

Date: 1 March 2023

Title: Air Quality and Environment Programme

This paper will be considered in public

1 Summary

Table 1: Summary of Air Quality and Environment (AQE) programme authorities				
Figures in outturn values (£m)				
Latest gross estimated final cost (EFC) (2017/18 to 2026/27)	*Previous gross estimated final cost (EFC) (2017/18 to 2025/26)	Authorities	**Financial Authority	Programme and Project Authority
1,230	1,007	Existing	954	877
		Requested	0	77
		Total	954	954
		<i>Future Submissions</i>	276	276
<p>*Previous EFC at the date of last Committee update in March 2022. **Financial Authority value is lower than EFC up to 2026/27 due to the Business Plan only including Future Road User Charging up to 2023/24 and a lower allocation for renewal schemes. These will be reassessed in the next Business Plan.</p>				

- 1.1 This paper is the sixth annual submission of the Air Quality and Environment (AQE) Programme to the Committee detailing the request for additional Programme and Project Authority and Procurement Authority for the 2023/24 financial year.
- 1.2 The focus of this paper is to:
- (a) provide an update on the progress of projects since the previous AQE Programme submission to the Committee in March 2022;
 - (b) summarise the planned delivery from March 2023 to the next annual submission to the Committee planned for March 2024, as well as key challenges and opportunities for the year ahead; and
 - (c) request additional £77m Programme and Project Authority as outlined in Table 2 of section 9 below, and additional Procurement Authority for the sum set out in the paper on Part 2 of the agenda.
- 1.3 A paper containing exempt information is included in Part 2 of the agenda for Members. This information is exempt by virtue of paragraph 3 of Schedule 12A of the Local Government Act 1972, in that it contains information relating to the

business affairs of TfL. Any discussion of that exempt information must take place after the press and public have been excluded from the meeting.

2 Recommendation

2.1 The Committee is asked to note the paper and the exempt supplementary paper on Part 2 of the agenda and:

- (a) approve additional Programme and Project Authority of £77m to support the delivery of the Air Quality and Environment (AQE) Programme for 2023/24 and 2024/25, bringing the total Programme and Project Authority for the AQE Programme to £954m; and**
- (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 (Capita) and Yunex (formerly Siemens Mobility) to continue activities in support of Road User Charging.**

3 Background of the Air Quality and Environment Programme

- 3.1 The Mayor is committed to accelerating action to address the triple challenges of congestion, air pollution and the climate emergency. The AQE Programme structure is shown in Figure 1 below and supports the Road User Charging (RUC) and Environment sub-programmes to secure strategic outcomes that help tackle these challenges.
- 3.2 RUC schemes aim to reduce traffic and manage congestion, improve air quality and reduce carbon emissions from road traffic. They can also support Vision Zero, Healthy Streets, active travel and improved public transport for our customers.
- 3.3 The Environment sub-programme combines the Electric Vehicles and Energy sub-programmes that were referenced in the March 2022 submission to the Committee. This re-defined Environment sub-programme will also include projects from a new 'green project pipeline' (see paragraph 4.1 below). In combination, it aims to decarbonise TfL's assets and operations to help meet carbon net zero by 2030, improve air quality, and support external innovation to achieve the similar benefits for society.

A Summary of Committee submissions in 2022/23

- 3.4 The Committee approved Programme and Project Authority of £54.5m on 2 March 2022 to support AQE Programme delivery in 2022/23, increasing the total Programme and Project Authority to £518.4m. Of the £54.5m approved, £49.7m was specifically for RUC in 2022/23.
- 3.5 Five subsequent submissions were made to the Committee within 2022/23 to enable the on-going development of RUC projects. These were:

- (a) **submission to the Committee on 20 July 2022:** the Committee noted the status of RUC projects. A request for additional Programme and Project Authority was deferred as the latest Government funding agreement was not concluded until 30 August 2022. This was later approved via Chair's Action (see (b) below);
- (b) **Chair's Action on 12 September 2022:** the Chair of the Committee, in consultation with members, approved an additional £177.2m of Programme and Project Authority to support the continued development of the following proposed RUC projects: London-wide Ultra Low Emission Zone (London-wide ULEZ), Scrappage Scheme, potential future RUC and Business Operations in-house giving a total Programme and Project Authority of £523.2m for RUC. The delivery approach for Tunnel User Charging (TUC) was also noted;
- (c) **Chair's Action on 4 October 2022 (Healthy Streets and Active Travel paper):** the Chair of the Committee, in consultation with members, approved an additional £24.8m of Financial Authority and £25m of Programme and Project Authority to support Healthy Streets and Active Travel. This included £7.5m for Direct Vision Standard phase 2 (DVS2), which is within the RUC sub-programme scope;
- (d) **submission to the Committee on 14 December 2022:** the Committee approved an additional £173.5m of Programme and Project Authority to progress the following RUC projects: London-wide ULEZ, Scrappage Scheme, TUC, and technical resource to support multiple RUC projects (including DVS2) giving a total Programme and Project Authority of £696.7m; and
- (e) **Chair's Action on 31 January 2023:** the Chair of the Committee, in consultation with members, approved additional Procurement Authority to vary the existing Business Operations (BOps) and Enforcement Operations (EOps) contracts with Capita for the London-wide ULEZ and TUC schemes. This follows the Committee's approval of related Programme and Project Authority on 14 December 2022 and the existing Financial Authority included in the Business Plan approved by the Board on 7 December 2022.

4 Changes to Air Quality and Environment Programme Since March 2022

- 4.1 TfL's Corporate Environment Plan sets out our approach for TfL to become carbon net zero by 2030. To achieve this goal TfL's assets and operations must be decarbonised in parallel with many other measures. A new green project pipeline has been developed, which will prioritise projects for investment from 2023/24 and the business plan has committed £39m up to 2026/27. This reflects what was set out in the Climate Section of the 2023/24 Greater London Authority (GLA) Budget document. The AQE Programme will include a proportion of these projects under its 'Environment' sub-programme and this paper includes a request for an initial £3m Programme and Project Authority in 2023/24 and a further £9m in 2024/25 to enable the delivery of high-quality projects quickly. In parallel, activities are underway to identify and access additional external funding

to achieve our de-carbonisation goal (e.g. £6bn was announced by His Majesty's Government for Energy Efficiency in the Autumn Statement). Further opportunities will be identified to secure extra environment-related benefits from committed asset renewal investment.

5 Air Quality and Environment Progress Update 2022/23

Road User Charging (RUC)

- 5.1 **London-wide ULEZ and Scrappage Scheme:** On 25 November 2022 the Mayor of London announced he would expand the ULEZ London-wide, enabling five million more Londoners to breathe cleaner air. The announcement included a commitment for a new and improved £110m scrappage scheme and a new package to support more disabled Londoners than ever before, including an extended grace period to October 2027. Notable progress has included: ordering long-lead time items with our supply chain, commencing engagement with Local Authorities and County Councils with a view to securing consents, designing a camera and signage network that will drive compliance, completing the system build to give operational capacity for managing higher volumes, and marketing to generate awareness of the scheme. In combination, this progress represents advanced mitigation against issues arising from challenging delivery timescales. In parallel, the Scrappage scheme went live on 30 January 2023.
- 5.2 **Blackwall and Silvertown TUC:** The Blackwall and Silvertown TUC system must be in place for the opening of the Silvertown Tunnel, currently planned for early 2025, as required by the Silvertown Tunnel Development Consent Order granted by the Secretary of State for Transport in May 2018. In September 2022 the Committee endorsed the recommended procurement route to deliver the scheme via a contract variation with Capita, which was agreed in December 2022 under the target price following Committee approval of the associated Authorities in December 2022.
- 5.3 **Business Operations System In-house (BOps):** Endorsement was given by the Committee on 2 March 2022 for delivery of the BOps system in-house. The original proposal had been to align delivery with TUC in 2024, although this was time sensitive and dependent upon securing approval to on-board sufficient technical resource. The submission to the Committee via Chair's Action in September 2022 noted that delays in securing the required resource meant that the delivery of BOps in-house was no longer viable for 2024. Timescales have since been reviewed to target the RUC Re-Let project for September 2026. Securing external technical resource via the framework approach outlined in the Chair's Action paper to the Committee in September 2022 has enabled the onboarding of resources as necessary.
- 5.4 **Potential Future RUC:** As part of the public consultation for London-wide ULEZ in summer 2022, questions were included to seek the public's views on the challenges that a new simple and fair scheme could help to address and the elements that should be considered for inclusion in scheme design, such as vehicle type, distance travelled and time of day. The feedback received, published as part of the ULEZ report to the Mayor in November 2022, has provided valuable

insight to what is important to the public, what they feel should be considered as part of a potential future scheme and concerns they have.

