AGENDA ITEM 6

TRANSPORT FOR LONDON
BOARD

SUBJECT: INDEPENDENT INVESTMENT PROGRAMME ADVISORY GROUP ANNUAL REPORT

DATE: 21 SEPTEMBER 2011

1 PURPOSE AND DECISION REQUIRED

1.1 The Board is asked to note the first annual report of the Independent Investment Programme Advisory Group (IIPAG).

2 BACKGROUND

2.1 The terms of reference for the IIPAG require that the group will publish an annual report on TfL’s delivery of its Investment Programme from its work during the year, drawing out any common themes, systemic issues and lessons learnt.

2.2 Building on the previous updates to the Finance and Policy Committee, the IIPAG has produced an annual report for its work over the period from May 2010 to May 2011. A copy of the IIPAG Annual Report is attached at Appendix 1. A copy of the TfL Management Response is attached at Appendix 2. A copy of the Mayor’s letter to the Chair of the IIPAG in response to the Report is at Appendix 3.

3 PUBLICATION

3.1 Following consideration of the report by the Committee, the report was sent to the Mayor and copied to the Secretary of State for Transport, along with TfL’s Management Response. The report is due to be published imminently and a press release issued.

4 RECOMMENDATION

4.1 The Board is asked to NOTE the attached IIPAG annual report.

5 CONTACT

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29th July 2011

Dear Mr Johnson,

Independent Investment Programme Advisory Group - Annual Report

I have pleasure in presenting our annual report for 2010/11 on the delivery of the investment programme as required in the IIPAG terms of reference.

This report is for publication. In summary, it notes our overall view of the issues TfL are faced with in delivering its very challenging programme of work. I am pleased to report that we have found many areas of good practice but we have also found a number of issues where improvement is possible and where there is potential for considerable benefit to be accrued.

TfL are engaging with us on all aspects of our work and indeed the results of our joint working, as a result of your initiative to set up IIPAG, is that together, we have already identified very significant savings. Our report also provides oversight of the improvement activities that we have recommended for the next year.

The members of IIPAG have now met many different staff across TfL throughout the last year and in the main, they have responded positively to our views/advice which have generally been accepted and acted upon. Going forward we will continue with the project reviews but we plan to increase our activities in the areas of benchmarking and asset management, with the support of the two additional advisors appointed to support the group. Also, working alongside the Horizon Project, we would like to focus upon improved commercial and value skills and the gradual change in culture we believe to be necessary in delivering a world class capital investment programme.

If you wish to engage further on the findings in our annual report then I and my colleagues would be delighted to discuss the issues with you. Further, I look forward to our next scheduled meeting in the Autumn.

Yours sincerely,

[Signature]

David James – Chair IIPAG
Copy to: The Secretary of State for Transport

The Independent Investment Programme Advisory Group (IIPAG) provides independent assurance and expert advice to the Mayor of London on the Transport for London Investment Programme.
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APPENDICES

1. IIPAG Terms of Reference
2. Risk Management: Summary Table of IIPAG Recommendations
3. Proposed Benchmarking Process
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1. EXECUTIVE SUMMARY

1.1 The Investment Programme Advisory Group (IPAG) was originally established by the Mayor of London, Boris Johnson and the then Secretary of State for Transport, Lord Adonis in May 2010. It comprises a team of six highly experienced engineers all of whom have spent their careers in the construction industry, in various sectors, and who were, on a part-time basis, to examine, comment upon and advise on the performance of Transport for London (TfL) in relation to its management of the capital programme estimated to be in the range of some £35bn over ten years, including Crossrail. As part of the Comprehensive Spending Review, in October 2010, the Mayor agreed with the current Secretary of State, Philip Hammond, to re-affirm the appointment and reinforced the importance of “independence” by re-naming the Group as the Independent Investment Programme Advisory Group (IIPAG).

1.2 The Mayor and the Secretary of State have agreed that the Group will provide “independent assurance and expert advice on issues such as economy, efficiency and value for money concerning TfL’s Investment Programme”, assuring that TfL delivers value for money to the taxpayer. The Terms of Reference include maintenance, renewals, line upgrades as well as major projects but specifically exclude operational issues and the activities of Crossrail Limited.

1.3 It is the view of IIPAG that the reporting line to the Mayor and the patronage of the Secretary of State have been important in establishing working relationships with teams within TfL and these relationships are now gradually maturing to one of respect and professional understanding. In other words, IIPAG has become accepted and finds a general enthusiasm to engage in robust discussion, debate and decisions as to how to undertake and improve the processes of capital spend. The Executive of TfL is engaged in the process and their cooperation is cascading through to project teams.

1.4 Prior to publication of this Annual Report, IIPAG’s involvement and progress was summarised in two reports, presented first to the Mayor and subsequently provided to the Secretary of State, the first produced in September 2010 followed by the second in January 2011. The involvement has included discussions directly with the Mayor and attendance at the TfL Board. Further, it has related not just to working with officers of TfL but also to regular meetings with the Finance and Policy Committee (FPC). This Committee has been very supportive of IIPAG and its work and it has scrutinised and questioned IIPAG’s findings and advice in order to bolster the decision-making process before recommending the release of funds, ensuring that management is encouraged to deliver best value. In fulfilling its role IIPAG has been provided with a range of commercially confidential information some of which has been included in their reports presented for the use of the TfL Board and the FPC.

1.5 IIPAG’s initial involvement focused upon projects in excess of £50m and the Corporate Gateway Approvals Process (CGAP) in which every project in excess of £5m is assessed at the key stages of approval and confirmation through project delivery. Projects over £50m require the approval of the FPC while those over £100m are submitted to the TfL Board. Assurance is provided through external experts and IIPAG
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has overseen the review process. This involved the examination of some 30 projects with subsequent challenge, comments, advice and coaching for the project teams in order to support them in managing and progressing their projects to standards set by the construction industry and within the corporate guidelines. This in turn led to IIPAG’s assistance in the re-design of project “dashboards”, these being the mechanism for reporting, on a monthly basis, the progress of each project and for forming the basis of project reviews thereby, improving financial and delivery management.

1.6 As IIPAG became more involved in scrutinising the overall management of the Investment Programme, the robustness of managerial challenge became less invasive as project teams understood the potential value of the review process and responded to it in a positive manner. Subsequently, IIPAG identified certain additional systemic and corporate issues which it considered appropriate for further examination including:

- more rigorous project reviews and, especially for the larger projects with protracted timetables, more regular interim reviews;
- major project capability and limited resources;
- risk assessments and management;
- contingency provision and governance;
- benchmarking and the development of asset management;
- value management, assessment, engineering, procurement, monitoring and delivery,
- sponsorship (the internal client role).

Each of these is discussed in the report and each will figure more prominently in IIPAG’s forward workload through the second year.

1.7 Closer working relationships progressed through the year and the need for more frequent dialogue with senior TfL staff became apparent, to the point that IIPAG now meets formally with the Commissioner and his Executive team at least twice per year and the Management team of London Underground every quarter. The Chair of IIPAG also meets with the Mayor and the Secretary of State twice each year. IIPAG was also invited to contribute to the TfL in-house review entitled Project Horizon which is addressing organisational structure and staff resources. This is also referred to in this report.

1.8 IIPAG’s initial focus has been on project activities so the successes that have been achieved thus far have been, in the main, at project level. However, as IIPAG better understood the modus operandi of TfL it has appreciated that whilst its culture is that of a very large operations organisation it has recently had to incorporate two asset based companies in the guise of Metronet and Tube Lines. This has brought in different skills and is changing the overall challenge to the corporate body.

1.9 Although TfL remains fundamentally an operations company charged with delivering affordable, safe and timely transportation for the travelling public of London and its visitors it now also has responsibility for one of the largest capital
Independent Investment Programme Advisory Group

programmes in Europe. In essence, it is now a global scale asset owner and operator and the measure for the successful delivery of its capital investment will ultimately be in its delivery to the public. TfL now has to transform into an organisation that appreciates the impact that targeted, coordinated and integrated capital investment can have on improving its day to day operational performance as well as on the condition of its transport infrastructure.

