This paper will be considered in public

1 Summary

<table>
<thead>
<tr>
<th>ID/UIPXXX</th>
<th>Surface Intelligent Transport System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>Estimated Final Cost (EFC)</td>
</tr>
<tr>
<td>Financial Authority</td>
<td>Estimated Project Authority</td>
</tr>
<tr>
<td>£133.58m</td>
<td>£133.58m</td>
</tr>
</tbody>
</table>

**Authority Approval:** The Board is requested to approve additional project authority of £3.54m for the Surface Intelligent Transport System (SITS) bringing the total to £5.80m. This tranche of funding will move the programme to be ready to commence procurement. This tranche will also cover the upgrading of LondonWorks – London’s system for coordinating planned road-works and events.

In addition, following completion of an Integrated Assurance Review being undertaken prior to the commencement of the procurement process, the Board is requested to authorise the Finance and Policy Committee to grant additional Project Authority of up to £6.26m (which would bring the total Project Authority to £12.06m), required to undertake all procurement activities up to contract award. Further Project Authority and Procurement Authority will be sought from the Board in due course.

**Outputs and Schedule:**


Approval of funding will enable the programme to deliver its procurement strategy in full with all the supporting documents and outputs listed below and move the programme to a point where procurement can begin from July 2016. This tranche will confirm the detailed approach and scope of the procurement, which will be to procure a systems integrator / supplier to replace the Urban Traffic Control (UTC) system; replace other systems used to manage road space in London (see section 4.9); provide additional data sources to improve detection capability and enhance the UTC system to speed up the detection of incidents on the network and provide the ability to select the right traffic signal strategy to respond to an incident. This would be delivered via a phased delivery approach. In parallel design, build and test LondonWorks (see section 3.7).

The outputs of the next tranche are:
- the design, build and test of an upgraded LondonWorks system;
- outcome-based requirement specifications, for the systems and components listed in section 4.9;
- procurement documentation including evaluation criteria, Invitation to Tender
(ITT) and contract schedules;
- technical and interface documentation to go out with the tender;
- Programme Execution Plan for the next tranche to run the procurement;
- validated end-to-end programme plan; and
- further validated programme costs and refined BCR.

**From 18 July 2016 – 30 September 2017**
With Finance and Policy Committee approval, undertake procurement activities up to contract award in accordance with approved procurement strategy.
Complete roll out of LondonWorks.

1.1 A detailed funding table for the next tranche is provided in Table 5 at section 5.2.

1.2 At its meeting on 30 July 2015, the Finance and Policy Committee considered a paper on SITS. This paper has been redrafted in light of comments made at that meeting. The Committee endorsed the recommendations in this paper to the Board.

2 **Recommendations**

2.1 The Board is asked to note the paper and:

(a) approve additional project authority of £3.54m for the Surface Intelligent Transport System bringing the total to £5.80m;

(b) authorise the Finance and Policy Committee to grant additional Project Authority of up to £6.26m (which would bring the total Project Authority to £12.06m) required to undertake all procurement activities up to contract award, following satisfactory completion of an Integrated Assurance Review undertaken prior to the commencement of the procurement process; and

(c) note that the current estimated final cost for the Surface Intelligent Transport System is in excess of £100m and further authorities will be sought from the Board in due course.

3 **Description and Background**

**Overview**

3.1 SITS will deliver £1,000m of benefits through delay reduction for all road users by 2036, through faster, automated responses to live road conditions using an enhanced UTC system, at a benefit to cost ratio (BCR) of 5.0:1.

3.2 London’s road space is becoming more and more constrained with more people using the existing road space. With an additional five million road trips a day by 2030 and continued growth in demand, the cost of delay in 2036 is estimated to be £12.55bn, up from £4.77bn in 2014. To meet this challenge, TfL needs to be more proactive in the way it manages its road space.
3.3 Currently TfL operators monitor road space using CCTV cameras. A typical road incident, such as a collision and the congestion that results from it, can take up to 20 minutes to detect and respond to, which exacerbates delay.

3.4 TfL operators managing the delay caused by these incidents also have to use multiple systems, many of which are approaching the end of their operational life. These systems are already struggling to cope and in the future, even if replaced on a like for like basis will not deliver the service required. This gives TfL an opportunity to replace, upgrade and integrate many of the systems using its extensive in-house delivery knowledge. The systems that will be replaced by SITS are listed with a description of their function in Table 3 in section 4.9.

3.5 SITS is part of TfL’s long standing vision for London’s roads and is a continuation of and builds on recent technology and enabling projects. These systems have been delivered successfully and provide the building blocks for the SITS package. These systems include the upgrade of all of TfL’s operational models to spread as far as the M25, the deployment of a single mapping platform and the delivery of faster than real time modelling linked to TfL’s UTC system. SITS will replace and upgrade many of TfL’s systems, as well as provide links to a common computing platform, provided by TfL IM, which will allow them to talk to each other.

