

**Date: 8 October 2014**

**Item 15: Strategic Risk Management Update – Quarter 1**

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**This paper will be considered in public**

**1 Summary**

- 1.1 The purpose of this paper is to update the Audit and Assurance Committee on TfL's Strategic Risk Register as at Q1 2014/15 and to seek approval for TfL's Risk Policy.
- 1.2 As outlined in previous meetings, the Strategic Risk Management Panel (SMRP) has been set up to develop and implement a pan TfL strategic risk framework for the management of risks and better support decision-making. The Leadership Team has agreed an approach to ensure continuous improvement of current strategic risk reporting.

**2 Recommendation**

- 2.1 **That the Committee note the Strategic Risk Register and approve the TfL Risk Policy.**

**3 Overview**

**Risk Process**

- 3.1 TfL currently captures strategic risk through the Strategic Risk Register (SRR) and the Quantified Strategic Risk Schedule (QSRS).
  - (a) The objective of the SRR is to capture the key risks that could impact the delivery of TfL's strategic objectives through the thematic aggregation of the strategic Business Area level risks. The SRR will be discussed in Part 1 of the agenda.
  - (b) The TfL QSRS quantifies where possible the risks included in the SRR. It also captures project contingency and any opportunities that could materialise. The QSRS will be considered in Part 2 of the agenda.

**4 Implementing New Strategic Risk Register (SRR)**

- 4.1 During Quarter 1 (Q1), a new pan-TfL SRR has been implemented. It has been designed to give greater focus on controls, actions and the potential impact on the risk status.
- 4.2 Noticeable changes, compared to the SRR presented during Quarter 4 include:

- (a) a stronger link to strategic objectives and key risk indicators identified to help track trends;
- (b) a clearer distinction between controls and mitigating actions; and
- (c) enhanced controls with specific owners and planned review dates and due dates assigned to controls and actions respectively.

## **5 Quarter 1 Strategic Risk Register Update**

5.1 During Q1 2014/15, the risks that feed into the SRR were assessed as part of the Business Areas quarterly forecast reviews.

5.2 The risks that were reported during Q4 were reviewed and reassessed by the SRMP and remapped into seven new TfL Risks. The mapping of these can be found in Appendix 1.

5.3 Due to implementing a new format for the SRR with a different means of consolidating the various risks, an accurate like for like comparison against Q4 2013/14 is not possible.

5.4 The new SRR can be found in Appendix 2.

5.5 The highest risks are as follows:

### **TfL01 – Maintaining a long term strategic, balanced plan**

5.6 This risk has been scored as high due to the impact on TfL's Business Plan and the overall potential financial value if the risk materialised.

5.7 There are a number of key controls in place to mitigate this risk such as:

- (a) stakeholder management, for example influencing and negotiating with the Department for Transport and the Mayor's office to ensure a favourable funding position is maintained, as well as identifying activities to mitigate potential shortfalls; and
- (b) holding suitable contingency and risk allowance for major projects.

5.8 Similarly key actions have been identified and include:

- (a) Leadership team to work together to create a financially balanced Business Plan and subsequently undertake quarterly forecast meetings with to review and challenge any deviations from the Business Plan; and
- (b) identify and agree savings initiatives to ensure delivery of £16bn savings and efficiency programme.

### **TfL03 – Delivery of capital investment portfolio**

5.9 There is a risk that the capital projects and programmes are not delivered on time, budget or deliver the expected benefits. This risk has been scored as high due to the impact on failure to deliver key Project Milestones, particularly milestones set by the Department for Transport.

- 5.10 There are a number of key controls in place to mitigate this risk such as through review of Project Dashboards and milestones to identify any potential slippage or risk to delivery.
- 5.11 Similarly key actions have been identified and include:
- (a) completion of the annual review of business workforce planning, in line with investment programmes focusing on the next twelve months; and
  - (b) develop and roll out consistent project controls, process clarification and project management systems by March 2017.

**TfL05 – Disruption to quality of service – operational and customer**

- 5.12 There is a risk that services levels could deteriorate through increased congestions on TfL's network. This risk is high due to the potential impact it could have on our Key Performance Indicators and overall customer satisfaction.
- 5.13 There are a number of key controls in place to mitigate this risk such as regular performance reviews of key suppliers to identify early warning signs of non delivery or deterioration of standards.
- 5.14 Similarly key actions have been identified and include delivering various programmes, such as the Predict and Prevent, Integrated Improvement and Reliability and Safety Programmes.

**6 Risk Policy and Procedure**

- 6.1 The Risk Policy and Procedure document was updated in August 2014. Key changes include:
- (a) clearer definitions of risk; and
  - (b) the addition of the SRMP, who provide day to day guidance in promoting and embedding risk management and reporting.

**List of appendices to this report:**

Appendix 1: Risk mapping  
Appendix 2: Q2 Strategic Risk Register  
Appendix 3: Risk Policy

**List of Background Papers:**

None

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**Risk mapping**

There were 15 Strategic Risks on the Quarter 4 SRR as follows:

- SR1 - Maintaining a long term strategic, balanced Plan within the constraints of available resources
- SR2 - Pension Fund
- SR3 - Ability to re-prioritise short term deliverables in response to external factors
- SR4 - Delivery of capital investment portfolio
- SR5 - Failure of critical IT systems
- SR6 - Risk of Information or Cyber Security incident on key services
- SR7 - Disruption to quality of service
- SR8 - Security
- SR9 - Major events
- SR10 - Managing external stakeholder interests
- SR11 - Major Incident – External
- SR12 - Major incident – Ticketing Systems failure
- SR13 - Environmental impact of delivering a transport service
- SR14 - Industrial Relations (IR)
- SR15 - People Strategy

During Q1 these risks were reviewed and remapped into 7 Strategic Risks (coded TFL01, TFL02 etc. to avoid confusion with Quarter 4 risks)

<b>Q1 Risk</b>	<b>SRR Title</b>	<b>Q4 Risks</b>
TFL01	Maintaining a long term strategic, balanced plan	SR1 SR3
TFL02	People Risk (Inc. Pensions, IR)	SR2 SR14 SR15
TFL03	Delivery of capital investment portfolio	SR4
TFL04	Technology Risk	SR5 SR6 SR12
TFL05	Disruption to quality of service - operational and customer	SR7
TFL06	Targeting continued improvements (set by external stakeholders)	SR10 SR13
TFL07	One-off serious incidents	SR8 SR9

## **Appendix 2**

### **Q2 Strategic Risk Register**

**Transport for London - Strategic Risk Register**

<b>TFL01 : Maintaining a long term strategic, balanced plan</b>			Owner: Steve Allen	Assessed	Quarter 1
Strategic objective : Value			Key risk indicator : Adverse variances or cash shortfalls arising through financial reporting and analysis and business planning	Trend	●
Description: Lower funding sources or higher than planned costs which creates cash flow problems resulting in an unbalanced Business Plan. This may be due to Government Grant reduction, shortfall in Commercial Development and other secondary income sources or a shortfall in the savings and efficiency target.					
<b>Current Risk Status</b> High score from potential impact on TfL's Business Plan and overall financial value			KPI impact to be quantified in Q2 Financial impact to be quantified in Q2	<b>Target Risk Status</b> Medium target as a result of closely monitored operational and financial activity	
KPI impact to be quantified in Q2			Financial impact to be quantified in Q2	KPI impact to be quantified in Q2	
Financial impact to be quantified in Q2			KPI impact to be quantified in Q2		Financial impact to be quantified in Q2
<b>Key Controls</b>	<b>Owner</b>	<b>Review Date / Status</b>	<b>Key Actions</b>	<b>Owner</b>	<b>Due Date / Status</b>
Influence and negotiate with DfT and Mayor's Office to continue favourable funding position and identify activities to mitigate any possible shortfalls.	Steve Allen	June 2014	Ongoing contingency planning to develop scenario and alternatives to generate feasible solutions.	Steve Allen Andrew Pollins Patrick Doig	Quarter 2
Having the TfL Business Planning Process	Steve Allen Andrew Pollins Patrick Doig	June 2014	2014 Business Planning round is underway - Leadership Team to work together to create a balanced plan.	Steve Allen Andrew Pollins Patrick Doig	August 2014
Quarterly forecast and review process to ensure the business plan remains balanced over the long term and take corrective action if necessary.	Steve Allen Andrew Pollins Patrick Doig	June 2014	Undertake quarterly forecast meetings with the business areas to review and challenge forecasts.	Steve Allen Andrew Pollins Patrick Doig	Quarter 2
Management contingency and risk allowance for major projects, informed by Quarterly Risk Assessments (QRA) and quarterly risk reviews.	Steve Allen Andrew Pollins Patrick Doig	June 2014	Monitor progress towards the NLE Transport and Works Act Order report and procurement.	Steve Allen	October 2014
Robust management of the Northern Line Extension (NLE) programme to ensure that costs are controlled and driven down.	Steve Allen	June 2014	Recruitment of essential resources to ensure project management skills required are available.	Graeme Craig	June 2015
Use of specialist skills in Property Development.	Graeme Craig	June 2014	Deliver required resource, specialist support, contracting arrangements, funding and governance required to deliver Comm Dev Business Plan, via Project Skyline	Graeme Craig	June 2015
Flexibility with regards to sites offered on the market, thereby optimising the Over Station development returns in the future.	Steve Allen	June 2014	Contingency Planning- review alternatives for generation of income to mitigate potential shortfalls	Graeme Craig	Ongoing
Continued monitoring of interest rate risk and investment strategy	Simon Kilonback	June 2014	Identify and agree savings initiatives with the Leadership Team and ensure inclusion within the Business Plan.	Steve Allen	Ongoing
Material allocation of investments into safe areas such as UK Government securities to reduce risk.	Simon Kilonback	June 2014	Engage with Leadership team and senior managers to identify a framework that includes targets for delivery of New Savings Programme (NSP).	Steve Allen	Complete
<b>Comments:</b> The imminence of 2015 general election and 2016 mayor election, creates increased political uncertainty and therefore policy direction and funding risks. This is considered throughout the business planning process and captured in the above risk.					