1.10 The importance of the condition of infrastructure and its contribution to reliable daily performance have become more apparent as “Asset Management” has become a recognised and essential part of operational management and IIPAG propose to focus on this next year. Benchmarking is a key input to this process identifying comparative performance and best practice. In recognition of this, IIPAG’s revised Terms of Reference refer to IIPAG being responsible for the direction of a team undertaking benchmarking, initially on London Underground. In order to tackle this, IIPAG has engaged dedicated but part-time benchmarking specialist resources. It is expected that these will make valuable contributions to the establishment of a capability aimed at raising TfL quality and will continue to develop appropriate international comparisons, a task begun under the PPP arbiter.

1.11 Benchmarking activities will inevitably mean that IIPAG will be expected to report on asset performance of London Underground in particular. Given the whole life issues of asset management, this will inevitably require consideration of certain operational performance associated with those assets. This should not require IIPAG review of operations per se as they are specifically excluded from IIPAG’s Terms of Reference.

1.12 It has been recognised that TfL’s service delivery has improved over the past eight years and IIPAG acknowledges that TfL has worked hard and made changes during the last year in order to review and improve its capital programme performance. Understandably, the primary focus of the organisation remains on delivering consistently good operations that safely serve the public. However, it is IIPAG’s opinion that, although there are examples of industry standard project management performance, some aspects of major project delivery contain room for improvement. For example, an observation was that even the management of extremely large, complex projects was treated as “work as usual” which in one way is laudable, but in the context of an asset based, operations company such as TfL, does not project the intensity of management and stewardship that such major projects warrant.

1.13 IIPAG has noted that TfL has already reacted to this observation and is currently seeking to recruit suitably senior expertise to enhance its major project capability. However, IIPAG proffers the advice that the type of experienced individuals required for this major programme of work, are unlikely to work within conventional TfL style employment packages, they generally much prefer to receive an appropriate salary with incentives and rewards based upon their delivery.

1.14 IIPAG acknowledges that on occasions, TfL has to develop and deliver projects, sometimes with an international or political dimension, that are to the long term
benefit of London in a global setting – for example the Olympics. These may not always align with conventional business case examination, having regard to issues other than just finance/economics but involving many stakeholders and beneficiaries with perhaps, less rigour in the corporate gateway process. World class venues and political influences bring fresh demands and new policies for more new projects and these tend to gain priority in the delivery process. IIPAG recognises that over its history, as a public organisation, TfL has had to handle and deliver such projects and its record in doing so is impressive.

1.15 At project and programme levels, TfL has already generally accepted the majority of IIPAG’s recommendations. However, IIPAG recommended a fundamental corporate organisational change to the structure under which the capital programme is delivered. This has generated considerable debate within TfL.

1.16 With a focus on best value and optimisation, IIPAG has proposed one Major Programme/Project Team to centralise all specialist skills, corporate processes and procedures for major projects and that consideration be given to such a unit also being responsible for common contractual and commercial conditions, large scale procurement and project sponsorship. IIPAG recognises that the large majority of capital works is undertaken by London Underground within which there have been a mode specific programme management office and a number of programme and project delivery teams. All this in addition to another project management office plus programme and project delivery teams in Surface Transport, where the projects tend to be smaller in value, but where there is also evidence of very good skills. Historically this has led to duplication of resources, different processes and a multiplicity of systems/software, as well as unique contract terms. This has been neither cost effective nor efficient.

1.17 IIPAG understands that TfL is addressing this issue in the Horizon initiative through the establishment of a single Programme Management Office that will provide support and assurance across all projects in TfL. It is intended that this single team will work closely with the programmes and projects to improve the efficiency of project delivery and increase the sharing of knowledge across the organisation. This is perceived by IIPAG to be a reasonable transitional position but ‘best value’ questions still remain over the need for a separate project delivery areas particularly when considering the scale of projects. IIPAG’s view continues to be that in the long term the importance of capital investment, being about a quarter of the business, should be recognised in the organisation with a central unit and a position within the TfL Executive team.

1.18 In the case of risk management and governance of contingency, TfL has aligned with and adopted IIPAG’s proposals for Risk and Contingency where historically the application of large contingencies and optimism bias have generated excessive project budgets. Culturally these have been targets for “spend” rather than “save”, and the value for money performance of the business has been of a questionable and sometimes unacceptable standard. The introduction of a robust value strategy is being diligently pursued by IIPAG.
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1.19 IIPAG remains concerned at the role of project sponsors (internal clients), - their location, their strength and their independence (or lack of). A clear definition of project scope and stewardship of business case is a major contribution to value for money, but in industries where operations prevail, projects are often susceptible to continual “change”, often not re-assessing the business case. Change almost inevitably translates to additional cost; often it leads to additional time and even further disruption. The role of the “informed client” who knows what needs to be delivered as opposed to what is “nice to have”, is paramount in improving value for money.

1.20 IIPAG has developed a reputation for being “independent” and for “not pulling punches”. It is critical but fair and gives credit where appropriate as well as advice to improve and to support. As a result of IIPAG’s involvement savings in excess of £100m have already been identified and, as an example of better value, scope has been increased on some projects for delivery all within the original budget. Future and most likely, larger savings are yet to be accrued through focused training, organisational and cultural change and greater staff flexibility. It must be recognised that the way to improve performance is to have an “informed client”, rather than a “sponsor”, together with specialised and focused major project expertise and rigorous project reviews.

1.21 IIPAG appears to have struck a chord with many parts of TfL and whilst benefits have been gained in the short-term, IIPAG is confident that the behavioural and cultural changes that it proposes to include in next year’s work, will bring even greater rewards in the future. Underpinning all of IIPAG activities is the need to assist TfL in the delivery of demonstrable best Value for Money within the available budget.

1.22 In summary, focus on project activity through the first year has produced considerable early savings and better value.. This work will continue but IIPAG has identified issues with potentially greater rewards that are more deeply rooted within TfL and is proposing to address these in the forthcoming programme. These ‘systemic’ issues including for example sponsors, value, risk etc will require “change”, change to processes and importantly, change to culture. Inevitably, change of this nature takes effect over the longer term before all of its benefits can be appreciated.

1.23 It has been acknowledged that the general success of the Mayor’s initiative in establishing an IIPAG and identifying the benefits that it can bring, may well prove to be an example of worthwhile “independent expert scrutiny and support” from which other major projects, programmes and organisations might benefit. Further, the earlier the involvement in the formative and assembly stages of projects then the more likely that those benefits can be identified.
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2. TERMS OF REFERENCE

IIPAG’s current terms of reference are included in a letter from the Secretary of State to the Mayor dated 20 October 2010 and are attached as Appendix 1. IIPAG’s role is to provide independent and expert advice to the Mayor concerning TfL’s Investment Programme, including maintenance, renewals, upgrades and major projects. IIPAG’s remit excludes operational issues and the activities of Crossrail Limited. In preparing its advice, IIPAG considers issues of economy, efficiency and value for money.

3. IIPAG REVIEWS

Corporate Gateway Reviews

3.1 A substantial proportion of IIPAG’s work has been observing and overseeing Corporate Gateway Reviews for major programmes and projects across TfL. These reviews seek to give a health-check on the progress of investment schemes, both in cost and programme terms, as well as their governance and management. The TfL Investment Programme Management Office (IPMO) has diligently supported and enabled IIPAG integration into the TfL Gateway process and other activities of the TfL businesses.