3.6 A significant part of the upgrade will be the replacement of the UTC system. One element of this upgraded technology is the enhancement of TfL’s capability to automatically detect moderate incidents on street allowing operators to tackle a wider range of incidents. This will significantly increase the speed at which TfL detects and is able to react to issues on the network. The enhanced UTC system will be able to access a library of pre-determined models and traffic strategies and automatically select the optimal signal timing strategy. This will include a direct link to iBus data to help automatically regulate the bus service in conjunction with the management of traffic flow. As well as upgrading its systems, TfL will introduce new on street detectors and use mobile data to improve its knowledge of all types of road user, enabling it to be more policy responsive. This detection is essential in allowing TfL to detect incidents happening on the network to enable it to respond to them. This will be done via a phased delivery approach and will enable customers to benefit from reduced delay, improved journey time reliability (JTR) and improved travel information. As described, there are many elements to SITS. TfL has extensive knowledge in developing integrated traffic systems that optimise the running of the network, and has been successfully delivering these for over 10 years.

3.7 In parallel to preparations for the procurement, LondonWorks will be upgraded including design, build and test, ready for it to be rolled out. LondonWorks is the system for coordinating planned road-works and events, but is not working to its capacity or being used in a common and efficient way. Upgrading it will enable TfL to improve usage by boroughs and utilities companies to get full visibility of works across London, which will improve TfL’s ability to coordinate road-works and minimise disruption on the road network. Delivering these improved capabilities sooner than other parts of SITS will help TfL manage the road capacity impacts of the Road Modernisation Plan more effectively. The improved LondonWorks system will subsequently be integrated into the wider SITS architecture as it will use TfL’s existing common computing platform provided by TfL IM and a separate previously developed mapping platform.
Contribution to Mayoral Strategy

3.8 The delivery of SITS aligns with the Mayor’s Transport Strategy and its goal to ‘support economic development and population growth’. This is achieved through meeting the strategic challenge of ‘delivering an efficient and effective transport system for people and goods’ and is now essential in helping to deliver the following Surface Transport outcomes:

(a) quality bus network – maintaining and enhancing a reliable and high quality bus network and ensuring efficient coach services in London;
(b) reliable roads – ensuring reliable operation of London’s road network while reducing congestion. This will be achieved by unlocking effective capacity on the road network;
(c) more and safer cycling – enabling more people to cycle, more safely and more often;
(d) more and safer walking – support an increase in walking;
(e) more efficient deliveries – supporting more sustainable patterns of freight delivery and servicing; and
(f) improving the environment – reducing carbon dioxide emissions.

Funding and Authority Strategy

3.9 Work undertaken to date has focussed on a feasibility study, the identification of benefits and the production of an implementation plan for SITS.

3.10 An IAR and assessment by the Independent Investment Programme Advisory Group (IIPAG) took place in May 2015. These reviews recommended that the project proceed and that TfL investigate procurement strategy options and prepare for procurement. A pre-tender IAR will be conducted in February 2016 ahead of a further request for Project Authority to run the procurement starting in July 2016.

3.11 This current Project Authority request is for £3.54m to prepare for procurement only and in parallel design, build and test LondonWorks. This will take the cumulative Project Authority to £5.80m. It is also recommended that the Finance and Policy Committee be authorised to grant further Project Authority up to £6.26m prior to the procurement process, which would take the cumulative Project Authority to £12.80m out of an EFC for the programme of £133.58m. The EFC of £133.58m is funded within the TfL Business Plan. Appendix 1 sets out how the programme is split into tranches.

4 Proposal

Benefits (and Value) & Business Case

4.1 A rigorous options analysis has been undertaken, following an industry standard Multi Criteria Decisions Analysis (MCDA). The preferred option, as outlined in the Overview section, costs £133.58m over the life of the TfL Business Plan. For calculation purposes the cost over the appraisal period 2015 - 2036 has a net
present value of £198.50m and delivers benefits with a net present value of approximately £1,000m (2015 prices and values), which gives a BCR of 5.0:1, as shown in Table 1.

Table 1: Economic appraisal over period 2015 - 2036

<table>
<thead>
<tr>
<th>Economic Appraisal</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Present Values, £k</td>
<td></td>
</tr>
<tr>
<td>Discounted NPV</td>
<td>198,500</td>
</tr>
<tr>
<td>Passenger Benefits</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Benefit : Cost Ratio</td>
<td>5.0</td>
</tr>
</tbody>
</table>

4.2 Surface Transport has a proven record in managing traffic control systems using TfL’s current UTC system. The benefits from SITS are driven by enhancing this system to automatically detect incidents on the road, running pre-determined traffic signal strategies faster than real time using TfL’s existing modelling capability and implementing the optimum strategy.

4.3 The result is reduced journey delay and improved JTR through the ability to detect and respond to moderate incidents faster. This is not reallocating delay but a reduction in its severity and accounts for approximately half of the SITS benefits.

4.4 There are also many constrained areas on the transport network where demand exceeds the available road capacity at peak times due to typical daily patterns of demand and capacity constraint. The other half of SITS benefits comes from TfL having better capability to manage the location of traffic congestion to where it has least impact. This will be achieved through an enhanced UTC system, driven by more data sources, managing queuing to where there is space and time to prevent gridlock – effectively managing moderate congestion which occurs across the network. This also results in reduced journey delay.

4.5 As a result of an improved ability to respond to incidents and an improved awareness of what is happening on the road network, SITS will also provide improved travel information for all road users, allowing better informed travel decisions and the smoothing of delay associated with congestion across the network throughout the day. The new system will also allow TfL to make its operational data much more open for external use. TfL will look to make the data openly available to third parties in keeping with TfL’s established open data policy.

