULCS has now delivered 4,300 residential charge points, double the target of 2,150, and distributed £13.2m to boroughs to enable the delivery of important schemes and initiatives, such as Neighbourhoods of the Future and multi-supplier procurement frameworks to aid delivery.
- 4.11 **Rapid Electric Vehicle Charging:** The objective is to develop a network of electric vehicle (EV) charging points in London to enable the charging of vehicles quickly and efficiently. The key milestone to install 300 rapid charging points was achieved between November 2018 and December 2020. Two of the committed three rapid charge hubs have been completed (Stratford Hub and Glass Yard Hub). The outstanding hub at Baynard House, led by City of London, is likely to be delivered by end of March 2022 though there have been specific supply chain issues. The original EFC was £17.8m and the current EFC is £17.4m.
- 4.12 **Dial-a-Ride Fleet Renewal:** The objective was to ensure that the fleet, consisting of 256 Euro VI vehicles, was fully compliant with ULEZ standards. This scope was successfully achieved in March 2021 and the service has the required capacity to meet projected customer demand. The original EFC was £20m and the current EFC remains the same. The EFC was steady and consistent, mainly due to standards rates of payment per vehicle.

Changes to the AQE Programme since the last submission to the Committee (December 2020)

- 4.13 **Blackwall and Silvertown Tunnels User Charging (TUC):** Responsibility for delivering TUC for Silvertown Tunnel was transferred from the Major Projects Programme into the AQE Programme in May 2021. The Committee approved the transfer of £6.8m Programme and Project Authority to the AQE Programme in October 2021.
- 4.14 **Road User Charging (RUC) Re-Let:** The operating model for RUC comprises three service contracts that will expire in 2026:
- (a) Detection and Enforcement Infrastructure;
 - (b) Business Operations Services; and
 - (c) Enforcement Operations Services.
- 4.15 Since project initiation in February 2021, feasibility work has been undertaken, assessing the options for delivery and procurement of the contract re-let of existing RUC projects from the contract end date in 2026.

4.16 This review has been expanded to include:

- (a) potential 2023/24 scheme – four potential approaches to a scheme which could be implemented by May 2024 at the latest;
- (b) potential acceleration of the Business Operations Services workstream for 2026 re-let to coordinate with Silvertown and Blackwall TUC in 2024;
- (c) the user charging element of the Silvertown and Blackwall Tunnels in 2024/25, as detailed in 4.13 above; and
- (d) early project initiation work on exploring options for the integration of future RUC systems.

4.17 **Grid to Gate Programme (G2G):** G2G proposed to fund bus garage power upgrades to allow for the operation of electric buses, in advance of re-tendering bus routes. Despite the business case being financially positive, the decision was made not to proceed with the G2G programme because it would require c.£150m capital expenditure, which could not be supported given existing funding constraints. A decision was taken to deliver power upgrades to bus garages through the bus route tendering programme.

4.18 **Ash Grove Bus Garage Power Upgrade:** The GLA provided a £2.7m grant to upgrade power infrastructure at TfL owned bus garages. While we were unable to pursue the G2G Programme as above, we can use this grant for Ash Grove and support up to 200 electric buses.

4.19 **Fleet Electrification:** All spend (£2.6m) is under review due to the coronavirus pandemic and TfL funding constraints. The project's objective was to switch TfL's support fleet of approximately 1,000 vehicles to electric, contributing to London's Green Recovery and the aims set out in the Mayor's Transport Strategy.

4.20 **Bus Opportunity Charging:** The £8.5m project included two trials for single and double deck routes. In May 2021, a decision was made to de-scope a double deck trial and complete the Route 358 (single deck trial) to accelerate the learnings from trialling the new technology in London.

5 Key AQE Programme Deliverables in 2022/23

5.1 **Blackwall and Silvertown TUC:** The Silvertown Tunnel is planned to open in 2025. The user charging system must be in place by this date, as required in the Development Consent Order granted by the Secretary of State for Transport in May 2018. Focus in 2022/23 will be on engaging with existing systems contractors, finalising requirements and progressing design, planning and system development in line with project milestones.