3.2 During IIPAG’s first year, members of the group have overseen some 31 Corporate Gateway Reviews relating to projects, programmes and associated subjects listed in the following schedule:

<table>
<thead>
<tr>
<th>IIPAG Participated Gateway Reviews as of 06th June 2011</th>
<th>Gate</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Cycle Hire - Phase 2</td>
<td>D</td>
<td>Jul-10</td>
</tr>
<tr>
<td>2 Cycle SuperHighways - Phase 1</td>
<td>D</td>
<td>Jul-10</td>
</tr>
<tr>
<td>Bank Congestion Relief</td>
<td>B+</td>
<td>Aug-10</td>
</tr>
<tr>
<td>Contract for Tracks - BCV/SSR 2011-16</td>
<td>D</td>
<td>Aug-10</td>
</tr>
<tr>
<td>ORN Junctions and Carriageways</td>
<td>D</td>
<td>Nov-10</td>
</tr>
<tr>
<td>SCOOT Deployment</td>
<td>D</td>
<td>Nov-10</td>
</tr>
<tr>
<td>SSR-Ealing Common/Upminster Depot</td>
<td>C</td>
<td>Nov-10</td>
</tr>
<tr>
<td>SSR Programme Management</td>
<td>Systemic</td>
<td>Dec-10</td>
</tr>
<tr>
<td>SSR Upgrade Programme: ATC signalling</td>
<td>D Follow up</td>
<td>Dec-10</td>
</tr>
<tr>
<td>TLRN Capital Renewals</td>
<td>P</td>
<td>Feb-11</td>
</tr>
<tr>
<td>Cable Car</td>
<td>D</td>
<td>Feb-11</td>
</tr>
<tr>
<td>Silvertown Crossing</td>
<td>B</td>
<td>Feb-11</td>
</tr>
<tr>
<td>Woolwich Ferry Replacement</td>
<td>B</td>
<td>Feb-11</td>
</tr>
<tr>
<td>Deep Tube Programme</td>
<td>A</td>
<td>Mar-11</td>
</tr>
<tr>
<td>Northern Line Upgrade (Commercial)</td>
<td>D+</td>
<td>Apr-11</td>
</tr>
<tr>
<td>Baker Street to Bond Street Tunnel Remedial Works</td>
<td>C-D</td>
<td>Apr-11</td>
</tr>
<tr>
<td>Tottenham Court Road Station Upgrade</td>
<td>D+</td>
<td>May-11</td>
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3.3 In general the project and programme reviews have been undertaken by External Experts (EE) with IIPAG members overseeing the process and adding comments at the report stage. IIPAG has found the reviews to be useful, highlighting both instances of good practice and areas where significant enhancements to the project process can be considered and adopted for the benefit of the project delivery. In addition, IIPAG identified several associated subjects specifically for what was termed ‘systemic review’. IIPAG believes that its input is most effective and beneficial through the early stages of projects.

**Systemic Reviews**

3.4 In addition to Corporate Gateway Reviews, IIPAG has identified certain issues/subjects/processes/activities/constraints relevant to the operation of part, or all, of the TfL businesses which have been subject of IIPAG’s review.

**Risk Management and Contingency**

3.5 IIPAG conducted a review of risk and contingency management within TfL, critiquing a review of these topics previously produced by the IPMO, and drawing heavily upon IIPAG’s own observations from conducting in-depth project reviews, discussions with TfL senior staff, and participation in a number of TfL capital programme governance meetings.

3.6 IIPAG’s paper provided extensive recommendations on the manner of calculation and management of risk and contingency cost estimates, together with some clear recommendations on actions necessary to change attitudes and behaviours across TfL that currently block effective management of risks and cause unnecessary release of contingency funds. Specifically, the paper identified that avoidable costs and risks are regularly incurred owing to the inability of project teams to compile realistic risk registers. IIPAG also observed that there are difficulties in the creation and controlled
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release of appropriate levels of contingency money. Contingency is sometimes viewed as “funds available to be spent”.

3.7 IIPAG’s recommendations included new management processes; training of relevant personnel, consistent application of risk assessment techniques and risk registers; reinforcement of commercial and risk management disciplines from thorough routine project reviews; and use of quantitative risk analysis to calculate the contingency level.

3.8 A subsequent TfL paper to Finance and Policy Committee in May 2011 set out TfL’s intention to implement significant changes in process, authority levels, skills and behaviours. TfL accepted the vast majority of IIPAG’s recommendations (Appendix 2). A major exception related to authority to release contingency sums, where TfL made specific recommendations for escalating authority in line with the scale of project. With this amendment, the recommendations were agreed by FPC and moved into implementation. A number of actions documented at FPC placed responsibilities on various members of the TfL Executive Team to implement the changes necessary.

Value Management
3.9 IIPAG considers that the delivery of Value for Money is a key objective for TfL and this pervades all its activities. This includes provision of a safe, available, low risk, high capacity and reliable transport system at a price the taxpayer and the traveller can afford.

3.10 TfL has the intent, the resources, and the talent but because of the pressures of public audit, lacks the value culture, training or systems required to take decisions based on sustainable value rather than on lowest first cost. As a consequence, although there are pockets of good practice, there is undoubtedly scope for improvement.

3.11 Late in 2010 IIPAG encouraged and supported an internal audit of the current status of Value Management throughout TfL. A report was provided based on progress against an initial study made in 2008. IIPAG’s comments on the Audit Report have been passed to TfL. In essence, there has been only nominal improvement since 2008.

3.12 IIPAG believes that a fundamentally different value strategy is necessary and has prepared a report for TfL setting out a potential way forward in the delivery of value. This takes into account the concurrent need to target a substantial cost saving in TfL activities whilst maintaining affordability within a limited budget. This report contained recommendations including senior appointments with responsibility for value, positions on management and executive teams, preparation of registers and training, all with the aim of raising the profile of Value to the equivalent of Safety, Risk or Quality.
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Benchmarking
3.13 IIPAG’s initial report identified the need for a strong benchmarking capability within TfL. Subsequently IIPAG was given the responsibility by the Mayor to direct the benchmarking activities initially at LU and at a later date, broaden to elsewhere across TfL. LU has an existing in house benchmarking and analysis team which has operated relatively successfully and IIPAG is supporting it to enhance its activities and effectiveness.

3.14 IIPAG has, during the last six months:

- identified a single point of contact in IIPAG for benchmarking;
- reviewed the proposed LU Rail Asset benchmarking report;
- worked with the current team on immediate issues; and
- formed an outline strategy/direction for discussion with the businesses including:
  a) focus on reducing meetings and review resources;
  b) redefining the duties, responsibilities and output of the parties where deemed more efficient;
  c) introduction of a Value for Money (VfM) justification of benchmarking activity;
  d) introduction of a VfM decision process for determining priorities for study;
  e) the intent for the LU specialist group to support other businesses within TfL.

3.15 The IIPAG team contains a senior member who will chair the Benchmarking Steering Group (BSG). To assist in the detailed execution of IIPAG’s benchmarking direction, IIPAG also has a benchmarking specialist to liaise with the BSG and the Benchmarking Analysis Team (BAT) in LU to ensure that the agreed direction is followed. The proposed relationship between the BSG, IIPAG and the other parts of the business is set out in Appendix 3.

3.16 This summer the IIPAG benchmarking champion, in consultation with the BSG, will confirm the priority and extent of benchmarking studies going forward. This will include consideration of the value of continuing each existing study and will also address capital projects.

Hot topics from first report
3.17 IIPAG’s first report identified a number of “Hot Topics” for TfL’s early consideration. We give below a summarised update on these issues:

Standards and Approvals
3.18 The “New LU” approach (now entitled Capital Change or “C-Change”) is designed to tackle the issue of historically conservative standards. In particular this is
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being led by the Sub-surface Railway (SSR) Upgrade Programme. IIPAG has received briefings on the approach and will seek to monitor its effectiveness.

Whole Life Asset Management
3.19 LU presented the Asset Management Strategy and plans to IIPAG in 2010. IIPAG expects to be actively engaged in the compilation of this year’s Plan.

Culture, Responsibilities, Accountability
3.20 In its initial report IIPAG noted the need for improved decision making, transparency and efficiency. TfL must take advantage of Project Horizon to enhance empowerment, accountability and responsibility within the organisation.

Project management skills and structure
3.21 A number of the project management skills and processes have been studied as systemic issues i.e. risk management, contingencies; and are reported elsewhere in this document. Again, Project Horizon should be used to rationalise TfL’s approach to portfolio, programme and project management including leadership, sponsorship and governance at all levels of development and implementation.

Benchmarking
3.22 This was forecast to be a very important activity for a number of reasons including:

- Governance of the TfL performance
- Asset management
- Asset performance
- Operational performance
- International comparison

In recognition of this IIPAG has recruited two highly experienced specialists to work with the team in London Underground. They both commenced their part-time roles in June 2011.

Residual Concerns noted in IIPAG’s second report

3.23 IIPAG’s second report noted a number of areas where further attention was required as follows:

Risk Assessment and Risk Management
3.24 Evidence of variable practice in these areas was found during Gateway reviews, with no commonality of approach or skills across TfL. TfL should adopt a common process and roll it out, including all necessary training (see also 3.5 above).
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**Contingencies**
3.25 IIPAG has produced a report on its findings and recommendations and TfL has now set out new procedures based on this report (see 3.8 above). IIPAG will monitor how this new arrangement is rolled out.