4.6 Table 2 sets out the quantified core benefits of SITS until 2036. The values below take into account discounting over time and changes to value of time each year. The benefits are conservative and the focus of quantification has been on analysing available information on current road conditions to support reasonable assumptions on the potential scale of impact of SITS. The calculations will be updated during preparations for procurement.
Table 2: Quantified core benefits of SITS over period 2015 - 2036

<table>
<thead>
<tr>
<th>Benefit Description</th>
<th>To 2036 (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delay and journey time reliability improvements associated with unplanned incidents</td>
<td>366</td>
</tr>
<tr>
<td>Delay and journey time reliability improvements associated with planned works/events</td>
<td>142</td>
</tr>
<tr>
<td>Delay savings associated with typical daily demand variation/capacity constraints</td>
<td>483</td>
</tr>
<tr>
<td><strong>Total Impact</strong></td>
<td><strong>991</strong>*</td>
</tr>
</tbody>
</table>

*The £991m value has been rounded to £1,000m in the BCR calculations so as not to appear overly precise, due to the number of assumptions used in the methodology.

4.7 SITS will also result in other benefits such as:

(a) flexibility to accommodate and interact with new technologies and future systems;

(b) improved flexibility to support policy objectives and improved information for decision making for future scheme investment;

(c) significant levels of additional data across all travel modes to improve TfL’s understanding of travel conditions for each mode, providing context for making policy responses and estimating their likely impact;

(d) protection of vulnerable road users through prioritisation and better allocation of road space;

(e) an iBus system that actively works with the UTC system with a direct link, to selectively prioritise buses, such as late running services, instead of all buses, helping to automatically regulate the service; and

(f) reduced fuel use for private vehicles, freight and buses, and the associated reduction in emissions and noise. This will occur through mode switch, route optimisation and less frequent stop-start traffic conditions.

**Execution Strategy**

4.8 The next tranche of work is to deliver the procurement strategy for SITS in full with all the supporting documents and outputs and move the programme to be ready to commence procurement in July 2016.

4.9 This tranche will confirm how the overall delivery strategy for SITS will be procured. The overall strategy is to procure a systems integrator/supplier to:

(a) replace the UTC system, a computerised control and management system for two thirds of London’s traffic signals, and the Split Cycle Offset Optimisation Technique (SCOOT) system which runs through UTC;

(b) replace the functionality of the following other operational and management systems used to manage road space in London:
(i) Traffic Information Management System (TIMS), which provides the capability to manage planned and unplanned events occurring on the road network;

(ii) London Driver Information System, which provides the capability to create and publish information to drivers using Variable Message Signs;

(iii) the London Congestion Analysis Project system, which provides the capability to report on JTR for traffic with registration plates; and

(iv) the other road management systems listed in Table 3.

(c) enhance the UTC system to cover automated traffic signal strategy selection, which will enable automated responses to moderate incidents. This is to include the use of TfL’s existing modelling capability;

(d) provide new sources of data to improve TfL’s awareness of road traffic conditions, to cover all road users;

(e) integrate LondonWorks and build a common operating user interface (UI), which uses TfL’s current mapping platform;

(f) provide appropriate skills to integrate these systems. This will incorporate the use of a common computing/integration platform built by TfL IM (built on open data standards), which the successful systems integrator/supplier will have to link to the new systems above;

(g) enhance TfL’s data analytics and fusion capability based on the new data sources; and

(h) provide appropriate storage platforms.
Table 3: Road management systems to be replaced by SITS

<table>
<thead>
<tr>
<th>Current System</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Traffic Control System (UTC)</td>
<td>a control and management system for two thirds of London’s traffic signals</td>
</tr>
<tr>
<td>Split Cycle Offset Optimisation Technique (SCOOT)</td>
<td>a tool that allows traffic signal junctions to balance traffic flow and coordinate movement between junctions and pedestrian crossings</td>
</tr>
<tr>
<td>Traffic Information Management System (TIMS)</td>
<td>provides the capability to manage planned and unplanned events occurring on the road network and reporting</td>
</tr>
<tr>
<td>London Driver Information System</td>
<td>provides the capability to create and publish information to drivers using Variable Message Signs</td>
</tr>
<tr>
<td>London Congestion Analysis Project</td>
<td>provides the capability to report on JTR</td>
</tr>
<tr>
<td>LondonWorks</td>
<td>a database and mapping system detailing TfL road and scheme works including all available information on third party works</td>
</tr>
<tr>
<td>Outcome Business Intelligence</td>
<td>a system that pulls together multiple sources of data and turns this information into useful network knowledge</td>
</tr>
<tr>
<td>HOOTSUITE</td>
<td>a system used to monitor, analyse and identify key trends of the @tfltrafficnews twitter account</td>
</tr>
<tr>
<td>Outcast</td>
<td>maintains an audit trail and log of all UTC system changes allowing the system to be recovered or respond to legal enquires if needed</td>
</tr>
<tr>
<td>TOMATOES</td>
<td>maintains and contributes to the management of all Traffic Orders; (Traffic Orders are used to enforce temporary and permanent traffic restrictions)</td>
</tr>
<tr>
<td>Pinpoint</td>
<td>a map based tool containing planning and operational information including CCTV and signal junction locations</td>
</tr>
</tbody>
</table>

4.10 The uncertainties associated with a technology programme of this duration and complexity mean that SITS will be delivered via phased delivery of the components listed in section 4.9. This will include the adoption of an iterative approach to system development, with appropriate check-points and opportunities to assess, learn, respond and improve, linked to supplier payment.