Transport for London - Strategic Risk Register

TFLO2 : People Risk (Inc. Pensions - Industrial Relations)			Owner: Tricia Riley	Assessed	Quarter 1
Strategic objective: Failure to deliver the people strategy			Key risk indicator : Attendance, Staff turnover, Employee Survey, No. of strikes, financial reporting on pension fund	Trend	●
Description: Failure to deliver TfL People Strategy (knowledge retention, timely access to scarce resources, staff development and retention) and/ or increased number of strikes resulting in unsuccessful delivery of projects, operational and change programmes, poor service, loss of revenue and loss of reputation. Failure to deliver New Savings Programme targets (through pay and pension savings) and risk of future TfL Pension Fund deficit from market conditions resulting in higher than planned costs.					
Current Risk Status		KPI impact to be quantified in Q2	Financial impact to be quantified in Q2	Target Risk Status	
Risk of Industrial action is high while all other risks relating to People are medium				Target risk of medium on IR while all other People risk element targeted to be Low or Very Low resulting in an overall target of Low	
Key Controls		Owner	Review Date / Status	Key Actions	
Compliance with TfL employment policies.		Tricia Riley	April 2014 May 2014 June 2014	Development of Strategic Resourcing strategy to enable TfL to have a framework to plan adequate resources for future and make provision to acquire these resources proactively.	
Development of People Management System to ensure information is consistent, simple to understand and easy to find to assist staff and managers in relation to HR issues.		Tricia Riley	June 2014	As part of the Integrated Planning Workstream develop an IT pilot solution to assist in improving the accuracy of workforce planning.	
External salary benchmarking.		Steven Field	Annual	Implement new Performance Management System to help managers manage the performance of their staff (e.g. guidance on performance management and TfL behaviours etc)	
Company Council & Consultations Groups for TfL and Trade Unions to discuss matters of mutual interest. Constant engagement with other external organisations to monitor trends and developments.		Tricia Riley	May 2014	Implement Managing Essentials programme to ensure managers have the skills applicable to their role (e.g. key policy documents, work instructions, training manuals etc)	
Regular reports from franchise/concession operators on the status of relationship with Trade Unions, ballots and pay negotiations.		Tricia Riley	April 2014 May 2014 June 2014	Review of Industrial Relations Strategy and Terms and Conditions	
Strike resilience via TfL volunteer programme.		Andrew Pollins	As required	Enhance the Organisational Change Capability Programme and re-establish the role of line managers through HR transformation	
Well diversified Trustee strategy which is set after taking advice from the Actuary and Investment Adviser and reviewed following each triennial valuation. Regular communication between Trustee/Actuary.		Stephen Field	Ongoing	Deliver staff development programmes: Directors - Cass Executive Education modules <sup>1</sup> Senior Managers - TfL Senior Management Programme <sup>2</sup>	
Fully diversified portfolio of return seeking assets, including alternate asset classes which is actively monitored and reviewed on a regular basis.		Stephen Field	Ongoing	Ensure that TfL has a well diversified investment strategy across all portfolios to minimise risk.	
Financial Management Plan (FMP) (reviewed by the Principal Employer) to enable the Trustee to monitor the ongoing funding position.		Stephen Field	Quarterly and ad-hoc as required	Trustees agree a prudent funding target with the Principal Employer (known as technical provisions) following receipt of advice from the Actuary.	
Comments: The TfL People Strategy, which is based upon the four pillars of recruit, manage, reward and develop, seeks to ensure TfL has the right skills, capabilities and behaviours at the right cost to deliver the business priorities. It is also recognised that there are people challenges in delivering "Fit for the Future Stations" and "Pay for Performance" proposals.					

Transport for London - Strategic Risk Register

<b>TFLO3 : Delivery of capital investment portfolio</b>			Owner: Nick Fairholme / David Waboso	Assessed	Quarter 1
Strategic objective: Failure to deliver the TfL Capital Investment Programme			Key risk indicator : Project milestones not being achieved	Trend	●
Description: Projects and programmes may not be delivered on time, budget or deliver expected benefits. This could lead to acceleration costs, target benefits being delayed and risking on going capital funding for DfT milestones.					
<b>Current Risk Status</b> High score due to potential impact on Project Milestones, to poor design, construction & manufacture, inadequate project management and assurance arrangements		KPI impact to be quantified in Q2	Financial impact to be quantified in Q2	<b>Target Risk Status</b> Improved processes and project controls as well as increased staff capability with improved handover process	
KPI impact to be quantified in Q2	Financial impact to be quantified in Q2	KPI impact to be quantified in Q2		Financial impact to be quantified in Q2	
<b>Key Controls</b>	<b>Owner</b>	<b>Review Date / Status</b>	<b>Key Actions</b>	<b>Owner</b>	<b>Due Date / Status</b>
Financial and project forecasting including the assessment of likely underspend and project risk.	David Waboso/Nick Fairholme	June 2014	An annual review of business workforce planning in line with the investment programme, will be undertaken, focussing on next 12-18 months period. Provide an outline view over the medium to long term.	Patrick Doig	September 2014
Review of Project dashboards and milestones; progress of projects reviewed to identify any potential slippage or risk to delivery.	Nick Fairholme	April 2014 May 2014 June 2014	A PPD Planning Improvement Initiative has been initiated. Also investigate establishing a single shared resource register for use by delivery portfolios.	Nick Fairholme	December 2014
Thorough director review of projects and milestones including programme boards, Surface board and R&U board.	Leon Daniels/Mike Brown	June 2014	The Gate 1 - 3 process improvement review has identified key actions to address including Finance Business Controller to investigate options for reducing governance timescales for early project feasibility spend.	Nick Fairholme	September 2014
Deployment of competent staff: engineers, assurance staff, project & programme staff and support staff.	Programme Directors	As required	To report the investment programme 'plan on a page' and an exception report highlighting all instances of slippage. In addition a process improvement plan to be developed.	Patrick Doig/Ben Plowden	September 2014
Independent oversight of the investment programme by the PMO including peer and external stage gate reviews	David Waboso	April 2014 May 2014 June 2014	Develop and rollout consistent project controls, process clarification and project management systems e.g. cost management, resource scheduling through the Delivery Capability Improvement Programme.	Andy Eastaugh	March 2017
Automotive Train Control retender, enhanced governance and support through the establishment of a steering with senior involvement.	David Waboso	Weekly	Assess staff capability and establish competency and resource needs. Develop and implement improvement programme.	David Waboso	March 2016
			Implement the Commercial Capability Programme 14/15 <sup>1</sup> & the Sponsorship Capability Improvement Programme <sup>2</sup>	Mike Lycett/David Hughes	March 2015 <sup>1</sup> TBC <sup>2</sup>
			Enhance peer review and stage gate process.	David Waboso	TBC
			Deliver recommendation on delivery improvements centred on one-team working through the Integrated Improvement Programme.	K. Dunning/ P.Hufton	August 2014
<b>Comments:</b>					