**Knowledge Sharing**
3.26 This is currently being addressed by IPMO and IIPAG is beginning to engage through the gateway process with the intent of reporting during the coming year.

**Value Engineering/Management**
3.27 See discussion under 3.9 et seq

**Standards and Approvals**
3.28 This is on going under LU’s C-Change programme which is aimed at streamlining approvals. IIPAG will monitor progress in 2011-12.

**Pre-contract conditions and engineering**
3.29 So far this issue has not been studied in any depth by IIPAG. It will be part of the 2011-12 workplan.

**Budget Holder and Sponsor**
3.30 IIPAG has noted that there is inconsistency with regard to the budget holder for Capital Projects. IIPAG would normally expect the Project Sponsor role to be accountable for the budget because he/she represents the business as Client. Experience shows that there is a benefit to the business from the creative tension between the Client who holds a fixed budget and the Project Manager who seeks to deliver within it. This is absent in many of the current projects. IIPAG is currently preparing a paper in order to clarify roles and responsibilities on ownership of the design specifications and business case and responsibility for delivery.

**4. ENGAGEMENT WITH TfL**

4.1 The early focus on project gateways required close working with the project teams and after an initial introductory period when IIPAG was ‘feeling its way’, the relationships generally became professionally respectful and the response in the main very positive. As the role of IIPAG developed it became apparent to all parties that the level of activity being sought was greater than that envisaged at the time of its inception. In addition to the Corporate Gateway reviews, systemic and cultural issues were identified for further discussion and then TfL acquired Tube Lines. This not only had an impact on TfL but also, in turn, on IIPAG.

4.2 By the end of 2010, with TfL adjusting to its enhanced business and with IIPAG becoming more and more embroiled in the workings of TfL including presentations to the FPC of TfL, it was clear that communications between the two required more attention. IIPAG’s reports raised issues that required involvement at the Executive
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level of TfL and in recognition of this, a new range of regular meetings was agreed and established in order for both parties to discuss and debate corporate matters as well as contentious issues. These meetings included:

- the Chair of IIPAG with the Mayor;
- the Chair of IIPAG with the Deputy Chairman of TfL
- the Chair of IIPAG with the London Assembly
- IIPAG with the Commissioner and his Senior Executive Team
- IIPAG with the Managing Director of London Underground and his Management Team.

Meetings have also taken place between the Chair of IIPAG and the Secretary of State

4.3 This has proven to be a very positive set of arrangements and because of their style and openness, issues across the business are raised and dealt with before they become matters of contention.

4.5 Following a low-key introductory period it became clear that IIPAG could add value to the work of TfL and it could support the activities of the project teams. Its findings from the reviews it undertook were similar to many of those of the McNulty work undertaken for the Government, but because of the cooperation of TfL, the response to recommendations has been more dynamic with swifter action, reaping early benefit as a result. TfL’s acknowledgement of IIPAG’s potential contribution and the establishment of the various senior management meetings reflect TfL’s positive response to IIPAG’s involvement in its business.

4.6 As a result IIPAG was invited to become involved in the assurance activities associated with the Project Horizon initiative, a review of organisational and resourcing within TfL. Although its involvement has tended to be spasmodic and hence, perhaps not as effective as it might have been, IIPAG has had some impact on the findings and proposals of Horizon.

Project Horizon

Background to IIPAG’s Involvement

4.7 Since its creation in 2000, TfL has been responsible for implementing the transport strategy and for managing transport services across London. In 2003 it took responsibility for London Underground increasing the enormity of the operational challenge including cars, buses, trams, as well as suburban and underground trains. Over the period the number of tube passengers has grown by more than 15% whilst bus passengers have increased by around 10%. The demand on performance is therefore relentless and apart from the requirements of innumerable drivers on London’s roads, TfL has also to provide for almost 9m bus and tube journeys every day.

4.8 Quite naturally therefore, the organisation, its financial administration, and indeed, its culture were heavily weighted towards operations with only limited
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requirement for investment in infrastructure. However, since the demise of the PPP and the incorporation of Metronet and latterly Tube Lines into TfL, its responsibilities have had to change quite markedly. These two companies, Metronet and Tube Lines were strongly focused on capital investment both from a business and a cultural viewpoint and this has manifested itself into another major challenge for TfL.

4.9 Changing a company fundamentally focused on operations into one that not only handles one of the most complex public transport portfolios in the world, but also manages one the largest capital investment programmes in Europe is no mean challenge and it is not one that is achieved overnight. Hence, the TfL decision to instigate Project Horizon and given IIPAG’s involvement in the Capital Programme, to invite IIPAG to support the work. There will be some immediate benefits from the resultant changes but the longer term impact of re-organisation and cultural change will inevitably take some time to produce the ultimate rewards.

Achievements in Project Assurance

4.10 Project Horizon has designed and implemented a new streamlined projects’ approval process. IIPAG supported the disbanding of the Project Review Group (PRG) and the approval of projects from £5m-£25m in value at the Rail and Underground Board and Surface Board with the attendance and endorsement of TfL’s MD Finance.

Achievements in Internal Audit

4.11 IIPAG identified apparent duplication and overlap of Internal Audit and IPMO responsibilities. Horizon determined the organisation changes that enabled a 25% reduction in staff costs. IIPAG supported the resource reduction. IIPAG agrees that the formulation of an Integrated Assurance Plan encompassing risk, project assurance, Internal Audit and HSE resilience will give a better understanding of TfL’s assurance needs.

Development of Project Assurance and Project Management Systems.

4.12 IIPAG expressed concern in its first report that IPMO was seen principally as the administrator of the Corporate Gateway Reviews. IPMO also found that attempts to introduce common Project Management (PM) standards and systems were sometimes negated by the business Programme Management Offices (PMOs) who duplicated the work done centrally.

4.13 IIPAG has stated its preference for a new TfL-wide Capital Projects Directorate (CPD) which would carry the authority, expertise and responsibility for managing all TfL major projects (greater than £50m), developing and using the best project management systems. It would have the benefits of providing a clear career progression for aspiring project managers, planners, commercial managers, risk managers etc., within their own specialisms and the Directorate’s systems could be constantly refreshed by current project experience. For smaller scale contracts (less than £50m) project management would be undertaken in the separate business units but adopting appropriate standards set out by the central TfL CPD.
4.14 IIPAG recognises that the formation of a single TfL-wide directorate may take some time. IIPAG has proposed that, as a first step, the existing CPD in LU becomes responsible for rail projects and the PMOs in the non-rail business areas become combined to form a separate non-rail Capital Projects Directorate. The aim should be to share the same best system knowledge and practices and facilitate the transfer and training of staff, and to nominate and develop Subject Matter Experts in project management specialist areas.

4.15 TfL have expressed the view that making such a change in the period running up to the Olympics would not be advisable.

The Single Project Management Office (SPO)
4.16 Horizon has recently set out the design criteria for a Single Project Management Office which reaches across and is integrated with the operating businesses. The integration of all the PMOs in one single office is supported by IIPAG.

4.17 It is proposed that the SPO has 3 functions ie: Project Assurance, Monitoring and Reporting and Centre of Excellence. The integration of Assurance and Monitoring and Reporting in one entity will bring benefits to TfL. However, achieving a respected dynamic and effective Centre of Excellence is less straightforward requiring considerable experience, expertise and leadership qualities. IIPAG will support Horizon with the aim of making the Centre of Excellence function a success, but counsels caution particularly as members of IIPAG have faced the difficulties of providing such a central service in the past.

5. PROJECT PERFORMANCE AND THE IMPACT OF IIPAG

Examples of good practice in TfL

5.1 Throughout IIPAG’s engagement with the various programmes and individual projects within the overall investment programme, several instances of exemplary practice have been identified including:

Lean Transformation Programme for Station Design
5.2 The Station Upgrades Lean Transformation Programme is delivering immediate and palpable change in the way one part of LU delivers CAPEX projects. The programme produced its first trained ‘Champions’ in September 2010, with to date 48 staff trained and the capacity to train around 80 staff per annum. The ‘Champions’ have already identified £10m of savings, and implemented procedural changes to realise £2m of that value. These are genuine waste eradication measures and annually repeatable savings.