5.5 **RUC Re-Let:** The current operating model for RUC comprises three service contracts that will expire in 2026:

- (a) Detection and Enforcement Infrastructure (D&EI – by Yunex);
- (b) Business Operations Systems and Services (BOps – by Capita); and
- (c) Enforcement Operations Services and Systems (EOps – by Capita).

Work has commenced on the procurement strategy to assess options to determine the best approach for continuing the operation, which will include assessment of value, risk-profile, operations, requirements and viability.

5.6 **Direct Vision Standard Phase 2 (DVS2):** Consultation commenced in February 2023 seeking views on the proposed Progressive Safe System (PSS) design that non-compliant Heavy Goods Vehicles (HGVs) over 12 tonnes would need to fit from October 2024 to secure a safety permit and operate in London. The PSS would enhance the current safe system that vehicles with low driver visibility (rated below 1*) are required to fit to obtain a safety permit, introduced as part of Direct Vision Standard (DVS) and enforced since March 2021.

5.7 The scheme is safety focused and contributes to the Mayor's Vision Zero strategy by improving HGV drivers' visibility thereby reducing the risks that HGVs present to vulnerable road users. As part of the original introduction of DVS, a public commitment was made to raise the minimum star rating to 3* from October 2024, with all 0*- 2* vehicles required to fit the PSS to obtain a safety permit. These changes will build on the safety improvements from the current DVS scheme, including the following outcomes and benefits published in the 'One Year On' report (June 2022):

- (a) number of fatal collisions involving an HGV where vision was cited as a contributory factor has halved (from 12 in 2018, the year before the scheme was introduced, to six in 2021). The number of serious injuries fell from 48 in 2017 to 17 in 2021; and
- (b) average daily compliance rates are very high, with more than 94 per cent of HGVs in London now operating with a Safety Permit and hauliers reporting that they are building DVS requirements into future purchasing decisions.

5.8 **External Technical Resource:** Substantial progress has been made to successfully mitigate the significant risk of availability of specialist technical resource noted in previous submissions to the Committee. Implementation of the framework approach outlined in the September 2022 submission has commenced, with use of the Crown Commercial Services (CSS) frameworks to procure technical resources to support a number of RUC schemes, most notably BOps system in-house. These frameworks have made a wide range of quality resources available and created opportunities to better utilise resources within the delivery teams. The process for procuring and onboarding resources has been streamlined to secure suitable resource quickly and provide flexibility to align with project needs, including the ability to onboard multiple teams in a coordinated

manner. Lessons learnt from the success of this approach are being shared more widely within the business.

Wider Air Quality and Environment Progress

- 5.9 **Electric Vehicle Infrastructure Delivery (EVID):** Progress remains on track to deliver a first tranche of 100 rapid charging bays on TfL's roads. A procurement strategy has been selected following extensive market engagement with key industry suppliers. An invitation to tender for the first batch of sites went to the market on 30 November 2022 as planned. The evaluation of prospective sites is continuing for delivery across multiple tranches and consideration is being given to how EVID's approach could be adopted by boroughs to accelerate the delivery of Electric Vehicle (EV) charge points on their highway and freehold land. EVID, a key commitment of the London EV Infrastructure Strategy, addresses the key barrier of accessing land for EV charge point operators while also generating revenue. London needs 40,000 to 60,000 EV charging points by 2030, which includes 4,000 rapid charging points. This would enable a reduction in carbon dioxide of between 1.5 million to 2.6 million tonnes by 2030.
- 5.10 **Bus Opportunity Charging:** This project will fully electrify the 15-mile bus route 358 between Crystal Palace and Orpington, using innovative pantograph charging technology. This will demonstrate how the technology responds to the demands of daily operations and inform plans to achieve a zero-emission bus fleet. While charging equipment has been successfully installed at Crystal Palace, delays have been experienced, pushing the original forecast route launch date from January 2023 to May 2023. This is primarily due to delays in agreeing legal terms with a third-party landowner at Orpington. Other contributory factors have been broader supply chain issues, including the provision of components for both the bespoke electric vehicle charging infrastructure and the delivery of the new buses. We continue to work with the operator to ensure any operational cost implications of late project delivery are minimised.
- 5.11 **Ash Grove:** This project initially planned to provide a power upgrade at Ash Grove bus garage by March 2023, to support zero emission buses. However, a change in operator has delayed progress by 12 months. We continue to explore how we can use GLA Grant funding of £2.7m to electrify the garage as soon as possible and are engaging with bus operators at the shared site to understand costs, feasibility and timescales. Ash Grove has capacity to accommodate approximately 200 buses.
- 5.12 **Zero-Emission TfL Support Fleet:** TfL operates approximately 1,000 fleet vehicles, with less than five per cent being Zero Emission. In line with the Mayor's Transport Strategy ambitions, the scope of the project will be to convert the entire TfL fleet to become zero emission, with the leasing of new vehicles as well as the implementation of supporting infrastructure in the depots, such as EV charging points. The project re-started in 2022/23 following a long pause due to previous funding uncertainties, with £100k of Programme and Project Authority secured to accelerate remobilisation activities until the end of March 2023. This submission includes a request for new Programme and Project Authority, to maintain progress through 2023/24.