Transport for London - Strategic Risk Register

<b>TFL04 : Technology Risk</b>			Owner: Shashi Verma/ Steve Allen	Assessed	Quarter 1
Strategic objective: Loss or disruption of key technology services			Key risk indicator : MD Scorecard targets and Director updates, Significant breach of SLA, Financial forecasts	Trend	●
Description: Significant loss of information/ key IM services including the ticketing system that support the business and/or network operations due to a cyber security incident or system failure/ outages. If the collection system (including contactless cards) fails temporarily, this may result in reputational damage to TfL and the loss of confidence in the integrity of the fare collection system.					
<b>Current Risk Status</b> Risks to Future Ticketing and a cyber security incident are high. The risk to ticketing system failure is medium despite the potential impact on TfL's Business Plan.			KPI impact to be quantified in Q2	Financial impact to be quantified in Q2	
<b>Target Risk Status</b> Risk driver- Key controls in place and maintained			KPI impact to be quantified in Q2	Financial impact to be quantified in Q2	
<b>Key Controls</b>	<b>Owner</b>	<b>Review Date / Status</b>	<b>Key Actions</b>	<b>Owner</b>	<b>Due Date / Status</b>
Ensure that all contractor equipment does not use live keys so that changes made do not inadvertently transfer to the live system.	Shashi Verma	June 2014	Develop the proposal for the extension of the Security gap analysis pan TfL and create and agree upon an Internal controls function within IM to maintain the Information Security Controls Framework.	Steve Townsend	July 2014
Ensure that any base data change delivered to the TfL ticketing system is tested and assured by TfL representatives before approval for implementation.	Shashi Verma	June 2014	Develop option for limited early accreditation of revenue inspection devices to allow basic inspections to take place <sup>2</sup> and engage with stakeholder regarding revenue inspection workarounds <sup>3</sup> .	Shashi Verma	Complete
Manage integration testing of all changes to the live system through the Test Assurance. Assurance on the performance of TfL ticketing systems through reviews of contractors.	Shashi Verma	June 2014	Support the legacy platform through the Desktop Futures Project.	Steve Townsend	June 2015
Robust change management procedures to mitigate risk of uncontrolled change.	Shashi Verma	June 2014	Define levels of criticality on systems managed by IM and apply to the services provided to the business.	Steve Townsend	Complete
Ensure that all bulk hot list changes have release plans to be assured and approved by TfL.	Shashi Verma	June 2014	The provision of a replica hosting capability to that which is in data centre (a) to ensure service resiliency where it is required (Enterprise Platform Resilience).	Steve Townsend	Complete
Quarterly rolling Future Ticketing Project (FTP) forecasts & FTP Programme overview meeting with Finance and Project teams.	Shashi Verma	June 2014	Dedicate a commercial work stream negotiating an amended agreement whilst incorporating a trial period.	Shashi Verma	June 2014
Maintain and monitor regular Backups and Restores of appropriate IM systems and carry out restore tests.	Steve Townsend	August 2014	Work Jointly with Association of Train Operating Companies and individual Train Operating Companies on operational readiness planning to remove barriers to launch in 2014.	Shashi Verma	June 2014
Implement and maintain a dual Data Centre Strategy.	Steve Townsend	August 2014	Review options for initial allocation of revenue inspection devices to prioritise 'open' systems (where access is not protected by a gate line) if final production is delayed.	Shashi Verma	June 2014
Continue to develop and implement remediation plans from the security gap analysis.	Steve Townsend	August 2014	Define levels of criticality on systems, implement replica hosting capabilities through Enterprise Platform Resilience and provide support for the legacy platforms through Desktop Futures Project	Shashi Verma	Complete
<b>Comments:</b> Failure of the ticketing system has a stable score due to the key controls that are in place. Phase two of the Future Ticketing Project is due to launch by the end of 2014 with mitigations in place and close operational monitoring, resulting in a reduced risk score for Q1 2014/15.					

**Transport for London - Strategic Risk Register**

<b>TFL05 : Disruption to quality of service</b>			Owner: Alan Bristow/ Mike Weston/ Phil Hufton/ Sarah Atkins	Assessed	Quarter 1
Strategic objective: Reliability of service and roads, high quality bus network, customer service, increasing capacity			Key risk indicator :Various KPIs including; TLRN CSS,TLRN Journey time reliability, Bus excess wait time, Scheduled Services Operated etc		Trend ●
Description: Increased congestion on TFL's network (across all modes of transports) impacts overall reliability and customer satisfaction. Causes include disruption to operational and investment programmes as well as reallocation of road space between uses and interchange with the TFL Rail Network.					
<b>Current Risk Status</b> Significant impact on various KPIs e.g TLRN & bus CSS & TLRN Journey time reliability. Moderate impact: inappropriate R&U operating standards and processes. Lower risk impact due to insufficient diversity in the supply chain			<b>Target Risk Status</b> Roll out of various programmes to improve disruption and to identify problems. Also to improve integration and accuracy.		
KPI impact to be quantified in Q2			KPI impact to be quantified in Q2		Financial impact to be quantified in Q2
Financial impact to be quantified in Q2			KPI impact to be quantified in Q2		Financial impact to be quantified in Q2
<b>Key Controls</b>	<b>Owner</b>	<b>Review Date / Status</b>	<b>Key Actions</b>	<b>Owner</b>	<b>Due Date / Status</b>
Existing Bus priority measures and programme and Bus routes reliability measures.	Ben Plowden/ Mike Weston	June 2014	Address key bus pinch points for Surface Board approval in autumn 2014 through developing plans for High Quality Bus Priority Corridors.	Ben Plowden/ Mike Weston	October 2014
Journey time reliability (JTR) disruption due to planned events will be reduced through schemes impact assessment as well as improved scheduling of works.	Alan Bristow	June 2014	Implement the Pathway programme Stage B which starts in July (a feasibility study) to define the Surface Intelligent Transport Systems programme in detail ahead of delivery.	Alan Bristow	April 2014
The Tunnels and Structures programme has been added into the road space assessment as a hot-spot assessment involving work with Planned Interventions and Utilities.	Dana Skelley	June 2014	Implement earlier AM peak signal plans, manage the JTR Mean and improve MET police liaison amongst other pan London actions.	Alan Bristow	September 2014
Early warning of supplier failure <sup>1</sup> as well as provision of standard terms of contract to protect Intellectual property rights, change of control, termination rights and performance. <sup>2</sup>	Phil Hufton	Daily <sup>1</sup> Periodic <sup>2</sup>	Expand the functionality and improve scheme co-ordination through utilisation of the Planning to Operations Surface Playbook.	Alan Bristow	September 2014
Supplier selection processes to support procurement agents in assessing the market and selecting suppliers. There should also be regular performance reviews of key suppliers.	Sarah Atkins/Gary Bain	April 2014 May 2014 June 2014	Implement the Commercial Capability Programme, ensure there is supply chain management <sup>7</sup> , supplier relationship management <sup>8</sup> , and new collaboration tools available to Commercial teams. <sup>9</sup>	Sarah Atkins	February 2015 <sup>7</sup> August 2015 <sup>8</sup> October 2015 <sup>9</sup>
Audit of controls and the management system <sup>3</sup> and asset integration controls within a whole life asset management approach and business contingency & resilience planning. <sup>4</sup>	C.Walker/K.Dunning/P. Hufton	Schedule <sup>3</sup> Periodic <sup>4</sup>	Deliver the Predict and Prevent <sup>10</sup> , Integrated Improvement <sup>11</sup> , Delivery of Access Transformation <sup>12</sup> and Reliability and Safety Programmes. <sup>12</sup>	K.Dunning/G.Mc nulty/Phil Hufton	TBC <sup>10</sup> Sep 2014 <sup>11</sup> 15/16 <sup>12</sup>
Produce three year plan, development of a 12 month rolling resource scheduling plan <sup>5</sup> and a BMR review of activity against the agreed plan. <sup>6</sup>	Phil Hufton	Annual <sup>5</sup> Periodic <sup>6</sup>	Deliver the Fit for the Future Stations to simplify the model at stations so that staff are more visible and able to respond to customers needs quickly.	Phil Hufton	15/16
LUCC operates 24/7 ensuring a response is available for all incidents on the R&U network.	Phil Hufton	April 2014 May 2014 June 2014	Extend DLR Beckton Depot shed to accommodate three car trains supporting a reduction in train coupler faults and other failures.	Jonathan Fox	15/16
<b>Comments:</b> The target is to reduce Underground delays by a further 40% by the end of 2015 (compared to 2011). The programme board for the R&U supplier risk is the Delivery and Commercial Capability Board while the programme board for R&U operating risks is RUOM. In terms of road congestion, of the 200 sites to be commissioned for Split Cycle Offset Optimisation Technique (SCOOT) by end of March 2014, 190 have been completed. The revised completion is June 2014. The Bus network will grow, and has done, by 3% from 2013/14 - 2020/21.					