5.3 The real power of the programme is the empowerment and tangible cultural change it delivers in a short time scale. It releases momentum from every level and every silo of the organisation, generating immediate impact and identification and eradication of waste, especially in decades of old red tape procedures. It is driving a new focus on measurable value for money. It is making pursuit of positive change not
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an idea but the organisational norm. Its only limitation is the lack of resource to increase the training output, and a natural home for the process outside this one small corner of LU. This is worthy of immediate wider application.

The Victoria Line Upgrade Programme

5.4 The overall impression gained by IIPAG, is of a complex programme which is being well managed by a competent team with an integrated supply chain. By all accounts the relationship with the key supplier and the supply chain is one of common co-operation and trust. The travelling public is already feeling the benefits of improved performance from this programme.

Green Park Station

5.5 The “Step Free Access” Project at Green Park Station is forecast to be completed in Autumn 2011. Although the Project appears to be a classic example of a scheme being set up with limited financial discipline generating very comfortable budgets and thereby unnecessarily ‘tying-up’ excessive funding, the manner in which the project team has managed the delivery is very impressive.

5.6 Significant savings of almost £40m or 40% of the budget are forecast through some fortuitous events/trends including low inflation as well as ‘generous’ estimates but, the diligence and style of the project management has undoubtedly been focused on best value. Indeed, the Project Team has actively sought to manage ‘Risk’ where it has clearly been more advantageous to be managed by them rather than the Contractor and has taken a disciplined attitude towards spend. The station is open to the travelling public and apart from landscaping, planting, etc scheduled for next Spring, is largely complete.. In summary, the planning, programming and costing of all the work are being well managed and the quality of performance should be presented within TfL as an example for Best Practice/Lessons Learnt.

A406 Bounds Green

5.7 Although only a relatively small highway improvement scheme in the order of £56m, the Review, undertaken by IIPAG with the Project Team, revealed a good example of sound Project Management demonstrating the necessary blend of management, commercial knowhow, planning, challenging and stakeholder involvement, all to the benefit of the Project. The approach to the Project appeared to have been very professional and relationships through to Stakeholders and Contractors were reported to have been well managed. The Project has reached a stage at which, despite some significant set backs relating to land acquisition and utility diversion works, the Project Team is able to forecast with some confidence that the project will be delivered within budget and time schedule.

Future Ticketing Programme

5.8 This project has the potential to be an exemplar. It has learnt from its success installing the Oyster card but instead of resting on its laurels as a European leader it is intent on taking TfL and the UK to a new level.
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5.9 The introduction of the Smart card is not an elementary expansion of the Oyster card but is a step change in efficiency for both the traveller and the credit must be given to the project team for their success to date. The team reports that it has:

- learnt from its previous experience;
- challenged its own operational modus operandi;
- reduced project risk with an innovative approach to weekly staged targets and with performance diligently monitored;
- modified management support and funding by developing confidence through demonstrable focus and planning;
- met the tough time targets; and
- co-operated with the technology, banking and installation supply chains to provide a seamless solution to a concept and at a scale not hitherto experienced by any of the partners.

5.10 IIPAG’s reservation, in spite of there apparently not being any current problems, is the lack of sufficient separation between sponsorship and delivery. The project has set itself a high performance target and intends to meet it without recourse to contingency.

**SCOOT**

5.11 The Split Cycle Offset Optimisation Technique (SCOOT) automatic real time road signal control system self adjusts to traffic demands and incidents. The project provides a 12% reduction in traffic delay and is an exemplar of step change at low risk, using existing supply chains, existing technology and well-established procedures. The result is a significant cost saving to the road user.

5.12 The project team has made impressive savings (£17m) with funds from other clients’ schemes which benefit from the solution. This concept will be converted into further savings in the 355 sites of Phase II. In addition to the project costs saved, on-going benefits (in journey time savings) of £50,000 per annum per key site are expected for the road user.

5.13 The project team has assessed the execution risks realistically and taken mitigation action. Following guidance and feedback by IIPAG, key risk provisions have been updated for the next stage of the project, based on a quantified risk register. Risk has been calculated at £167k. Management contingency has been reduced to 4% of capital costs (£681k) as the project is using robust and embedded processes and is two-thirds of the way through delivery. This approach has been endorsed by IPMO. IIPAG believes there to be a potential saving accruing from acceleration of the programme and reduction of the contingency. The project is well proven and the risk and uncertainties must be low. In addition there is political merit and cost benefit to TfL if the project could be completed in time for the Olympics. IIPAG thus recommended that appropriate funding be released for the project to accelerate and this has now been agreed.
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Blackwall Tunnel Refurbishment

5.14 The works include managing refurbishment in a live tunnel with hand-back each morning. This is a difficult proposition with a high degree of risk. In IIPAG’s view the project has been, and is being, well and successfully managed.

5.15 The project team have excelled in their efforts to keep the costs down and to minimise delay and disruptions. Their confidence in their performance and their willingness to accept change has led them to release the contingency, back to TfL, one year before completion.

5.16 This is a bold move and one which releases funds needed for other projects. None of this occurs without very good planning, focused management and pride in the team’s performance. Relationships with the Contractor and the supply chain are excellent. None of the possessions has over-run and the External Expert - (EE) has added value to the team.

5.17 There are some lessons learnt of a systemic nature which include a need for:

- the EE to interview the Contractor during CGAP reviews;
- the reduction in “Admin” burden;
- consideration of ‘earned value’ monitoring; and
- early preparation of a good O & M manual.

Perceived Benefits from IIPAG Involvement

5.18 During IIPAG’s engagement on Corporate Gateway Reviews (CGAP), through systemic assessments or in general discussions, IIPAG members have noted how their involvement has influenced future behaviour which should in turn benefit the overall Investment Programme and some specific examples are given below:

Risk Management and Contingency

5.19 IIPAG critiqued reviews already undertaken by IPMO, drawing upon IIPAG’s own observations of practice across TfL and preparing recommendations for significant changes to the methodology for calculating, and process for managing, risk and management contingency.

5.20 Extensive discussions were held with senior leaders in TfL, resulting in TfL agreeing to adopt the recommendations, with the exception of the recommended authority levels for release of contingency, where an escalating level of sign off will be adopted rather than a one size fits all approach.

5.21 TfL’s Managing Director Finance is responsible for ensuring an orderly transition from current practice to consistent practice in accordance with the new procedures. The Modal Chief Officers are responsible for ensuring their team’s upskilling and compliance.
5.22 These changes should:

- properly equip project teams with the skills necessary for effective and realistic assessments of their commercial risks and opportunities, providing the consistent processes and governance to successfully manage risk avoidance or risk mitigation;
- encourage the behaviours and leadership necessary for TfL to secure better value for money and lower outturn costs that will better protect the TfL business case for capital schemes, completing them more reliably to time and budget;
- provide a consistent means of appropriately calculating management contingency, based on the risk profile of the project and enabling its routine reassessment and review, rather than simply allocating a fixed percentage of “optimism bias” (this will help the business to avoid unnecessarily “locking up” capital budgets in contingency “pots” against each project, and is considered an improvement on Treasury guidelines);
- provide governance and transparency that discourages the unnecessary utilisation of contingency and pressures project teams to accurately forecast and actively control costs from concept to completion; and
- provide greater transparency of risk and contingency management, and thereby lessen the temptation for sponsors or project deliverers to consider the risk allowance and management contingency as part of the project cost budget that can be spent with little concern.

Track Renewals Programme

5.23 This was one of the first schemes reviewed by IIPAG, and was at the point of procurement. IIPAG worked closely with the sponsor and delivery manager, securing effective tension between sponsored scope and procured work scope. The work re-evaluated the likely cost, risk and contingency; enabling an improved scope of work to be included within the budget.

5.24 The likely impact of the revised work scope is an enhanced level of track quality, reliability and safety above the renewal levels originally planned, with consequent savings in reactive and preventative maintenance.

5.25 The approach championed by IIPAG challenged the original project management assumptions and approach to meeting FPC requirements. The programme is now scoped to deliver an additional work commitment c. £55m greater than originally planned, enabling additional track to be renewed, rather than deferred.