4.11 The programme team intend to appoint a systems integrator/supplier; financial incentives to align the successful bidder’s payment with TfL’s outcome-based requirements will be explored. These decisions and the wider procurement strategy will be kept under review during preparation for procurement and subject
to a further IAR prior to the request for further Project Authority to undertake procurement.

4.12 The outputs of the next tranche will be:

(a) the design, build and test of an upgraded LondonWorks system;
(b) outcome-based requirement specifications, for the systems and components listed in section 4.9;
(c) procurement documentation including evaluation criteria, Invitation to Tender (ITT) and contract schedules;
(d) technical and interface documentation to go out with the tender including interface specifications and standards, architecture design, high level data model;
(e) Programme Execution Plan for the next tranche to run the procurement;
(f) validated end-to-end programme plan; and
(g) further validated programme costs and refined BCR.

4.13 While other procurement preparations are ongoing, the development of LondonWorks will continue since this is required sooner. Existing framework arrangements will be used to design, build and test an upgraded LondonWorks system running on the Geographical Information System as a Service (GISaaS) spatial mapping platform. Progress on LondonWorks will subsequently be integrated into the wider system procured. Once granted the necessary authority to undertake procurement, the procurement strategy will be executed with contract award anticipated in September 2017. Over this period, work will continue on LondonWorks, completing the transition to the new system, training and re-launch by 31 December 2016.

4.14 Key Milestones: Appendix 1 sets out how the programme is split into Pathway Programme Stages. Table 4 shows milestones up to programme close.
**Table 4: Programme milestones**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Forecast Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commence IAR / IIPAG review to assure outputs</td>
<td>1 February 2016</td>
</tr>
<tr>
<td>Seek Finance and Policy Committee approval to undertake procurement</td>
<td>30 June 2016 *</td>
</tr>
<tr>
<td>Complete preparations for procurement (Stage C - Tranche 1A)</td>
<td>17 July 2016</td>
</tr>
<tr>
<td>Start procurement</td>
<td>18 July 2016</td>
</tr>
<tr>
<td>Complete transition to new LondonWorks</td>
<td>31 December 2016</td>
</tr>
<tr>
<td>Complete procurement, including Contract Award (Stage C - Tranche 1B)</td>
<td>30 September 2017</td>
</tr>
<tr>
<td>TIMS replacement solution roll out completed</td>
<td>31 October 2018</td>
</tr>
<tr>
<td>Complete replacement and enhancement of UTC (Stage C - Tranche 2)</td>
<td>28 February 2020</td>
</tr>
<tr>
<td>Complete transformation to wide-area delivery of enhanced UTC system (Stage C - Tranche 3)</td>
<td>31 December 2021</td>
</tr>
<tr>
<td>Complete Programme Close (Stage D)</td>
<td>30 September 2022</td>
</tr>
</tbody>
</table>

* 30 June 2016 is estimated date as Committee meeting dates for FY 2016/17 are not yet confirmed.

4.15 Risks: the following risks are acknowledged, with mitigations in place:

(a) enhanced UTC systems offered by the market are less effective than anticipated;

(b) new sensor technology and other data sources to drive multi-modal detection and benefits measurement are less effective or more expensive than anticipated; and

(c) cost approximations, even after thorough market engagement, for new systems (in particular for new technologies), may be underestimated owing to commercial sensitivity from vendors.

4.16 The total risk value for the project included in the EFC is £52.33m, which is 66 per cent of the total future programme costs and is in line with a programme at this early stage and of this complexity.

4.17 Resources and staffing relating to this project authority request have been reviewed at IAR and assessed as appropriate. Staffing will include a programme management team, a dedicated sponsor’s team and support from commercial, legal and relevant subject matter experts. For preparation for procurement, including requirements elicitation, an additional team of business analysts and technical architects is planned. The programme will place importance on ensuring that the most appropriate skills, knowledge and experienced is applied to the programme.
5 Financial Implications

Summary of the costs and funding and Budget Status:

5.1 Feasibility work which included detailed cost modelling has determined that the programme will require budget authority for a total EFC of £133.58m, which includes sunk costs. Project costs total £43.53m, Operational Costs total £37.72m, and risk at 66 per cent is £52.33m. The bulk of this spend is from 2017/18 onwards after the proposed contract award date of 30 September 2017.

5.2 The costs associated with the next tranche of work which is preparing for procurement only (Stage C – Tranche 1A) are estimated in Table 5. This project authority request is for these costs only.