Transport for London - Strategic Risk Register

<b>TFL06: Targeting Continued Improvement</b>			Owner: Ben Plowden	Assessed	Quarter 1
Strategic objective: Improved environment, more & safer cycling, reduced casualties			Key risk indicator :TLRN Cycling index, Nox emission from bus fleet, KSI London-wide	Trend	●
Description: Inability to meet targets set by external stakeholders resulting in loss of reputation and/or fines. Target include: Mayor's target for "more and safer cycling" and reduced casualties as well as EU air quality targets.					
<b>Current Risk Status</b> Medium risk due to impact on KPIs: e.g TFL Road Network (TLRN) Cycling index, cycle hire numbers, NOx emission from buses, killed or seriously injured (KSI) London Wide etc.			KPI impact to be quantified in Q2	Financial impact to be quantified in Q2	
<b>Target Risk Status</b> Addressing target through Central London cycle grid, Quiet ways, Road Safety Action Plan and delivery of more efficient buses.			KPI impact to be quantified in Q2	Financial impact to be quantified in Q2	
<b>Key Controls</b>	<b>Owner</b>	<b>Review Date / Status</b>	<b>Key Actions</b>	<b>Owner</b>	<b>Due Date / Status</b>
Encourage cycling through: raising awareness of safety & ease and encouragement through cycling events e.g borough and work place cycle training, cycle parking, Ride London, Tour de France.	David Rowe/Ben Plowden	June 2014	Implement key infrastructure e.g Central London Grid and Quiet ways commences in 2014. First Grid schemes have commenced.	Ben Plowden	September 2014
Ongoing engagement with Defra, DfT, Society of Motor Manufacturers and Traders (SMMT), Taxi Industry (zero emission Taxi) and Office Low Emission Vehicles to address agenda.	Ben Plowden	October 2014	Present a strategy paper regarding a London-wide monitoring plan. This will outline proposals to improve our monitoring capabilities across London to ensure accurate tracking of growth in cycling.	Ben Plowden	July 2014
Research into electric vehicles potential usage in commercial fleets to inform / prompt private sector investment in charging infrastructure.	Ben Plowden	October 2014	To retrofit a further 400 buses with Selective Catalytic Reduction (SCR) and replace Euro 3 buses with Euro 6 vehicles by 2015 (stage 2). More than 900 buses have already been fitted with NOx reduction	Mike Weston	September 2014
Engage with car clubs and car share industries.	Ben Plowden	October 2014	Deliver 2 more electric buses (already 6) and generate investment in new charging points. EU funding has also been secured for wireless induction charging infrastructure and hybrid buses.	Mike Weston/Ben Plowden	September 2014
Implement the Road Safety Plan working with the boroughs.	Ben Plowden	October 2014	Mayor's Road Safety Action Plan: funding to deliver has been approved. Implementation tracker has been established and together with the Road Safety Plan were reviewed by Internal Audit.	Ben Plowden	Complete
Continue political and officer engagement to raise the profile of road safety with the boroughs, and urge them to prioritise effective investment through the LIPs.	Ben Plowden	October 2014	Develop specific action plans outlining interventions for the most vulnerable road users (pedestrians, cyclists, and motorcyclists) which account for over 80% of all killed and seriously injured casualties.	Ben Plowden	August 2014
Continue using external and internal governance framework to ensure the road safety portfolio is on-track, balanced, and delivered with the support of key partners.	Ben Plowden	October 2014	Issue the draft Cycle Safety Action Plan. A draft Pedestrian Safety Action Plan (PSAP) was issued for public comment on 31 March and publication of the final PSAP is planned for late June.	Ben Plowden	July 2014
Construction Logistics and Cycle Safety and Work Related Road Risk (WRRR) projects being in place.	Ben Plowden	October 2014	Prepare a programme of engagement workshops (working with Centre of Excellence) and approval paper. This will ensure maximum compliance to WRRR requirements across TFL contracts.	Ben Plowden	September 2014
<b>Comments:</b> Cycle flows on the TLRN in period 2 of 2014/15 were 58.4 index points (18.6 per cent) higher than in the same period last year. This is the highest level of cycling seen in period 2 since the index began in 2000/01. NOx emission from bus fleet - the target of 5095 tonnes annually was achieved in 2013/14 and the programme target of 943 by the end of March this year has been achieved and is now completed. Reduction of KSI London wide - the KSI targets for 2013/14 have been exceeded and are equivalent to the 2014/15 stretched target with no change to trend or status in Q1 2014/15.					

Transport for London - Strategic Risk Register

<b>TFLO7: Major / Catastrophic Incident</b>			Owner: Dana Skelley/Mike Weston/Jill Collis		Assessed	Quarter 1
Strategic objective: Quality bus network and reliable roads, reliability and safety, customer service			Key risk indicator: UK threat level, Category 1 effects made safe within 24 hrs, emergency call-out within 1 hour, planned assurance audits		Trend	●
Description: Lack of resilience to a major external event such as a terrorist incident which impacts on the integrity of infrastructure and/or ability to provide a core service. This could have a long term impact on public confidence in using the network and lead to reduction in revenue. Major incident or accident that results in fatalities or multiple serious injuries to the travelling public, staff and damage to TfL assets.						
<b>Current Risk Status</b>			<b>Target Risk Status</b>			
Risk drivers - Medium impact due to potential adverse effects on KPIs including safety, security. There are health, safety and environment incidents due to asset failure or an external event.			KPI impact to be quantified in Q2	Financial impact to be quantified in Q2	Addressing target through Central London cycle grid, Quiet ways, Road Safety Action Plan and delivery of more efficient buses.	
KPI impact to be quantified in Q2			KPI impact to be quantified in Q2			Financial impact to be quantified in Q2
<b>Key Controls</b>			<b>Owner</b>	<b>Review Date / Status</b>	<b>Key Actions</b>	
London Buses has put contingency plans in place for a range of anticipated incident scenarios as part of business as usual planning for disruption. Annual and regular review and exercising of plans.			Mike Weston	June 2014	The developing of training courses for Bronze (Operational) and Silver (Tactical) Incident Managers. Gold (Strategic) Incident managers have attended Gold Commanders Summits.	
Manage arising disruption with business as usual practices and contingency arrangements.			Mike Weston	October 2014	The creation of the new Roads and Transport Policing Command was approved by the Metropolitan Police Service Management Board. Key focus is on improving revised Command and Control operations.	
Work with the Metropolitan Police Services (MPS) to ensure that all of TfL's priorities and service requirements are met.			Steve Burton	June 2014	Renew assets such as Major Bridge and Tunnel Works and work with London Boroughs and other partners.	
Audit of Client inspection procedures will be conducted under PAS 55 scope specification (Optimal management of physical assets).			Dana Skelley	June 2014	Undertake external audit of structures inspection regime and focus on structures below good 'criteria'.	
Ensure Safety is integrated into all business processes and avoid complacency.			Mike Weston	June 2014	Develop a Procedural Blueprint that will align with outcome of strategic review of capacity to identify areas of deficiency and outline timelines, responsibilities, etc.	
Training programme to up skill managers and enable an up to date risk assessment of operational assets. Health & Safety Standards - robust health safety procedures have been implemented to mitigate this risk.			Mike Weston	June 2014	Produce prioritised action plan based on the findings of the Safety Management System maturity assessment.	
Annual Health, Safety and Environment (HSE) management system review and the production of Line Asset Network Plan.			J.Collis/G.Powell/P.Hufton	Annual	Produce HSE Benchmarking report to determine further improvements to customer and employee safety.	
Audit of safety performance controls & safety management system.			Clive Walker	Agreed Schedule	Develop and deliver a programme of interventions to enhance HSE capability and improve performance of smaller suppliers.	
Intelligence and liaison with police and security services to determine security risk assessment.			Phil Hufton	April 2014 May 2014 June 2014		
<b>Comments:</b> Current UK Threat level remains at "Substantial" since August 2011. Safety and security KPIs of the bus and road network was better than target in P2; Actual 6.8 Target 7.7. The Programme board for R&U in regards to serious incidents is the Safety Improvement Programme Board.						

## **Appendix 3**

### **TfL Risk Policy and Procedure**



# Risk Policy and Procedure

**DRAFT**

Policy Issue date: January 2012  
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## Part A - Policy

### 1 Purpose and Scope

This document sets out TfL's policy on risk management. TfL recognises that effective risk management must be carried out consistently, effectively and according to best practice.

The policy applies to all TfL staff and contractors and supports all of TfL's high level policies across the organisation.

### 2 Policy

Transport for London's risk policy is to proactively manage all risks in order to enhance the organisation's ability to deliver its objectives. Risk management will be integrated into our business framework so that:

- The management of business risk is clearly driven from the objectives of the business, delivers value and is actively incorporated into the business planning process.
- Regular risk reviews are conducted to identify and manage risks effectively and efficiently.
- Adequate resources are allocated to manage risks within the corporate risk appetite and to support the development of a strong company wide risk culture.
- Clear roles and responsibilities in relation to risk management are defined and risk managers are enabled and supported.
- There is visibility of strategic and key business risks, that all risks have mitigating strategies and owners, action plans are identified and can be measured through appropriate performance indicators.
- A culture is developed that encourages disclosure of issues and concerns, so timely and appropriate action can be agreed and implemented as necessary.
- The risk management framework is aligned and integrated with our supply chain.
- TfL is able to anticipate and respond to changing social, environmental and legislative requirements.