5.2 **Road User Charging:** The Mayor's potential approaches to reduce transport emissions in London, announced on 18 January 2022, emphasised the important role that road user charging can play in addressing air quality and moving towards London becoming a net-zero carbon city by 2030. The Mayor recognised that London could benefit in the long term from more sophisticated types of technology to introduce a new kind of simple, fair road user charging system and asked TfL to start exploring how it could be developed.

- 5.3 The RUC sub-programme includes the existing and investigation of possible future RUC schemes or modifications to existing schemes, aiming to provide a holistic and coordinated approach both for delivery and customer experience.
- 5.4 In 2022/23, the focus is likely to be to develop, assess and consult on a new proposal for road user charging, with efficiencies sought in order to meet implementation timescales.
- 5.5 Early strategic assessments will also identify the dependencies with other elements of the RUC programme, most notably the re-let of the three service contracts for the provision of the infrastructure, systems and operations in 2026. Activities in 2022/23 for the re-let specifically will include planning the approved approach for delivery to enable continuity of this critical service. Close coordination will also take place with Blackwall and Silvertown TUC.
- 5.6 **Electric vehicle Infrastructure Delivery Plan:** London's Electric Vehicle Infrastructure Strategy, published on 16 December 2021 sets out a keystone commitment for the GLA group estate, where viable, to accommodate electric vehicle charging infrastructure.
- 5.7 The focus for 2022/23 is to progress work on delivering a first tranche of 100 rapid and ultra-rapid charging bays across the GLA group estate and to work with boroughs to produce guidance that will simplify third party installation.
- 5.8 **Bus Opportunity Charging Trial:** Route 358, which runs 25km between Orpington and Crystal Palace, will have a fully electric fleet of 20 buses by January 2023. The project will install pantograph charging from August 2022, with phased commissioning of zero emission buses from December 2022.
- 5.9 **Ash Grove Bus Garage: Power Upgrade:** It is envisaged the power upgrade will be completed by the end of the 2022/23.

6 Challenges and Opportunities

- 6.1 The Government extended its funding support for TfL until 24 June 2022. In the meantime, discussions with Government continue to agree a sustained long-term funding settlement that is vital for the coming years if a period of 'managed decline' of London's transport network is to be avoided.
- 6.2 The AQE Programme is currently under resourced, in part due to issues recruiting in the context of organisational funding constraints, and this adds risk to delivery in 2022/23 across all sub-programmes to a varying degree but most significantly in the Road User Charging sub-programme.
- 6.3 We aim to continually improve and diversify the AQE Programme to secure better air quality, health, environment and value outcomes for London, subject to a long-term Government funding settlement. TfL is exploring work on noise reduction which focuses on mode shift, freight consolidation and the shift to quieter electric vehicles.

7 Equalities Implications

- 7.1 The AQE Programme will be delivered in accordance with TfL's obligations in the Equality Act 2010. Equality Impact Assessments and an Integrated Impact Assessment to assess other relevant impacts as appropriate are prepared and taken into account on all strategies, policies, business plans, change programmes or projects, having regard to our obligations under the public sector equality duty in section 149 throughout the delivery of the AQE Programme. Possible impacts on people with protected characteristics, will be considered, acted upon and appropriate mitigations implemented wherever possible and recorded.

8 Legal Implications

- 8.1 All schemes proposed in this AQE Programme are consistent with the Mayor's and TfL's duty to bring about compliance with legal limit value for pollutants such as NO₂ as soon as possible. The majority of the projects within the AQE Programme contribute to reducing pollutants and improving air quality.

Privacy and General Data Protection Regulation

- 8.2 All relevant public bodies (including TfL) are under a legal duty to protect personal information and to ensure compliance with General Data Protection Regulation and associated data protection legislation. A range of robust policies, processes and technical measures are in place to control and safeguard access to, the use of, personal information associated with all RUC schemes.
- 8.3 Data Protection Impact Assessments (DPIA) have been completed for relevant schemes. The DPIA helps ensure the operational decisions made have been considered in terms of data protection, understand data security concerns, and identify/implement mitigations for any privacy and data security risks. The DPIA will involve the Information Commissioner's Office and the Metropolitan Police Service.