5.26 Considerable scope for future capital saving through tighter project and risk management, and other activities were also identified. IIPAG has challenged the project to find and adopt an economically sustainable track renewal solution, ie one which eliminates avoidable cost.
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Baker Street – Bond Street Linings
5.27 This tunnel remedial project was one of the few where IIPAG has been involved early enough to influence the base case before it was finalised.

5.28 IIPAG found that the project team was particularly knowledgeable due to the experience of the work executed to date. In addition, the amount of pre-project engineering and planning work carried out by the project team and the extent of the information acquired, enabled the risks related to the options to be more easily and more accurately assessed.

5.29 The decision of the LU Board to “park” the Sprayed Shotcrete Lining (SSL) option, and to proceed with a more permanent lining, seemed to IIPAG to be premature. The decision making process did not seem adequate.

5.30 The outcome of the options analysis clearly highlighted the low risk and other benefits of utilising a strapping method proven to be successful in the strengthening works to date. In view of this and the evidence presented, IIPAG questioned the decision to remove and replace the segments. Removing linings on a significant scale is an action not lightly undertaken by any tunnelling engineer and is an action of last resort. Whether in this case this is the best option or not, it seemed to IIPAG that the decision had been taken without a significant risk review and comparative costing of the options, not least a determination of the influence of voids behind the existing linings.

5.31 IIPAG recommended in its review report that further trial work be undertaken on site to establish the viability of using the principles of the “strapped” solution to strengthen the rings and back grouting to determine if this stabilised further movement.

5.32 To their credit, the project team saw the prudence of the recommendations of the External-Expert, the IPMO, and IIPAG and decided to investigate the alternatives more thoroughly.

5.33 The savings arising from IIPAG intervention, particularly when a new direction is advised, are not always quantifiable but the risk in time and cost overrun in not stripping out and replacing the tunnel lining is undoubtedly significant. Whatever the final method, the risk will be significantly reduced by the rigorous review and action now being taken by the project team and the outturn cost may be significantly reduced.

Sub-surface Railway Upgrade Programme (SUP) Programme Management
5.34 A number of recommendations were made which have reflected IIPAG’s concern that as the largest programme in LU’s portfolio approaching £5 billion, considerable strengthening of management and programme procedures was needed. The recommendations on management strengthening have included widening the commercial terms under which key major projects staff could be attracted to the programme, co-location of the project team, formulation of a comprehensive
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integrated schedule which respects the uncertainties of some projects but provides the best basis for decision making on new contractual commitments, the reappraisal of scope, risk and management contingency. LU has accepted these recommendations and a slight pause in the programme has enabled these to be acted upon allowing it to move forward on a much sounder footing.

5.35 IIPAG has expressed concern at the potential limitations of the current TfL remuneration scheme in the context of high quality, experienced, industry leading Project Managers. In order to ensure the successful delivery of this extensive world class, investment programme, it is IIPAG’s opinion that such Managers will have to be attracted and employed and this appears to be unilaterally accepted. Such individuals are not necessarily seeking employment with a body such as TfL but they are enticed by the complexity and scale of projects. The attractiveness of the TfL projects/work is beyond question for these types of ambitious Managers but their normal expectations will be based upon market based performance related pay where they are appropriately remunerated with a reasonable salary plus a considerable bonus/incentive, based upon successful performance and delivery. Without such enticement, the best people from the industry are unlikely to be attracted, yet complex programmes like SUP need this quality of talent to ensure the targeted outcome.

Sub-surface Railway Upgrade Programme Automatic Train Control (ATC) Signalling Programme

5.36 The ATC programme is a technically and logistically complex signalling scheme, embedded within the broader scope of an extensive remodelling and upgrade of the Sub-surface lines.

5.37 The ATC reviews required in-depth review as well as strategic thinking from the team, the EE and the IIPAG. The work contained considerable challenge. From the outputs achieved, IIPAG challenged and encouraged the team leadership, enabling a strong outcome including:

- a good project management team to set themselves up properly for success during delivery, and gain further confidence and strength;
- helped the team position for more effective final negotiations between suppliers,
- a saving in inflation risk of circa £60m;
- a more effective risk transfer to and incentive profile from the final supplier;
- a rigorous and appropriate quantification of risk and contingency, with much better understanding of effective risk mitigation measures;
- a clearly integrated schedule of work with the wider programme, identification of all critical interfaces, containing adequate float to derisk the complexities;
- secured a deeper commitment to embed safety leadership noted by the team as “Zero Harm” to all involved
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- escalated the awareness of the high degree of dependence on successful “C-Change”;
- encouraged and enabled the team to secure a different recruitment and retention employment policy; and
- highlighted the need for strengthened programme leadership within the scheme and across LU/TfL.

5.38 The ATC project team is considered one of the most promising with which IIPAG has worked.

Project Dash-boards
5.39 IIPAG has worked very closely with IPMO and the Finance Director to re-style the reporting dash-boards across the operating units. Graphical progress charts and key indicators provide a more immediately comprehensible assessment of progress. These charts are aimed to be interrogated at all levels to enable up to date and better understanding of the financial and delivery performances and thus better decision making. FPC has already commented favourably on their layout.

Input into Project Horizon Process
5.40 As mentioned in 4.7 above, during the development of Horizon’s work, particularly on assurance and management structure, IIPAG has had contact and made certain recommendations which have fed into Horizon’s outcomes. This has included identification of overlaps in functions between groups within the modes where rationalisation will lead to greater efficiencies within TfL.

Strengthening of Gateway Review process
5.41 IIPAG believes that IIPAG members’ presence and input during CGAP reviews has strengthened the robustness of the process and helped to reinforce significant findings from the External Experts undertaking the reviews. However, there remains a concern that projects are often brought for review before they are sufficiently ready for the relevant gate.

6. IIPAG’s FUTURE WORK PROGRAMME

Interim Reviews for major programmes and projects

6.1 In addition to its continuing role in the CGAP process, IIPAG plans to carry out periodic reviews for the on-going substantial programmes and projects between major CGAP milestones together with those projects that report ‘unusual/unforeseen actions’ in their monthly dashboard reports. Where possible, but not exclusively, these will be carried out at the same time as IPMO reviews (usually termed “D+” reviews for those projects under way). The reviews will be aimed at giving a health check of these major projects to ensure earlier recommendations have been incorporated and that projects remain “on track”. The reviews will be simpler than full CGAP reviews and will entail interviews between IIPAG and key members of the project delivery team, examination of relevant documentation and a brief report.
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Systemic reviews

6.2 A number of systemic issues related to TfL activities have already been addressed by IIPAG during 2010 / 2011 (see section 3.4). The future focus will continue to be on these and other issues which have been prioritised using the criteria of:

- potential / perceived level of problem
- potential for cost / efficiency saving
- implementation of change.

6.3 To date, there are a number of broad areas where IIPAG has had little opportunity to delve deeply into the investment programme and which will be subjects for targeting in the coming year. These include: Tube Lines, Surface Transport, Asset Management and Maintenance. IIPAG will consolidate work on Benchmarking and continue further examination of the systemic issues; those issues that have already been given some priority in next year’s programme include:

Asset Management

6.4 The strategy and execution within TfL for Asset Management is a complex matter with the acknowledged science of whole life considerations still under development. The inter-action with the new emphasis on effective benchmarking, maintenance and continual improvement in operational performance make this a pivotal discipline in the future activities of TfL. Over the next year, IIPAG will work with the range of skill sets, primarily in LU and Tube Lines to support the establishment of a best value and efficient Asset Management capability.

Sponsors/Ownership of budget - Impact of where responsibility does/should lie.

6.5 Essentially the role of the sponsor is to enhance and protect the original business case, leading the project for commercial and operational success. IIPAG’s expectations are that the following will be achieved by the sponsor:

- acting as the internal client;
- leading the investment; and
- managing the external stakeholders as the authoritative TfL client representative concerned with the project.

6.6 Whilst the sponsor’s role spans the full lifecycle of a project (including acceptance into services and benefits analysis) the bulk of the work in this highly responsible role falls during project feasibility, development, design and then change control.

6.7 Following discussions with Senior Executives, it has been identified that IIPAG will conduct a thorough systemic review of the sponsor’s role and performance within TfL, for the purpose of providing clear recommendations on how to create an effective role, reporting line and skill set that ensures commercial success.