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## Part B – Procedure

### 3 Scope and Purpose

3.1 This document applies to all areas of TfL and to all TfL business activity

3.2 The purpose of this procedure is to describe the process and arrangements in place to ensure that risk management is understood by staff and carried out in a consistent and effective manner within Transport for London (TfL). This section supports the Risk Management Policy in Part A.

### 4 Risk Management

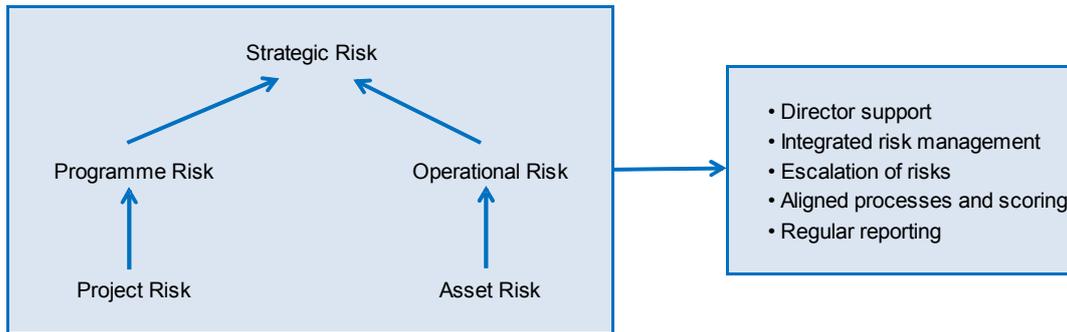
#### 4.1 General Principles

Effective risk management comes from continuously, systematically and proportionally addressing the risks surrounding an organisation's activities and is part of the culture of the organisation.

A risk management framework and process enables the organisation to manage uncertainty in an effective, efficient and systematic way from strategic, programme, project and operational perspectives, as well as supporting continual improvement. It should be applied at all levels of an organisation and to all activities. It should enable easy identification of activity where costs of mitigating risks might be too high or where objectives might not be realised irrespective of risk management effort.

Risk Management in TfL considers both the management of threats and the exploitation of opportunities.

Figure 1 Overview of effective risk management



## 4.2 Risk Definitions and Perspectives

A risk is an uncertain event or set of events that, should it occur, will have an effect on the achievement of objectives.

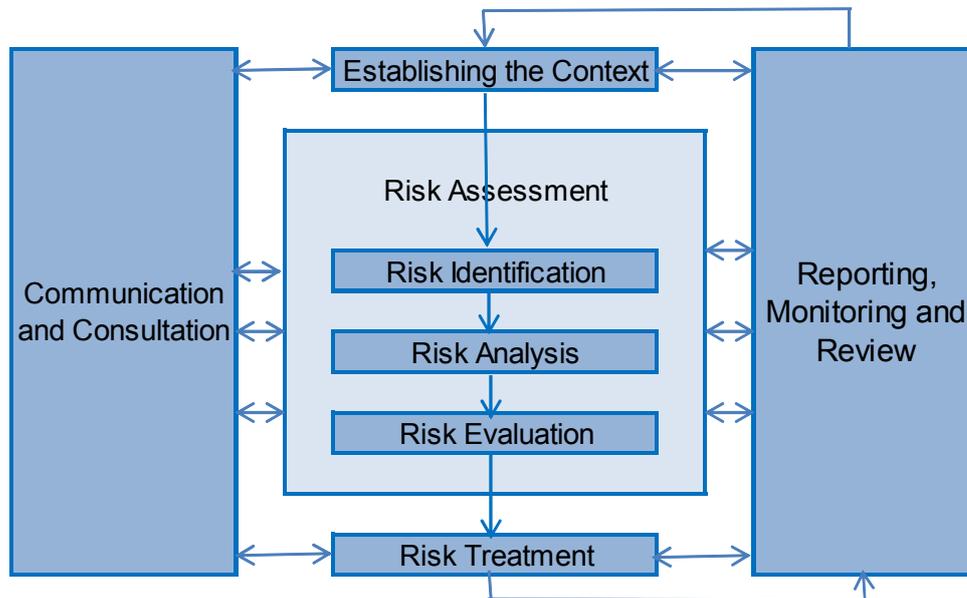
- 4.2.1 **Strategic risks** - risks that either affect or are created by an organisation's business strategy and strategic objectives and its relationship with its external and internal environment.
- 4.2.2 **Operational risks** - risks associated with the day to day provision of a transport service including support functions and impacts from external events.
- 4.2.3 **Asset risks** – risks associated with the effective and efficient delivery of operational asset management objectives such as optimising the performance of assets and asset systems, and minimising whole life asset costs.
- 4.2.4 **Programme risks** - risks associated with transforming strategic plans into actions relating to capital programmes comprising multiple, interdependent or interrelated projects
- 4.2.5 **Project risks** - the risk management process is supplemented in projects and programmes by a project risk management process. This is governed by the integrated projects and programme methodology (TfL Pathway) and made available through the TfL Programme Management Office (PMO)

## 4.3 Steps in the Risk Management Process

ISO 31100 states that each instance of the risk management process should provide a systematic, effective and efficient way by which risks can be managed. It should be consistent with the risk management process outlined in the risk management framework, but should be tailored to the context in which it is to operate.

The organisation's risk management process should, as a minimum, comprise the activities in figure 2 below and further expanded on.

Figure 2 The risk management process



#### 4.3.1 Establishing the Context

By establishing the context, the organisation articulates its objectives and defines the external and internal parameters to be taken into account when managing risk, and sets the scope and risk criteria for the remaining process. This should be articulated in a detailed risk strategy.

#### 4.3.2 Risk Assessment

All areas of TfL assess business risk using the Probability Impact Diagram (PID) in Fig 3 section 5.2. This allows consistent and comparative assessment of business risk across TfL.

**Risk Identification** – Anyone can identify risks and a number of techniques can be used to do this. This can be through risk workshops, brainstorming, assumption analysis, SWOT and PESTLE. A well defined risk will have:

**A Cause** – A situation that gives rise to a risk or event that results in risk.

**An Effect** – The result of the risk event occurring, e.g. loss of power supply could result in stopped trains or station closures.

**Risk Analysis and Evaluation** – All risks are evaluated using the scoring schemes in the risk management software, Active Risk Manager (ARM). These take into account all the impacts.

Risks will be measured by:

**Likelihood** - The likelihood or probability of the risk occurring

**Impact** - The impact and/ or severity of that risk. TfL currently recognises cost, time, reputation and customer service as the key impacts. These incorporate other impacts such as performance and quality.

### 4.3.3 Risk Treatment

Once a risk assessment has been carried out, a risk mitigation plan should be defined. This plan may contain:

- **Controls** – ongoing activities that have already been embedded into processes, procedures, systems or programmes. These controls will have driven down the risk exposure from the original exposure to the **current level**.
- **Actions** – specific actions undertaken to reduce risk to an acceptable or **target level**. If actions are effective, they do not need to be continued. Actions will have agreed completion dates and costs.
- **Fall back responses** – if the risk does occur, fall back responses will define how we minimise the impact after the event.

Risk treatment options are taken to:

- Tolerate or accept the risk where cost of incurring the risk is acceptable and the risk level does not justify the cost of further mitigation
- Terminate or avoid the risk; change scope or stop the activity
- Treat or reduce the risk – implement specific actions to reduce the likelihood of occurrence and/ or the impact should the risk occur
- Transfer the risk – shift liability for the risk to a third party, e.g. insurance cover or through contracts. Note: Reputational risk may be impossible to transfer for TfL.

### 4.3.4 Reporting, Monitoring and Review

This involves regular checking to ensure controls and actions are effective. All risks must be reviewed at least once a quarter and updated in ARM. Very high and high risks should be reviewed once a period.

In section 9, Table 3 Risk Management, Reporting and Communication lists the existing reporting arrangements across the operating areas.

#### Risk Integration

Risk integration in the operating business areas is achieved by ensuring line of sight between operational, project, directorate and strategic risks. See Fig 1 in section 4.1.

This flow of risk information is also applied at the TfL group level where the strategic risk information from the operating areas is consolidated to form the TfL view of strategic risk.

### 4.3.5 Risk Communication and Consultation

In section 9, Table 3 Risk Management, Reporting and Communication lists the forums used to implement and share a consistent risk management approach across TfL.

## 5 Risk Appetite

The ISO/ British Standard defines risk appetite as “the amount and type of risk that an organisation is prepared to seek, accept or tolerate.

This is normally used in conjunction with the concept of ‘tolerating risk’ which is described as “an organisation’s readiness to bear the risk after risk treatments in order to achieve its objectives”.

### 5.1 Risk appetite in TfL

The TfL risk appetite is the level of risk TfL is prepared to tolerate in pursuing its strategic objectives.