9 Financial Implications

- 9.1 The AQE Programme's Financial Authority is based on actual costs up to 2020/21, and the TfL Revised budget is the baseline for 2021/22 and 2022/23 as per agreed TfL accounting methodology. There is no Financial Authority beyond 2022/23.
- 9.2 The only item included in the authority request beyond 2022/23 is a rephrasing of Bus Retrofit Operational Costs (spend will now occur later than requested in the previous submission to the Committee in December 2020). Authority granted by the Committee which relate to both the current funding period to 25 February 2021 and commitments outside of this period, may need to be revised as part of future budgets to be considered by the Board. Provision will also need to be made in future Budgets and Business Plans in respect to commitments made. If additional funding is not available, a prioritisation of the TfL Investment Programme will be required, and some programmes and projects will not be taken forward and revised authority will be sought as appropriate.
- 9.3 All financial commitments related to this request will be overseen in accordance with TfL Business controls in respect of draw down.

Activity Areas	Current Financial Authority *	Current P&PA Authority	Additional Proposed P&PA	Authority Request (£m)								
	£m	£m	£m	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2017/18 to 2024/25
Road User Charging	443	298	48	29	32	48	104	63	70	0	0	346
AQE Electric Vehicles	168	199	-26	15	35	41	50	11	12	6	3	173
AQE Energy	2	3	-2	0	0	0	0	0	0	0	0	0
Value Engineering	-4	-35	35	0	0	0	0	0	0	0	0	0
TOTAL	608	464	54	43	67	89	153	74	82	6	3	518

***Financial Authority: Actuals to 20/21. Revised Budget for 2021/22 and 2022/23. No Financial Authority beyond 2022/23**

Table 1: Constituent activity areas and Programme and Project Authority requested from the Committee

- 9.4 The Programme and Project Authority request for 2022/23 of £54.5m includes reductions in authority required across the AQE Programme since the submission to the Committee in December 2020. These include: ULEZ Expansion (£22m), LEZ Tightening (£1m), Bus Opportunity Charging (£6m) and Grid-to-Gate (£27m).
- 9.5 The £54.5m AQE Programme and Project Authority request includes £49.7m specifically for Road User Charging in 2022/23. This is split as follows:
- (a) £20.5m to commence initiation, development work and any necessary early purchasing for a potential new 2023 road user charge. The scheme's current EFC of £338.9m (until the end of 2023/24) is subject to further refinement, though any funding will be contingent upon a future government funding settlement and prioritisation of the TfL Investment Programme before the next submission to the Committee;
 - (b) £26.5m to continue development of the road user charging in-house Business Operations System workstream for 2026 with delivery brought forward to enable Silvertown and Blackwall TUC in 2024. This workstream is currently recommended for development via in-house resources;
 - (c) £2.3m to progress RUC Relet procurement activities for 2026; and
 - (d) £0.5m to commence early scoping and feasibility work for the integration of future RUC systems.

10 Assurance

- 10.1 An Integrated Assurance Review on the AQE Programme was carried out in January 2022 by the TfL Assurance Team and the Independent Investment Programme Advisory Group (IIPAG). One critical issue has been identified by IIPAG for the RUC sub-programme and a management response has been formulated in response.

10.2 The Integrated Assurance Plan was updated in December 2021 and sets out the reviews for projects within the AQE Programme for the next 12 months.

List of appendices to this report:

Appendix 1: AQE Programme Performance since December 2020

A paper containing exempt supplemental information is included on Part 2 of the agenda.

List of Background Papers:

Minutes of the Programmes and Investment Committee, 13 October 2021, relating to Silvertown Tunnel

AQE Programme Annual PIC Submission March 2022

Briefings relating to Road User Charging

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