Table 5: Cost estimates to prepare for procurement (Stage C – Tranche 1A)

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsor’s Team</td>
<td>£279,460</td>
</tr>
<tr>
<td>Programme Management Team</td>
<td>£372,930</td>
</tr>
<tr>
<td>Business Analyst Team</td>
<td>£416,000</td>
</tr>
<tr>
<td>Legal</td>
<td>£370,000</td>
</tr>
<tr>
<td>Architecture Team</td>
<td>£365,910</td>
</tr>
<tr>
<td>Additional Specialist Advice</td>
<td>£200,000</td>
</tr>
<tr>
<td>Assurance</td>
<td>£144,000</td>
</tr>
<tr>
<td>Commercial Team</td>
<td>£132,640</td>
</tr>
<tr>
<td>Development of LondonWorks</td>
<td>£750,000</td>
</tr>
<tr>
<td>Risk</td>
<td>£510,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>£3,540,940</strong></td>
</tr>
</tbody>
</table>

5.3 The costs associated with the tranche of the programme after this one are estimated at £6.26m, which will run the procurement. The intention is for the Project Authority for this tranche to be granted by the Finance and Policy Committee. These costs include £3.89m of staff and legal costs, £1.15 of technology costs for concurrent trials and £1.22m of risk. These costs will be further validated in the next tranche.

Benchmarking including reference to benchmarking tables

5.4 Costs have been estimated by reference to industry benchmarks ascertained through market engagement and proof of concept exercises for the more innovative elements such as the predictive elements of the UTC system enhancement and the use of mobile data. The SITS programme undertook a successful industry engagement day in January 2015 which has led to ongoing engagement opportunities. Engagement with industry, other authorities and government organisations will continue.

Other income, costs, saving/efficiencies, revenues etc

5.5 There are not expected to be any income, cost savings or revenue changes as a direct result of SITS. This programme has no third party funding. Whilst there may
be opportunities for income generation in the future, these have not been factored into the cost assumptions.

**Operational costs that are included in Project costs**

5.6 The innovative nature of the SITS programme will mean that a small increase in staff will be required in the first four years of programme delivery; this will result in additional training and up-skilling costs related to the training of existing staff and these are included in the estimated project costs. In the longer term (i.e. after four years) TfL expects the resource requirement to remain the same, but staff time could be made available to concentrate on more serious incidents due to more automation of moderate incidents.

**Commercial**

5.7 The system integrator / supplier will be procured through a tender process, most likely through a competitive dialogue process.

5.8 Taking on board feedback from the IAR and IIPAG process, careful consideration of the commercial delivery approach will continue throughout the next tranche of procurement preparation, with a final recommendation forming the core of the Procurement Strategy and Procurement Authority submission.

**6 Assurance**

6.1 An IAR and IIPAG review were conducted in May 2015. Both reviews recommended that the requested £3.54m project authority is approved. There were no critical issues in the reports and in total eleven recommendations were made. A further IAR is planned towards the end of preparation for procurement and prior to the commencement of procurement.

**7 Views of the Finance and Policy Committee**

7.1 On 30 July 2015, the Finance and Policy Committee considered a paper on SITS. This paper has been redrafted in light of comments made at that meeting. The Committee noted the proposals in this paper and recommended that Board approve the additional Project Authority of £3.54m, bringing the total to £5.80m. The Committee said the remaining Project Authority of up to £6.26m should be requested following an IAR.

List of appendices to this paper:

Appendix 1: SITS Programme Stage and Tranche Dates

List of background papers:

IIPAG and PMO Reports, with management responses

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## Appendix 1

### SITS Programme Stage and Tranche Dates

SITS will be run as a Pathway programme. Planned dates for future stages and tranches are shown below.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Tranche</th>
<th>Key events</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tranche 1A</td>
<td>Prepare for Procurement</td>
</tr>
</tbody>
</table>
| Stage C | • Finalise outcome-based requirements for systems integrator/supplier.  
| Deliver | • Finalise procurement strategy and preparation of procurement documentation.  
| Tranches | • LondonWorks design, build and testing.  
| Tranche 1B | Undertake Procurement | 18 July 2016 - 30 Sept 2017 |
| | • Conduct procurement, tender evaluation up to contract award.  
| | • Complete re-launch of LondonWorks on new standard mapping platform.  
| Tranche 2 | Replace and enhance UTC | 1 October 2017 - 28 February 2020 |
| | • UTC developed, trialled and built, phased transition to new UTC. UTC enhancements also developed trialled and built.  
| | • Suppliers deliver other system components and systems integrator/supplier begins integration.  
| Tranche 3 | Transformation to wide-area delivery of enhanced UTC system | 1 March 2020 - 31 Dec 2021 |
| | • Develop UTC system further to cover wide area prediction.  
| Stage D | Close out and transition to BAU | 1 January 2022 - 30 Sept 2022 |
| | • Complete transition from a pathway programme to business as usual operation of SITS.  
| | • Close down of programme.  

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This paper will be considered in public

1 Summary

1.1 The purpose of this paper is to set out the contractual position regarding the renewal/non-renewal of the Alstom Northern Line Train Service Contract (NLTSC) at the end of September 2017 and to seek a decision as to whether to renew into the Secondary Usage Period which will run until 2027.

1.2 A paper is included on Part 2 of the agenda, which contains exempt supplemental information. The 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 information must take place after the press and public have been excluded from this meeting.

2 Recommendation

2.1 The Board is asked to make a decision regarding the renewal of the Alstom Northern Line Train Service Contract into the Secondary Usage Period.