The risk appetite is based upon an assessment of the current level of risk taking into account the potential impact of a risk should it materialise and the likelihood of the risk occurring.

Figure 3 section 5.2 the TfL Probability Impact Diagram (PID) maps the risk based upon impact and likelihood using the schema in section 13 Appendix 1, which in turn reflects the risk which the business is prepared to accept as approved by the Audit and Assurance Committee on behalf of the TfL board.

A risk scoring 23 or more is beyond the TfL risk appetite. All reasonable actions should be taken to reduce the likelihood of the risk occurring or to reduce its impact. If after assessing controls and mitigating actions, a risk still scores 23 or more, it must be escalated to the Leadership Team. The risk escalation routes is described in section 8 table 1.

In general terms TfL will seek to move risks from the top right hand corner (medium to very high) of the PID to the bottom left hand corner (low to very low) after undertaking an analysis of the risk and developing cost effective action plans.

However TfL will proactively review all risks and based upon the current level of risk and the cost to mitigate, after taking into account the impact on business objectives, will agree upon an appropriate risk management strategy.

### 5.2 Risk Assessment

When risks are identified, they are scored by the assessor using the following process:

- Risk is assessed against one or more of the impact types
- Each impact type is scored against a severity level between very low and very high.
- The risk is then allocated an assessment of the likelihood of the risk crystallising, within the descriptive bands.
- Active Risk Manager (ARM) software takes the highest score from any of the impact types and multiplies that score with the likelihood; overall scores can therefore be between 1 – 25 (NB: There is weighting in the software calculation)

The overall risk score is assessed twice to give:

- 1 The **current risk level** - the potential impact to the business if the risk crystallised now, but with existing controls embedded into processes, procedures, systems or programmes.

- 2 The **target risk level** – the impact level the risk could credibly be reduced to once active risk mitigating actions are in place and delivered.

All risks are reviewed against the current score, but the target score is used to allocate funding to project risks.

The diagram below highlights risk appetite levels.

Figure 3 The TfL Probability Impact Diagram (PID)

Likelihood	Very High	11	16	20	23	25
	High	7	12	18	21	24
	Medium	4	8	13	19	22
	Low	2	5	9	14	17
	Very Low	1	3	6	10	15
		Very Low	Low	Medium	High	Very High
Impact						

## 6 Risk Management Tools

### 6.1 Active Risk Manager (ARM)

TfL has adopted the use of the specialist risk management software to record risk and create a risk register.

ARM is mandated for use across all areas of TfL.

ARM can be configured to complement any company business process. Attendees of the TfL Key Risk Representative Meeting manage the strategic direction of ARM across the estate.

### 6.2 ARM Access

The use of ARM is controlled by the TfL ARM Administrator and supported by Administrators nominated to represent all areas of TfL. Access to ARM is arranged via the Administrators.

ARM training for new users is delivered by TfL IM Learning and Delivery and training sessions are delivered regularly according to demand. This is supplemented with knowledge sharing on good ARM practice at the TfL ARM User Group.

Each risk register entry must be allocated to a **Risk Owner** who will ensure that the risk is reviewed at least quarterly – more frequently in more actively changing environments. The **Risk Owner** must also ensure that development and timely

delivery of risk mitigation strategies and plans are allocated to appropriate **Risk Mitigation Owners**.

Detailed good practice in the use of ARM can be found in:

- A tutorial available on the software.
- The 'Active Risk Manager Best Practice Guidance Manual' – available on the TfL intranet.

### 6.3 Risk training

Directors and managers who are involved in the delivery of business objectives will be trained so they have an understanding of how risk management can help improve the likelihood of achieving business objectives and understand what is expected of them.

Risk professionals who support managers to manage their risk profile will be trained both in risk management techniques and the appropriate use of risk management tools e.g. ARM.

Non project related training such as that for strategic and operational risk will be controlled by the Virtual Risk Team. The R&U Corporate Risk Manager will coordinate this effort to ensure consistency and standardisation of risk training material. Each business will be responsible for the delivery of its own training.

Project related risk training will be managed by the PMO risk team utilising the Pyramid development process.

## 7 Quantification of Risk

Strategic risks shall be quantified, where appropriate, in accordance with the TfL business planning guidelines to support the embedment of risk in the business planning process.

Project risks are quantified according to the process reported in the integrated projects and programmes methodology, TfL Pathway, and made available through the TfL Programme Management Office (PMO).

Asset risks are quantified according to instructions reported in the Asset Risk standard (S5044 – LU specific).

Business and operations risks are quantified using scoring schemes in ARM and these are developed to meet the risk quantification requirements at the appropriate level.

## 8 Risk Escalation

Based upon the risk appetite and **current** risk score, the table below explains the risk escalation routes.

Table 1

ARM Score	1-20	21-22	23-25
<b>Rail &amp; Underground</b>	<ul style="list-style-type: none"> <li>Risk is managed within routine management meetings</li> <li>Monitoring kept for deterioration and effectiveness of mitigations</li> <li>Evaluation undertaken to see if there are any common themes or interdependencies that mean the risk needs to be escalated</li> </ul>	<ul style="list-style-type: none"> <li>Escalate immediately to relevant Director for review of mitigation effectiveness and residual level of risk</li> </ul>	<ul style="list-style-type: none"> <li>Escalate immediately to relevant Director for review of mitigation effectiveness and residual level of risk</li> <li>Director to escalate to next RUB meeting</li> </ul>
<b>Surface Transport</b>	<ul style="list-style-type: none"> <li>Risk is managed within the Directorate by the action owner.</li> <li>Mitigations are monitored to ensure effectiveness; this is part of the Quarterly Risk Review process.</li> </ul>	<ul style="list-style-type: none"> <li>Escalate to appropriate Director for evaluation of current mitigation in place to review effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Escalate to appropriate Director for evaluation of current mitigation in place to review effectiveness</li> <li>Director to escalate at Surface Board</li> </ul>
<b>Corporate Directorates</b>	<ul style="list-style-type: none"> <li>Risk is managed by the risk owner and mitigation action owner.</li> <li>Risk is reviewed and monitored by the Senior Management Team (SMT).</li> <li>SMT, Director and Corporate Risk Manager to review risk and impact on services delivered by the Corporate Directorates to decide if further escalation is necessary</li> <li>Review risk to determine if any financial impact should be included in the quarterly forecast process.</li> </ul>	<ul style="list-style-type: none"> <li>Escalate to the Director for discussion at SMT meeting to ensure effective mitigating and review of scoring.</li> <li>SMT, Director and Corporate Risk Manager to review risk and impact on services delivered by the Corporate Directorates to decide if further escalation is necessary</li> <li>Review risk to determine if any financial impact should be included in the quarterly forecast process.</li> </ul>	<ul style="list-style-type: none"> <li>Escalate to the Director discussion at SMT meeting to ensure effective mitigating and accuracy of scoring.</li> <li>Director and Corporate Risk Manager to consider escalation to MD for discussion and further action.</li> <li>Review risk to determine if any financial impact should be included in the quarterly forecast process.</li> </ul>

## 9 Key Risk Responsibilities

All managers play a part in managing risk within TfL whether it is to do with financial, safety, information or project risk. In order to support the effective management of risk within TfL the following responsibilities are allocated

Table 2

Assurance and Approval				
Group or Role	Key Risk Responsibilities	Approvals & Reviews	Assurance & Promotion	Frequency
TfL Board	Own the risk management framework for the organisation	✓		Ongoing
	Delegate to the Audit & Assurance Committee the responsibility for implementing the risk management framework.	✓		Ongoing
	Review recommendations on the risk appetite	✓		Annually
Audit and Assurance Committee	Own the risk management framework on behalf of the Board	✓		Ongoing
	Review and approve risk policy and risk appetite	✓		Annually
	Take the lead for ensuring the framework is effectively implemented and managed across TfL		✓	Ongoing
	Actively monitor the risk appetite and make necessary recommendations to the TfL Board		✓	Annually
	Review the pan TfL Strategic Risk Register	✓		Annually
	Review and provide assurance on the effectiveness of business risk and the associated internal controls and procedures		✓	Ongoing
Leadership Team	Act as the principal owner of the TfL Strategic Risk Register on behalf of the Board	✓		Ongoing
	Review, monitor and provide assurance on the risk management framework		✓	Annually
	Visibly support and promote the risk management		✓	Ongoing
	Approve the risk policy, procedure and risk appetite	✓		Annually
	Review the pan TfL Strategic Risk Register and strategic review of safety risk	✓		Quarterly
	Promote a 'risk aware culture' to facilitate timely identification and/or mitigation of risks and realisation of opportunities		✓	Ongoing
	Ensure that risk management forms part of all major projects and business change initiatives		✓	As required
	Monitor and review the status of the Strategic Risk Register and mitigating actions	✓		Quarterly
Finance Leadership Team	Review the pan TfL Strategic Risk Register	✓		Quarterly
Strategic Risk Management Panel SRMP	Provide day to day guidance in promoting and embedding risk management and reporting. The SRMP is a temporary committee convened to drive risk management developments.		✓	Ongoing