- 5.13 **Waste Heat:** The project aims to capture and re-use thermal energy from the London Underground (LU) network for external suppliers of local heat networks and buildings. The LU network produces 500GWh of waste heat per year, with 10 per cent removed through ventilation and released into the atmosphere. Feasibility studies have identified six sites, which if developed, could provide heating for up to 15,000 households. The infrastructure will be financed and delivered by a third party and their activity will be assured by TfL Infrastructure Protection to manage risk to assets and operations.
- 5.14 **Solar Private Wire:** This project will enable TfL to receive zero-carbon electricity directly into LU, reducing carbon emissions and creating up to 64 megawatts of renewable generation, which is five per cent of TfL's annual energy load. As well as the environmental benefits, there are potential financial savings through avoiding costs associated with the delivery of power via the grid. Our risk exposure is being managed, as we plan to seek a partner in the market to assess sites and deliver the required facilities.

6 Key Air Quality and Environment Programme Deliverables 2023/24

- 6.1 **London Wide ULEZ and Scrappage Scheme:** Installation of infrastructure to support the London-wide ULEZ launch on 29 August 2023 is continuing, with signs and cameras being prioritised on our own assets or at locations where TfL is the Highway Authority such as traffic signals and on the TfL Road Network. Consents agreements are being progressed with Local Authorities for installation of infrastructure off the TfL Road Network and engagement with stakeholders is continuing. In January 2023 a London wide marketing campaign was launched to raise awareness of the ULEZ expansion in August, including television and radio adverts. Enhancements to the current system and testing activities are on-going to ensure a successful scheme expansion.
- 6.2 Following the successful launch of the Scrappage Scheme on 30 January 2023, grants are continuing to be processed for eligible applications.
- 6.3 **Silvertown and Blackwall TUC:** Following confirmation of the contract variation with Capita in December 2022, mobilisation is planned to commence by June 2023. Design and development work will be informed by updated assumptions relating to Silvertown Tunnel traffic volumes and charges.
- 6.4 **BOps system in-house:** Specialist technical resources are continuing to be onboarded using the CCS frameworks, supporting key activities focused on BOps system design, build and integration. Further onboarding of technical resource is planned throughout 2023/24 to continue to support of these activities. The project remains closely aligned to the Re-Let and potential Future RUC projects to ensure coordination of developing assumptions and requirements.

- 6.5 **Potential Future RUC:** Building on feedback received from the summer 2022 consultation, work continues to understand the range of issues which would need to be considered in any potential future RUC scheme. This includes considering how such a scheme could address some of the essential challenges raised by the public as part of the consultation: making the roads safer for everyone and improving bus journey times and reliability. Exploration of available technology will also commence to develop an improved understanding of the potential functionality that could be used to support such a scheme.
- 6.6 **RUC Re-Let:** Procurement Strategy for the Re-Let of the three existing RUC contracts (D&EI, BOps services, EOps system and services) will be finalised and enacted, including commencement of market engagement activities. The Procurement Strategy will reflect current requirement assumptions for both the potential Future RUC scheme and existing legacy schemes, and these assumptions will continue to be developed as more information becomes available.
- 6.7 **Direct Vision Standard Phase 2 (DVS2):** Following completion of consultation in April 2023, results will be considered and applied to the design of the Progressive Safe System (PSS). Results of the consultation and the final recommended PSS design will be included in the submission to London Councils Transport and Environment Committee in June 2023. Subject to approval, this will confirm the permit requirements HGVs must meet when the minimum DVS star rating threshold is raised from 1 star to 3 star from October 2024.
- 6.8 **Electric Vehicle Infrastructure Delivery (EVID):** Key deliverables in 2023/24 will include; the first contracts being signed with EV charge point operators by spring 2023, which will determine the delivery timescales for 100 rapid charger bays within 2023/24 by operators providing turnkey delivery solutions, and establishing the framework to deliver future tranches of rapid EV charge points across the GLA estate as well as borough highways by July 2023.
- 6.9 **Bus Opportunity Charging:** Within Quarter 1 of 2023/24, Route 358 between Crystal Palace and Orpington will become fully electric, with a new fleet of zero emission buses utilising rapid charging technology. Performance of the route will be monitored, with data informing day-to-day operations, as well as longer term plans to decarbonise some of London's longest bus routes.
- 6.10 **Waste Heat and Solar Private Wire:** Since the projects were remobilised in autumn 2022, the new programme management team has prioritised the development of detailed schedules that will set out the key deliverables for 2023/24. These include launching the Invitation to Tender by autumn 2023 for Solar Private Wire, and for Waste Heat, determining the most efficient route to market for a prioritised Waste Heat site in Southwark.