3 Background

3.1 In 1995 London Underground Limited (LUL) entered into a Private Finance Initiative arrangement with Alstom for the provision and maintenance of trains, equipment and depot works for the Northern line.

3.2 The contract expires in 2033 but LUL has the option to break in 2017 and 2027.

3.3 The trains, equipment and depot works are financed through sale lease arrangements between Alstom and the two lessor banks.

4 Renewal / Non Renewal beyond 2017

4.1 LUL can terminate the contract by serving notice of non renewal at the end of September 2017 or extend the contract into a secondary period which will run until 2027 by notice of renewal.

4.2 A notice to either renew or not must be served by 30 September 2015. Once served, the notice is irrevocable.
List of Appendices to this Report
None

List of Background Papers:
None

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Number: 020 7088 5262
Email: martin.faulkner@tubelines.com
This paper will be considered in public

1 Summary
1.1 To report to the Board on the meeting of the Safety, Accessibility and Sustainability Panel held on 7 July 2015.

2 Recommendation
2.1 That the Board note the report.

3 Background
3.1 The main matters considered by the Panel were:

(a) Quarterly Health, Safety and Environment Performance Reports for Quarter 4, 2014/15;

(b) TfL Green Bonds;

(c) Emissions from the TfL Bus Fleet;

(d) Intelligent Speed Assistance;

(e) Road Safety Update;

(f) Accessibility Schemes at Crossrail Surface Stations;

(g) Resilience Report;

(h) Key Findings from Internal Audit Reports;

(i) Legal Compliance Report;

(j) TfL’s Customer Strategy and Action Plan; and

(k) TfL’s Response to the London Assembly Next Steps Report on Customer Service
4 Issues Discussed
Quarterly Health, Safety and Environment Performance Reports for Quarter 4, 2014/15

4.1 The Panel noted the quarterly HSE reports for Quarter 4, 2014/15, for Rail and Underground, Surface Transport, Crossrail and the Corporate directorates. Items discussed included:

(a) the actions being taken to reduce Platform Train Interface incidents and the resultant positive effects at stations;

(b) the increase in work-related violence on staff which was being investigated;

(c) an update from the Safety Adviser, David Morris, on safety management and risk mitigation on Night Tube. He was content with the appropriateness of the safety systems and analysis of risk;

(d) the success in achieving the target reduction in people killed or seriously injured on London’s roads; and

(e) Crossrail’s work on its Target Zero programme and Golden Rules to ensure they were appropriate for the changing risk profile as the project moved into its fit-out stage.

TfL Green Bonds

4.2 The Panel noted the paper, which provided an overview of the development, issue and benefits of TfL’s first Green Bond. The issue of the bond had been successful, raising £400m which was invested in projects with demonstrable environmental benefits. The Panel congratulated TfL on the success of the issue and suggested that it should become a case study and be presented to interested parties.

Emissions from the TfL Bus Fleet

4.3 The Panel noted the paper and presentation, which provided an overview on the work undertaken to reduce emissions from buses. Data from monitoring at Oxford Street had shown a reduction of NOx levels and the introduction of the Ultra Low Emissions Zone would also make a significant contribution.

TfL Bus Driver Behaviour Training

4.4 The Panel noted the paper and presentation, which provided an overview of the training developed by TfL and London Bus Operators for bus drivers. The Panel were also shown a video interview, which formed part of the bus driver training, with Sarah Hope who, with members of her family, had been involved in a serious collision with a bus.
Intelligent Speed Assistance

4.5 The Panel noted the paper and presentation, which provided information on the Intelligent Speed Assistance technology developed to assist bus drivers. This was being trialed on two bus routes, the 19 between Parkgate Road and Finsbury Park and the 486 between North Greenwich and Bexleyheath.

Road Safety Update

4.6 The Panel noted the paper and presentation on the progress of the Safe Streets for London programme. The target of a 40 per cent reduction in KSIs from the 2005-09 baseline by 2020 had been achieved. Members discussed the introduction of a stretch target of a 50 per cent reduction given the challenges from an increase in population and corresponding increases in traffic and cycling.

Accessibility Schemes at Crossrail Surface Stations

4.7 The Panel noted the paper and presentation, which provided an overview of the proposals for improving accessibility at seven surface Crossrail stations. The paper had been presented to the Rail and Underground Panel at its meeting on 20 May 2015.

Resilience Report

4.8 The Panel noted the report, which provided an update on developments with resilience matters relevant to TfL since the last meeting.

Key Findings from Internal Audit Reports

4.9 The Panel noted the paper, which provided information on the Internal Audit Reports related to Safety, Accessibility and Sustainability, issued during the fourth quarter of 2014/15.

Legal Compliance Report

4.10 The Panel noted the report, which provided information on actual and alleged breaches of HSE legal obligations between 1 October 2014 and 31 March 2015.

TfL’s Customer Strategy and Action Plan

4.11 As part of what will be regular consideration of TfL’s approach to continuous improvement of customer service, the Panel noted the paper and presentation, which provided an overview of TfL’s Customer Strategy and Action Plan focused on meeting the changing needs of TfL’s customers.