	Ensure the TfL Risk Policy and Procedure is current, relevant and updated as required	✓		
Chief Finance Officer CFO	Review the Corporate directorate Strategic Risk Register	✓		Quarterly
	Ensure TfL's Risk Policy/ Management Process is implemented across the Corporate directorate		✓	Ongoing
R&U Managing Director/ R&U Value and Sustainability Board	Review the Rail & Underground Strategic Risk Register	✓		Quarterly
	Ensure TfL's Risk Policy/ Management Process is implemented across Rail & Underground		✓	Ongoing
Surface Managing Director/ Surface Board	Review the Surface Strategic Risk Register	✓		Quarterly
	Ensure TfL's Risk Policy/ Management Process is implemented across Surface		✓	Ongoing
TfL PMO	Review and approve project risk authority and risk management strategies	✓		As required
Programme and Project Boards	Review project risk profiles and mitigation strategies and approve draw down of risk budgets as appropriate	✓		Ongoing
Assurance Delivery Group	Responsible for oversight of the risk management framework on behalf of the Leadership Team	✓		Annually
	Review and recommend changes to the risk framework for approval by the Leadership Team and the Audit & Assurance Committee.	✓		Annually
	Ensure that risks are mapped to sources of assurance		✓	Ongoing
Internal Audit	Provide assurance to the Audit and Assurance Committee on the effectiveness of risk management within TfL		✓	Annually
Head of Group Insurance	To design and implement insurance policy and strategy		✓	Ongoing
	Provide practical mitigation advice and insurance management to all functions		✓	As required
	Maintain an overview and awareness of group risk profile		✓	Ongoing

Table 3

**Risk Management, Reporting and Communication**

Group or Role	Key Risk Responsibilities	Comms and Consultation	Risk Management	Reporting	Frequency
Risk Owners	To take responsibility for a nominated risk, monitoring and reporting on progress of planned management actions and assurance activities		✓		Periodic
Action Owners	To ensure successful completion of management actions as recorded on the risk register		✓		Due Dates
Corporate Risk Professionals	Develop and implement the Risk Management Policy and processes		✓		Annually
	Work with key finance contacts to define the best approach to risk appetite that works at group and operating business level		✓		Annually
	Develop and manage the pan TfL Strategic Risk Register		✓		Quarterly
	Risk reporting to the Audit Committee and Leadership Team(s) in conjunction with key finance contacts.			✓	Quarterly
	Provide support and leadership to business areas on risk management		✓		Periodic
	Develop and deliver risk training courses and materials and work with TfL PMO to incorporate best practice across the entire organisation		✓		As required
	Act as the first point of contact for any part of the organisation outside the TfL PMO looking for support in relation to risk management		✓		As required
	Develop and manage the risk management software, Active Risk Manager, for all of TfL		✓		As required
Risk Managers	Develop and manage risks in individual business areas with support from corporate risk professionals and in projects in accordance with guidelines set down by the TfL PMO in the TfL Project Delivery Methodology.		✓		Periodic
	Deliver training as appropriate and in alignment with training developed by corporate risk professionals.		✓		As required
PMO	Maintain risk related products in TfL Pathway		✓		As required
	Develop project risk training and maturity assessments; support capital projects and resource allocation		✓	✓	As required
Programme Risk Managers	Create risk management strategies, embed the risk assessment process and report on risk for projects		✓	✓	Periodic
Project Risk Managers	Lead project risk workshops, carry out risk assessments and analysis, report on risks and maintain the project risk register in ARM		✓	✓	Periodic
Key Risk Representatives	Quarterly meetings with risk owners to promote a risk aware culture and a consistent approach to risk management in the business	✓			Quarterly
Risk Special Interest Group	To share good practice on project risk management and support a consistent approach to project risk across TfL	✓			Quarterly
ARM User Group	Quarterly meeting to share good practice in the use of ARM and to update the user community on ongoing development of the software	✓			Quarterly
Risk Virtual Team	Develop and implement risk management process in line with guidance from senior management	✓			Quarterly



TfL Corporate Risk Manager	Corporate Strategic Risk Register updates to Group Business Planning & Performance and CFO			✓	Quarterly
	TfL Corporate risk register reviews/ top risks in the CFS and Finance BMR			✓	Quarterly/ Periodic
R&U Corporate Risk Team	R&U Strategic Risk Register updates to the VSPB			✓	Quarterly
	Directorate Top Risks Register to R&U MD's report and TfL CFS			✓	Quarterly
Surface Head of Risk	Surface Transport Strategic Risk Register updates in Surface BMR			✓	Quarterly
	Directorate Top Risks Register to the Surface BMR			✓	Periodic

## 10 Other Internal Risk Management Controls

- Instructions, standards and process discipline in all areas across TfL
- Legal, contractual and regulatory compliance
- Business continuity, contingency planning, security, insurance, Fraud and revenue control

## 11 References

Document no.	British Standards
ISO 31100	Code of Practice for Risk Management
ISO 31000	Risk management principles and guidelines
Document no.	TfL Company Documents
tba	TfL Governance Framework
tba	TfL Audit and Assurance Group – Assurance Map

Document no.	Business Control Documents
TfL Management System	Assessment & management of all HSE risk
S5044	Asset risk standard
TfL Pathway	Project Risk
tba	Treasury Finance and Risk
tba	Insurance and Risk
tba	Cyber Security Risk

## 12 Document History

Issue no	Date	Changes	Author
A1 Policy	Oct 2012	New Operational Risk Policy document - draft	T. Akanni
A2 to A5	Jan 2013	Draft revisions and updates to Operational Risk Management Policy and Work Instruction	T. Akanni/ K Reid
A5 to A6	May to Aug 2014	Consolidation and revision of risk policy and work instruction documents	C Lynton

Person accountable for this document – Steven Allen, MD Finance

### 13 Appendix 1 Pan TfL Risk Scoring Scheme - Proposed

RISK SCORE	PROBABILITY	CONSEQUENCE/IMPACT			
		Cost	Time	Customer	Reputation
	% likelihood occurrence this financial year or numbers of events in terms of year(s)	Decrease in revenue/increase in cost over the 10 year business plan	Delay to achievement of key milestone	Reduction in customer service	Level or type of media coverage/ impact on relationship with stakeholders
<b>Very High (5)</b>	• 75% Once or more per year	> £100M	> 52 weeks delay or more	Impact on multiple modes of transport as a result of more than one of the following ; <ul style="list-style-type: none"> <li>• Full/part line suspension of more than 1 line for more than 1 day</li> <li>• Negative impact on journey time reliability at peak periods affecting a number of high flow corridors on the TfL Road Network (TLRN) and occurs more than once a week over the course of several weeks.</li> <li>• Full/ part line suspension on 1 line for more than a week</li> <li>• Severe over crowding of affected areas of the bus network, contributing to higher safety risks</li> <li>• Very high impact on non-time elements of customers journeys e.g. ambience, staff customer service, information – sufficient to cause loss of more than two points to the CSS score in the operating business.</li> </ul>	Risk results in significant ongoing negative media coverage & major loss of confidence/significant intrusion by regulators/stakeholders leading to one of the following outcomes: <ul style="list-style-type: none"> <li>• Fundamental changes to the TfL operating model/structures</li> <li>• High profile management changes (e.g. Managing Directors (MDs))</li> <li>• Fundamental changes to safety procedures</li> </ul>
<b>High (4)</b>	50% - 75% Once or more in 2 years	£20-100M	26-52 weeks delay	Impact on multiple modes of transport; <ul style="list-style-type: none"> <li>• Negative impact on journey time reliability at peak periods affecting a number of high flow corridors on the TLRN and occurs more than once a week for a few weeks.</li> <li>• Full, or part, line suspension for more than 1 line for a whole day</li> <li>• Full, or part, line suspension on 1 line for several days</li> <li>• Severe over crowding of affected areas of the bus network,</li> </ul>	Risk results in ongoing negative media coverage & loss of confidence/significant intrusion by regulators/stakeholders leading to one of the following outcomes: <ul style="list-style-type: none"> <li>• Sustained (i.e. one week+) diversion of MDs and senior managers' time, energy &amp; resources away from business as usual activities &amp; planned projects, to deal with</li> </ul>