7 Challenges and Opportunities

- 7.1 The AQE Programme plays an important part in helping TfL address the triple challenges of congestion, air pollution and the climate emergency. The reduction of traffic and congestion resulting from any potential future RUC scheme could not only improve air quality and reduce carbon emissions but also help realise

other goals within the Mayor's Transport Strategy including Vision Zero, Healthy Streets, active travel and improved public transport. The Environment sub-programme will need to significantly expand, which represents a challenge, but also a major opportunity to play a leading role in helping TfL become carbon net zero by 2030 and deliver wider society benefits including better health for Londoners.

- 7.2 Previous submissions to the Committee have highlighted availability of resource as a critical challenge for the successful delivery of several projects in the AQE Programme. Positively, the onboarding of specialist technical resources for RUC schemes via the framework approach has successfully mitigated this risk. However, availability of key resource in other areas of the project teams remains an issue and will continue to require careful ongoing management. Activities are underway to recruit or procure necessary resource; but lead times and ongoing retention issues result in resources remaining a key risk.
- 7.3 The complex inter-dependencies between RUC schemes have increased since the introduction of additional projects in early 2022. Most notably the full impact that potential Future RUC will have on the BOPs in-house and Re-Let projects is still being assessed. Project teams are working closely together to identify and manage overlaps, particularly for requirements and timescales, with opportunities for efficiencies being explored along with minimising of delivery risks.
- 7.4 An application for judicial review has been made by the London Boroughs of Hillingdon, Harrow, Bexley, Bromley and Surrey challenging the Mayor's decision, made on 24 November 2022, to confirm the expansion of the ULEZ London-wide and to approve £110m in funding for the associated scrappage scheme. TfL is named as an interested party. We will be defending the claim on behalf of TfL and the Mayor and depending on available court time, it could take several months for a final hearing of the claim.

8 Financial Implications

8.1 The sums for which Programme and Project Authority is being sought are set out in Table 2 below.

Activity Areas	Current Financial Authority to 26/27 £m	Current P&PA Authority £m	Additional Proposed P&PA £m	Authority Request (£m)								
				17/18 to 19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	17/18 to 26/27
Road User Charging	733	704	67	109	104	63	166	188	101	36	5	771
AQE Environment	232	173	14	91	50	12	12	11	12	0	0	187
Value Engineering (*23/24 target saving)	-11	0	-4	0	0	0	0	-4*	0	0	0	-4
TOTAL	954	877	77	199	153	74	178	195	113	36	5	954

Table 2 - Constituent activity areas and Programme and Project Authority requested from the Committee

8.2 Following agreement of a financing facility with the GLA in September 2022, the London-wide ULEZ and Scrappage Scheme were included in the 2022/23 revised budget and full project forecasts are included in the draft 2023/24 budget. Forecast project costs for Future RUC had been included in the draft 2023/24 budget and published Business Plan for 2022/23 and 2023/24 only. However, future year forecasts have since been included in the 2023/24 budget and are intended to form part of the next Business Plan.

9 Assurance of the AQE Programme in 2022/23

9.1 The annual Integrated Assurance Review of the AQE Programme was carried out in January 2023 by the TfL Assurance Team and the Independent Investment Advisory Group. No critical issues were raised with the consensus being the AQE Programme is being well managed.

9.2 The Integrated Assurance Plan was updated in January 2023 and sets out the proposed reviews for projects within the wider AQE Programme for the next 12 months.

List of appendices to this report

None

Exempt supplementary information is included in a paper on Part 2 of the agenda.

List of Background Papers:

Programmes and Investment Committee papers 2 March (AQE), 20 July (RUC), 12 September (RUC) and 14 December 2022 (RUC)
AQE Programme Assurance Report (January 2023)

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