4.12 The strategy is based on a framework informed by customer research, complaints, operational data and feedback from staff and others and is brought together under ‘Every Journey Matters’.
4.13 The action plan involving hundreds of individual steps is based around the things customers want us to improve most. It includes better bus driver training and automatic refunds on Oyster and contactless payment cards. It harnesses technology and free open data to provide up to date and coordinated travel information. Following the example from London Underground and London Rail, provision of accurate and timely incident and travel demand information is now also being provided to road users.

4.14 As with all modern customer focused organisations, this will be a continuous programme of action reflecting the evolving needs of London and the changing expectations of customers.

**TfL’s Response to the London Assembly Next Steps Report on Customer Service**

4.15 The Panel noted the paper and presentation, which summarised the commitments made to the Transport Committee of the London Assembly in response to its March 2015 “TfL’s Customer Service Next Steps” report. The work done by the Transport Committee was very constructive and TfL agreed with nearly all the recommendations and, as the Customer Strategy and Action plan demonstrated, was committed to improving customer service.

**List of appendices to this report:**

None

**List of Background Papers:**

Papers for the meeting of the Safety, Accessibility and Sustainability Panel held on 7 July 2015.

Contact Officer: Howard Carter, General Counsel
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This paper will be considered in public

1 Summary
1.1 To report to the Board on the meeting of the Remuneration Committee held on 8 July 2015.

2 Recommendation
2.1 That the Board notes the report.

3 Background
3.1 The main matter considered by the Committee was the Commissioner’s Salary Review 2015.

4 Commissioner’s Salary Review 2015

4.1 On 3 June 2015, the Committee considered the results of the 2015 bespoke market benchmarking review for the Commissioner and Chief Officer roles undertaken by the external remuneration advisors, New Bridge Street. It deferred a decision on the Commissioner’s salary to a future meeting.

4.2 In light of the benchmarking information and that there had been no increase to the Commissioner’s salary since 2008, the Mayor had recommended that the Committee consider the Commissioner’s salary in light of the review. The Committee approved a base salary increase of £7,500 for the Commissioner, with effect from 1 April 2015.

List of appendices to this report:
None

List of Background Papers:
Papers for the meeting of the Remuneration Committee held on 8 July 2015

Contact Officer: Howard Carter
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This paper will be considered in public

1 Summary
1.1 To report to the Board on the meeting of the Finance and Policy Committee held on 30 July 2015.

2 Recommendation
2.1 That the Board notes the report.

3 Background
3.1 The main matters considered by the Committee are listed below. Items identified by an * in the list below appear elsewhere on the agenda for this meeting.

(a) Independent Investment Programme Advisory Group 2014/15 Annual Report;
(b) Independent Investment Programme Advisory Group Appointments;
(c) Project Monitoring – Project Approvals;
(d) Surface Intelligent Transport System*;
(e) Cycle Hire Re-Let;
(f) Crossrail Stations Upgrades;
(g) Barking Riverside Extension;
(h) Jubilee and Northern Lines Additional Trains;
(i) Tottenham Court Road West Over Station Development; and
(j) Appointment of the Commissioner of Transport*.
4 Issues Discussed

Independent Investment Programme Advisory Group 2014/15 Annual Report

4.1 The Committee noted the Independent Investment Programme Advisory Group’s (IIPAG) Annual Report for 2014/15 and the information provided on the delivery of TfL’s Investment Programme. Members noted the contribution of the IIPAG in providing a useful level of challenge and the role of the Annual Report in facilitating further dialogue. Work was underway within TfL to examine improvements in the management of large commercial projects and the rationalisation of telecommunications contracts, both of which were welcomed by Members. The Committee endorsed TfL’s management response for approval by the Mayor.

Independent Investment Programme Advisory Group Appointments

4.2 The Committee approved the process and selection panel to recommend two candidates for appointment by the Mayor to the IIPAG. The need for additional expertise, in information and systems technologies and highways/transport planning, had been identified as part of a review of the Assurance and Approval Processes applicable to Investment Projects.

Project Monitoring – Project Approvals

4.3 The Committee noted the forward approval programme for projects with a value in excess of £50m from July 2015 to January 2017 and details of the Project Authority granted by the Commissioner.

Surface Intelligent Transport System

4.4 The Committee recommended that the Board approve additional Project Authority for the Surface Intelligent Transport System (SITS), bringing the project total to £5.80m.

4.5 Members discussed the drivers behind the SITS in detail. Given the particular challenges involved in a unique and technically complex long term project such as SITS, Members recommended that the remaining Project Authority of up to £6.26m should be requested following an Assurance Review.

4.6 A paper on SITS appears elsewhere on the agenda.

Cycle Hire Re-Let

4.7 Under the authority delegated by the Board on 26 March 2015, the Committee granted Project and Procurement Authority to enable implementation of the recommended option for the Cycle Hire Re-let (CHR) Programme and the continued operation of the Cycle Hire Scheme. The CHR Programme would deliver the continuation of the Cycle Hire Scheme services, including back and front office systems, contact centre, on street fixed assets, scheme integration, bike management and supply, for launch by 1 August 2017.
Crossrail Stations Upgrades

4.8 Under the authority delegated by the Board on 26 March 2015, the Committee approved an increase of £55m in the Procurement Authority (to a total of £1,399m) for the Crossrail train operating contract with Mass Transit Railway Corporation (Crossrail) Limited (the MTR Contract) and arrangements for amending the MTR Contract to enable the delivery of station upgrades.