				<p>contributing to higher safety risks</p> <ul style="list-style-type: none"> <li>High impact on non-time elements of customers journeys e.g. ambience, staff customer service, information – sufficient to cause loss of CSS KPI score in the operating businesses.</li> </ul>	<p>feedback</p> <ul style="list-style-type: none"> <li>Loss of support leading to removal of key funding</li> <li>Loss of trust leading to fundamental changes to governance arrangements</li> <li>Series of strikes impacting operations (bus or tube network)</li> </ul>
<b>Medium (3)</b>	<p>20% – 50%</p> <p>Between once in 2 to once in 5 years</p>	£10-20M	12-26 weeks delay	<p>More than one of the following impacting on multiple modes of transport :</p> <ul style="list-style-type: none"> <li>Full/part line suspension or failed Depot access</li> <li>Repeated severe delays (= severe delays occurring more than once over the course of the week)</li> <li>Negative impact on journey time reliability occurring more than once a week at peak periods on the TLRN</li> <li>Over crowding of some affected areas of the bus network, contributing to higher safety risks</li> <li>Journey time exceeds the target for “Excess Wait Time” once a week for several weeks on a number of High Frequency routes.</li> <li>Impact on non-time elements of customers journeys e.g. ambience, staff customer service, information – sufficient to cause loss of CSS KPI.</li> </ul>	<p>Risk results in negative media coverage &amp; loss of confidence/increase intrusion by regulators/stakeholders leading to one of the following outcomes:</p> <ul style="list-style-type: none"> <li>Short-term (less than one week) diversion of MDs and senior managers’ time, energy &amp; resources away from business as usual activities, &amp; planned projects, to deal with feedback</li> <li>Sustained (i.e. more than one week) diversion of middle managers’ time, energy and resources away from business as usual activities &amp; planned projects, to deal with feedback</li> <li>Limited industrial actions such as a one-off strike or local strikes impacting operations (i.e. trains cancelled and/or stations closed)</li> </ul>
<b>Low (2)</b>	<p>5% - 20%</p> <p>Less than once in 5 years</p>	£1-10M	4 - 12 weeks delay	<p>Low impact to services across multiple modes:</p> <ul style="list-style-type: none"> <li>Major delay (one instance of severe delay) on a line or repeated minor delays occurring daily over the course of a week.</li> <li>No impact to overall journey time reliability however localised impact to a number of high flow corridors on the TLRN</li> <li>Major station closure or over crowding on localised routes affected by disruption</li> <li>Journey time exceeds the target for “Excess Wait Time”</li> </ul>	<p>Risk results in short-term negative media coverage or impact on relations with regulators/stakeholders leading to one of the following outcomes:</p> <ul style="list-style-type: none"> <li>Significant negative feedback from customers via the Customer Service Centre or from stakeholders via media outlets (Twitter, blog etc)</li> <li>Short-term (less than one week) diversion of middle managers’ time, energy &amp;</li> </ul>

				<p>once a week for several weeks on a small number of High Frequency routes.</p> <ul style="list-style-type: none"> <li>Impact on non-time elements of customers journeys e.g. ambience, staff customer service, information – decreases in individual elements of CSS without loss of the KPI.</li> </ul>	<p>resources away from business as usual activities &amp; planned projects, to deal with feedback</p> <ul style="list-style-type: none"> <li>Unions building a case for action</li> </ul>
<b>Very Low (1)</b>	<ul style="list-style-type: none"> <li>5% Less than once in 20 years</li> </ul>	< £1M	< 4 weeks delay	<p>Negligible impact across any mode of transport:</p> <ul style="list-style-type: none"> <li>No impact to overall journey time reliability however localised impact to a small number of high flow corridors on the TLRN</li> <li>Minor delay or closure of a major station Negligible Impact on non-time elements of customers journeys e.g. ambience, staff customer service, information- negligible impact on individual elements of CSS KPI and no impact on KPI score.</li> </ul>	<p>Risk has negligible impact on regulators/stakeholders but does impact customers &amp; employees leading to one of the following outcomes:</p> <ul style="list-style-type: none"> <li>Low level of negative feedback from customers via the Customer Service Centre or from stakeholders via media outlets (Twitter, blog)</li> </ul>
<b>OPPORTUNITY SCORE</b>	<b>% likelihood occurrence this financial year or numbers of events in terms of year(s)</b>	<b>Increase revenue/decrease costs</b>	<b>Delivery ahead of schedule</b>	<b>Improved customer benefit</b>	<b>Level or type of media coverage/ impact on relationship with stakeholders</b>
<b>Very Low (1)</b>	<ul style="list-style-type: none"> <li>5% Less than once in 20 years</li> </ul>	<£1M	Milestone will be achieved up to 4 weeks early	<p>Minor journey time improvement OR Minor impact on non-time elements of customers journeys e.g. ambience, staff customer service, information – negligible improvements to CSS KPI.</p>	<p>Opportunity has negligible impact on regulators/stakeholders but does impact customers and employees leading to one of the following outcomes:</p> <ul style="list-style-type: none"> <li>Positive feedback from customers via the Customer Service Centre or media outlets (Twitter, blogs)</li> <li>Minor increase in Speak Up scores</li> </ul>
<b>Low (2)</b>	<ul style="list-style-type: none"> <li>5% - 20% Less than once in 5 years</li> </ul>	£1-10M	Milestone will be achieved between 4-12 weeks early	<p>Improvements to customer service across any mode of transport:</p> <ul style="list-style-type: none"> <li>One major journey time improvement OR repeated minor journey time improvements (occurring on a daily basis over the course of the week) on the tube network.</li> <li>Small number of journey time improvement localised to high flow corridors on the TLRN</li> <li>Repeated improvements to journey time reliability across the bus network (occurring on a daily basis over the course</li> </ul>	<p>Opportunity results in positive media coverage and enhanced relations with local stakeholders (e.g. local business community, Boroughs, Unions) for a period of less than one month</p>

				<p>of the week)</p> <ul style="list-style-type: none"> <li>Positive impact on non-time elements of customers journeys e.g. ambience, staff customer service, information – Improvement to individual elements of CSS KPI.</li> </ul>	
<b>Medium (3)</b>	<p>20% – 50%</p> <p>Between once in 5 years &amp; once in 2 years</p>	£10-20M	Milestone will be achieved between 12-26 weeks early	<p>Improvements to customer service across multiple modes of transport:</p> <ul style="list-style-type: none"> <li>An increase in capacity of more than 2% on one Line, or the equivalent of 1 or 2 extra peak TPH on the rail network</li> <li>An increase in capacity at a major station of 10% or more</li> <li>Repeated major journey time improvements (occurring more than once over the course of the week)</li> <li>Repeated, 1 percentage point improvement to journey time reliability occurring more than once a week at peak periods on the TLRN</li> <li>1% increase in the scheduled number of bus services operated.</li> <li>Major improvement to non-time elements of customers journeys e.g. ambience, staff customer service, information - sufficient to result in an improved CSS KPI in the operating businesses.</li> </ul>	Opportunity results in positive media coverage and enhanced relations with local stakeholders (e.g. local business community, Boroughs, Unions) for a period of more than one month.
<b>High (4)</b>	<p>50% - 75%</p> <p>More than once in 2 years</p>	£20-100M	Milestone will be achieved between 26-52 weeks early	<p>Improvements to customer service across multiple modes of transport::</p> <ul style="list-style-type: none"> <li>An increase in capacity, or an increase in train km run, of more than 10% on one Line OR an increase in train km run of &gt; 2% on multiples lines on the rail network.</li> <li>An increase in capacity at a major station of 20% or more.</li> <li>Repeated improvements of 2 percentage points to journey time reliability on the TLRN occurring at peak periods more than once a week over the course of several weeks.</li> <li>2% increase in the scheduled number of bus services operated.</li> <li>High impact on non-time elements of customers journeys e.g. ambience, staff customer service, information - sufficient to result in improved CSS KPI score in the</li> </ul>	Opportunity results in significant positive media coverage & significantly enhanced relations with regulators and/or key stakeholders (e.g. DfT, GLA, Unions) for a period of less than one month

				operating businesses.	
<b>Very High (5)</b>	<ul style="list-style-type: none"> <li>• 75%</li> </ul> Once or more per year	>£100M	Milestone will be achieved over 52 weeks early	Improvements to customer service across multiple modes of transport:: <ul style="list-style-type: none"> <li>• An increase in capacity, or an increase in train km run, of more than 20% on one Line</li> <li>• An increase in capacity, or an increase in train km run, of more than 10% on 2 Lines</li> <li>• An increase in capacity, or an increase in train km run, of 7% on 3 or more Lines</li> <li>• Repeated improvements &gt; 2 percentage points to journey time reliability at peak periods on the TLRN occurring more than once a week over the course of several weeks</li> <li>• 2% increase in the scheduled number of bus services operated.</li> <li>• Very high impact on non-time elements of customers journeys e.g. ambience, staff customer service, improvement of 2 points or more to the overall evaluation CSS score in the operating businesses.</li> </ul>	Opportunity results in significant positive media coverage & significantly enhanced relations with regulators and/or key stakeholders (e.g. DfT, GLA) for a period of more than one month.