4.9 The MTR Contract permits Rail for London Limited (RfL) to instruct MTR to carry out station improvements. TfL’s Business Plan from 2015 to 2020 includes £93.6m Financial Authority for the station improvement works, of which £55m has been identified for the management and delivery of station improvements. Project Authority for this was granted by the Committee on 17 June 2015. Following the development and identification of funding of the proposals for the station upgrade works, RfL was now in a position to instruct MTR to carry out the works.

4.10 The station works would be procured in line with the project programme, leading to completion of the stations upgrade works to the east of London in time for the launch of the new Crossrail trains and branding in May 2017.

Barking Riverside Extension

4.11 Under the authority delegated by the Board on 26 March 2015, the Committee agreed additional Project Authority of £2.7m to enable development of the Barking Riverside Extension to continue and to prepare documentation for a Transport and Works Act Order (TWAO) application in early 2016. The Committee endorsed the submission of a paper to the Board in due course seeking authority to submit the TWAO application alongside additional Project Authority to advance the scheme to detailed design.

Jubilee and Northern Lines Additional Trains

4.12 Under the authority delegated by the Board on 26 March 2015, the Committee approved additional budgeted Project Authority to progress the Invitation to Tender stage of the procurement of additional trains for the Jubilee and Northern lines. The additional trains were required for three projects: Jubilee Line World Class Capacity, increasing the number of trains per hour to up to 36 peak service by 2019; Northern Line World Class Capacity, which will increase the number of trains per hour to 30 peak service by 2021; and the Northern Line Extension from January 2020.

4.13 The additional Project Authority of £4.62m increased the total Project Authority to £6.027m. A further paper would be submitted in September 2016 seeking Project and Procurement Authority to award a contract.

Tottenham Court Road West Over Station Development

4.14 The Committee noted the paper which detailed Crossrail’s general policy of having Over Station Developments (OSDs) in place in advance of the station and railway opening and how the current forecast meant there would be
insufficient time to complete the works. The Committee approved additional Project Authority to procure completion of the shell and core of the OSD above the new Crossrail station at Tottenham Court Road West using the current contractor, Laing O’Rourke (LOR), for the Crossrail Main Station contract.

4.15 The shell and core work would be undertaken by LOR, enabling the OSD to be completed prior to the station opening. The earlier procurement was recommended on the basis of it being both necessary in order to avoid or mitigate the local impacts of an extended and disrupted construction period and to avoid the abortive cost of reinstating urban realm facilities and to maximise commercial returns.

Appointment of the Commissioner of Transport

4.16 The Committee received this paper as an item of urgent business, in accordance with section 100(B)(4) of the Local Government Act 1972, on the grounds that the appointment of the Commissioner of Transport should be progressed as soon as possible. The Committee noted the paper and the membership of the panel to assist with the appointment process.

4.17 A paper on the Appointment of the Commissioner of Transport appears elsewhere on the agenda.

List of appendices to this report:
None

List of Background Papers:
Papers submitted to the Finance and Policy Committee on 30 July 2015

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1 Summary

1.1 This paper informs the Board of the recruitment and selection process undertaken to support the appointment of a Commissioner of Transport for London (the Commissioner). The Board will be asked to appoint a Commissioner, based on the recommendation of the Chairman of TfL and the Selection Panel.

2 Recommendation

2.1 That the Board note the recruitment and selection process and appoint a Commissioner of Transport for London based on the recommendations of the Chairman and the Selection Panel.

3 Background

3.1 Under Standing Order 100(e)(i), the appointment of the Commissioner is a matter reserved to the Board. A new permanent appointment to that role is required following the departure of the former Commissioner, Sir Peter Hendy CBE, on 16 July 2015 following his appointment as Chairman of Network Rail.

4 Selection Process

4.1 On 28 July 2015, the Chairman of TfL met with available Members to discuss the selection process for a permanent appointment. On 30 July 2015, the Finance and Policy Committee, in its capacity to act under delegated authority from the Board, noted the proposals to agree the selection process.

4.2 Following expressions of interest, the Chairman nominated the following Members to assist him in the shortlisting and interviewing process ahead of the Board being asked to make an appointment: Daniel Moylan (lead), Peter Anderson, Sir Brendan Barber, Brian Cooke, Baroness Grey-Thompson DBE and Eva Lindholm. Charles Belcher was subsequently asked to join the Selection Panel at the interview stage due to Eva Lindholm and Baroness Grey-Thompson DBE being unavailable at the time the interviews were scheduled.

4.3 The role was externally advertised in a range of major publications and recruitment consultants were also engaged to identify candidates and support the process. The recruitment process attracted a number of high calibre individuals from the UK and internationally.
4.4 The Selection Panel met to agree a list of candidates for interview. The Selection Panel interviewed five candidates and recommended a shortlist of candidates to meet with the Chairman.

4.5 It is anticipated that the Chairman and the Selection Panel will be in a position to make a recommendation as to the appointment of a suitable candidate at the meeting on 24 September 2015.

List of appendices to this report:

None

List of Background Papers:


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