Blockades v Possessions

6.8 Following requests, IIPAG will work with LU and will assemble industry-based data, in order to conduct a study assessing the relative benefits of blockades.
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compared to possessions and engineering hours from a value for money perspective as opposed to the political expedient.

Other Systemic Issues
6.9 Other issues that have been identified by IIPAG for possible review and prioritisation include:

- Preparation of Reviews - The extent of resources and time preparing and attending reviews

- New Engineering Contract (NEC) Re-Writing - The tendency within TfL to substantially re-write / re-type the NEC contract

- NEC training - The level of training within TfL in view of the extent of the use of this contract form

- EE Reviews. Their range of quality and the potential to improve their effectiveness

- Reduction in Admin Burden and Assurance - The seemingly onerous level of administration and assurance

- Self Certification - The risks and rewards balance and the increased usage

- First Cost v Whole Life Cost – Procurement processes including the impact of the decisions made.

- Plant Utilisation

- Carbon Footprint

IIPAG’s sufficiency in future

6.10 IIPAG’s estimated Workplan/Workload for 2011/2012 - based on the current Terms of Reference has been set out in a technical paper and will be presented to TfL and DfT for consultation in order to agree with the Mayor and inform the Secretary of State, the Finance and Policy Committee and the TfL Board the agreed workload for IIPAG through its second year.

6.11 As in year one, an estimate of more than 500 days for next year’s workplan is well in excess of the IIPAG resources availability of some 375 days. In practice, some projects will take less time than the current estimate and some exercises may well not be tackled. In cases where the work has to be undertaken then if necessary IIPAG will seek to commission additional support in co-operation with TfL.
6.12 IIPAG will manage the demands of the Terms of Reference within the time allocations that the team has agreed. In practice, the Revised Terms of Reference have generally been appropriate to the role undertaken although IIPAG has begun to enter the fringe of areas that are specifically not included. For example, as IIPAG becomes more involved in Maintenance, Asset Management and Benchmarking, so it has to understand features of the operational performance. As a result, now that IIPAG has considerable resources dedicated to Benchmarking, and in order to carry out the governance features of this work, then IIPAG will inevitably have to become more knowledgeable about operational performance. Regarding Crossrail, IIPAG is specifically not involved although TfL is of course a major contributor to the scheme.
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APPENDIX 1

Terms of Reference for the Independent Investment Programme Advisory Group (IIPAG)

Purpose

The IIPAG will provide independent assurance and expert advice to the Mayor of London concerning Transport for London’s Investment Programme as published from time to time; including all maintenance, renewal, upgrades and major projects, but not operational issues or the activities of Crossrail Limited. The IIPAG will consider issues of economy, efficiency and value for money in preparing its advice.

The Secretary of State for Transport also wishes to be assured that the financial support provided to TfL delivers value for money to the taxpayer, and will be consulted in relation to the work of the Group and will receive copies of reports and other materials that are provided to the Mayor as set out in this Terms of Reference.

Membership

Six to eight Members

Frequency of Meetings

The Group shall meet at least twice a year. The Chair of the IIPAG will determine the frequency of any additional meetings should they be required for the group to function effectively.

Group members may be required to attend relevant meetings of the Finance and Policy Committee or TfL Board.

Terms of Reference

1. The Group will advise the Mayor, the Finance and Policy Committee and the TfL Board, sending reports also to the Secretary of State for Transport with regard to:

(a) the delivery of the TfL Investment Programme. This may include consideration of systemic or generic issues such as organisational capability and structure, and the efficiency, effectiveness and economy of delivery of the Investment Programme, including all maintenance, renewal, upgrades and major projects.

(b) the approval of projects by the TfL Board and/or Finance and Policy Committee, by overseeing the system of gateway reviews and ensuring they are undertaken thoroughly and efficiently, and (where necessary) recommending that further reports or reviews be commissioned;

(c) the adequacy of progress and delivery status of major projects between formal approval gates;

(d) other aspects of the Investment Programme it considers appropriate; and
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(e) examination and commentary upon the draft Asset Management Plans relating to the infrastructure of London Underground.

The remit of the Group does not include operational issues or the activities of Crossrail Limited.

2. The Group will be responsible for the direction of a team undertaking benchmarking of the costs of maintenance and project delivery on the London Underground network, using data provided by London Underground and such other materials as the Group considers appropriate, including international benchmarking. The Group will broaden benchmarking to other areas of TfL undertaking delivery of the Investment Programme at an appropriate time.

3. The Group will assign members to review and report on specific high value and/or high risk projects or programme areas within the TfL Investment Programme.

4. Annually, the IIPAG will consult with TfL and the Secretary of State for Transport and propose a workplan for the year to the Mayor for his approval. The plan will cover both the Group’s involvement in the review of specific projects and its activities to form a broader assessment of the delivery of the Investment Programme. The workplan will be kept under review by the Group, and changes will be proposed to the Finance and Policy Committee as required. Significant changes will be agreed with the Mayor, having consulted with the Secretary of State, prior to implementation.

5. The Group may, to support its work, provide advice in relation to the selection of appropriate engineering and project management consultancies in accordance with TfL’s policies and procedures on procurement and conflicts of interest as they may vary from time to time.

6. Annually, the Group will review the level of resource required to undertake the activities set out in the terms of reference and will recommend a budget to the Finance and Policy Committee for consideration, prior to a budget being submitted by TfL to the Mayor for his approval.

7. The Group will publish an annual report on TfL’s delivery of its Investment Programme from its work during the year, drawing out any common themes, systemic issues and lessons learnt. The Group may also publish additional reports throughout the year as it sees fit, after consulting the Mayor and subject to appropriate obligations relating to confidentiality and conflicts of interest.

8. The Group will notify the Mayor and TfL Board of any issues of significant concern in relation to the value for money or delivery of the Investment Programme. Any notification of such issues shall be passed to the Secretary of State for Transport together, where so requested by the Secretary of State and subject to appropriate confidentiality obligations, with such other reports and related data which the Group may produce for the Mayor or the TfL Board and its committees. The Secretary of State shall pass such material to the European Commission as necessary.
APPENDIX 2  Risk Management

The specific recommendations summarised in the IIPAG report are as below:

SUMMARY TABLE OF IIPAG RECOMMENDATIONS:

<table>
<thead>
<tr>
<th>Ref</th>
<th>Main recommendation</th>
<th>Subset of recommended actions</th>
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<tr>
<td>4.6a</td>
<td>Conduct effective project, programme and business reviews</td>
<td>Projects (in development or delivery phase) to be reviewed every 6-8 weeks, with a summary sheet signed off by the reviewer, the project director and the modal Chief Officer which details the latest and previous cost forecast and duration, confirms functionality and notes all changes in risk register together with mitigation plans and their progress. Before committing to major works contracts the sponsor, project director and modal Chief Officer should review the project and contract in detail, signing off together the project summary sheet that forecasts quantum and timing of business returns from the scheme, cost outturn, functionality and forecast duration, checking and agreeing the risk register, before presenting the business case and risk register to the FPC for authority to proceed. Finance only update project figures when the summary sheet has been signed and agreed by the Chief Officer. Every Corporate Gate Review must have an appropriately compiled risk register in evidence for the review to commence. Risk registers to be refreshed and updated ahead of every project review or CGAP review. Detailed training and practical guidance should be provided for the reviewers to make them effective and thorough.</td>
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<td>4.6b</td>
<td>Establish a transparent and just culture</td>
<td>Project leaders/directors to speak coherently on their numbers, risks and mitigation plans at all reviews. “Know the numbers, risks and plans inside out.” Where significant new risks have been identified or crystallised, the accountability for recovery should be clearly identified within the project team, and simple clear</td>
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<td>Ref</td>
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<td>plans communicated to the senior TfL Executive member with oversight of the project. Follow-up by the Executive is essential.</td>
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<td></td>
<td>Simple, straightforward accountabilities and responsibilities should be clearly and consistently laid out for all TfL employees (or subcontracted/agency individuals) who participate in the leadership and execution of capital schemes.</td>
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<td>Appropriately hold to account project sponsors, project delivery teams and TfL/modal executives for the failure to deliver to the time, money and functionality levels. Similarly, reduction of final completed cost and early delivery to quality and functionality are to be considered strong successes: recognised, celebrated and appropriately rewarded when considering career growth and personal remuneration. The Executive should pass strong messages on what they appreciate.</td>
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<td>Effective visible consistent communication and follow-through on risk management from the top: the TfL Executive members</td>
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<td>4.6c</td>
<td>Provide assistance in developing practical risk management skills</td>
<td>Competence workshops and coaching in risk register compilation, QRA and risk management for project staff</td>
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<td></td>
<td></td>
<td>Training of reviewers in review techniques, and review of risk registers-management in particular</td>
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<td>Personal warranty of team members in their effective management of construction, commerce and risk</td>
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<tr>
<td>4.6d</td>
<td>All schemes should cost risk at the P50 level into their estimated final cost forecast.</td>
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<td>4.6e</td>
<td>Schemes with unusually steep or unbalanced QRA profiles require additional review and careful thought by the project director/manager.</td>
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<td>4.6f</td>
<td>An appropriate level of risk provision, beyond the project base costs, should be directly available to each project to enable appropriate contract management. The cost forecast for each project (including its variations and risks incurred) will be reviewed by the project manager/director with his</td>
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<td>responsible line manager/director at every project review (6-8 weeks) and a revised risk register signed off on conclusion of that review, including signed authority for the use/release of any risk register monies as additional cost incurred/risk successfully avoided. Change of the risk register numbers should only occur after a full project review that validates its quantum as factual, related to the risks identified and which indicates even that the cost incurred cannot be recovered by other actions. Forecast cost of risk held on the project risk register should be removed when overtaken by reality, moving to incurred cost or reducing the EFC.</td>
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<td>4.6g</td>
<td>IIPAG continues to recommend that TfL appoint a single head of capital programmes at executive level across TfL.</td>
<td>[IIPAG agreed separately to resolve this matter through project Horizon which has proposed a specific organisational structure that is a significant improvement and moves to two capital programme teams, directed from within the two future “modes”, with a common overlap of Subject Matter Experts (SMEs) to provide a single means route to excellence in running capital programmes.]</td>
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<tr>
<td>4.6h</td>
<td>The new dashboard of capital trend on each project should be used by FPC and Executives responsible for capital work to hold teams to account for active risk management that successfully delivers projects to time and within budget.</td>
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<tr>
<td>4.7 ii</td>
<td>FPC to consider who is responsible for leading the necessary changes across all TfL projects</td>
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<tr>
<td>5.4.1b</td>
<td>Determine the level of contingency by calculation based on the risks above those recognised at P50 in the risk register. A robust appropriate risk register and QRA/Monte Carlo be compiled for every project at each gateway review in order to secure authority to proceed. This would then be used to determine appropriate contingency levels as the difference between P80-P50.</td>
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## Independent Investment Programme Advisory Group

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<thead>
<tr>
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<tbody>
<tr>
<td>5.4.1c</td>
<td>Agree a staged implementation plan for the transition from today’s contingency levels to the revised levels.</td>
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<td>5.4.2e</td>
<td>Contingency money be excluded from the EFC for the purpose of reporting project progress.</td>
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<tr>
<td>5.4.2f</td>
<td>Governance of Contingency money: held 80% centrally by the MD Finance, with balancing 20% held by the modal Chief Officer. Contingency at mode should not be moved between projects.</td>
<td>Tfl decided to adopt a different governance procedure here, with release of contingency for the majority of schemes requiring the sign off of Mode CO, CFO, Commissioner, FPC, and TfL Board – according to scale of project. This Tfl proposal is expected to adequately drive a significant change in project team behaviour and the unacceptability of overruns in time and money should become very apparent, very quickly.</td>
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<tr>
<td>5.4.2h</td>
<td>For schemes &gt;£5m, requests to utilise management contingency will require recommendation by the MD Finance or the Modal Chief Officer, with authority granted from FPC - excepting those schemes over £100m which additionally would require approval by TfL Board for use of contingency.</td>
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<tr>
<td>5.5 ii</td>
<td>The MD Finance leads the review of projects and their transition from current contingency arrangements to these recommended arrangements for contingency provision.</td>
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</table>
TfL Benchmarking Process - Proposed

IIPAG

TfL Exec

Benchmarking Steering Group (BSG)

BSG Chairman +1

Reports

Plan and Execution

ST BM Champion +1

ToRs & Reports

TfL Exec

IIPAG

Reports

Direction

Feedback

Clarification

LU/TLL

Benchmarking and Analysis Team (BAT)

LU & TL Businesses

London Rail

Surface Transport

TfL Corporate

Data

Assistance

ToRs

413x257

LU & TL Businesses

London Rail

Surface Transport

TfL Corporate

315x116

Feedback

Clarification

ToRs

432x246

Businesses

411x361

London

430x373

Rail

430x555

Surface

430x577

Transport

430x527

Corporate

290x527

ST BM

Champion +1

305x509

ToRs &

Reports

339x440

TLBM Champion +1

LU BM Champion +1

411x361

ToRs

413x257

LU & TL

Businesses

432x246

Businesses

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ToRs

1.2 Over recent years the scale and complexity of TfL’s Investment Programme has grown as the result of the acquisition of the former PPP companies, Metronet and Tube Lines. The level of investment in transport infrastructure in London, particularly the Tube, has grown significantly and many major improvement programmes are now well underway, with some already delivering benefits to the public. All this is being achieved whilst maintaining and improving day-to-day operational performance for an increasing number of passengers.

1.3 To ensure the successful delivery of the huge investment in transport, TfL has strengthened its delivery capability, governance and scrutiny of projects. In 2008 a robust gateway review process was established that applies detailed independent scrutiny of all major projects at key points in their development. These reviews provide senior managers with the information they need to make informed decisions on whether to authorise a project to pass into the next stage of development. The Finance and Policy Committee has increased its scrutiny and governance of major projects by lowering the threshold for approval of projects by the Committee from £100m to £50m and by receiving more detailed regular information on the delivery of individual projects.

1.4 Finally the establishment of the IIPAG in 2010 has provided fully independent advice on the delivery of the Investment Programme by six industry experts through their role in overseeing the gateway reviews and examining systemic issues. As part of the 2010 spending review, further strengthening of the independence of the group occurred through the direct reporting line to the Mayor and their revised terms of reference included more active direction of benchmarking in TfL. These changes are enabling project delivery performance to be improved further.

1.5 The management of TfL welcomes the views of the IIPAG on the delivery of the Investment Programme and acknowledges the challenging and constructive suggestions made by the group. It is recognised that even when the recommendations of the IIPAG are not accepted in their entirety by TfL, the scrutiny and challenge has prompted useful debate on issues of project delivery.

1.6 The IIPAG recognition of the complexities of delivering a major programme of
capital projects whilst maintaining the safe and efficient operation of the transport network is welcomed. In particular, the need to secure appropriately skilled project management and engineering staff that are necessary for effective delivery of the programme. TfL considers that the best risk mitigation to achieve successful project delivery is to ensure the best teams and suppliers are engaged in the delivery of the Investment Programme. The IIPAG’s support of TfL in attracting and retaining world class talent at appropriate pay and reward levels is welcomed.

1.7 The advice given by the group has been valuable by providing the TfL Board, Finance and Policy Committee and TfL senior managers with independent perspectives to the decisions they make on projects.

1.8 TfL has established several mechanisms for engagement with the IIPAG that have enabled the group to form a comprehensive view of TfL’s performance in delivery of the Investment Programme.

1.9 The primary mechanism for engagement has been the reviews and assurance processes associated with the approval of major projects. Approvals of major projects are granted by the TfL Board and the Finance and Policy Committee at determined project gates at the commencement of each stage of a project. The IIPAG has provided oversight of the assurance reviews, undertaken by experts appointed from external organisations (the External Expert), that provide scrutiny of projects prior to approval to pass the gate and has ensured these processes are rigorous and that decisions by the Board and Finance and Policy Committee are made in full knowledge of all relevant information. The lead member of the IIPAG responsible for each review attends the relevant Board or Finance and Policy Committee meeting so that they can comment on their conclusions. For each project reviewed, the IIPAG produces its own report setting out its assessment of the robustness of the gate review itself alongside its own specific recommendations, often endorsing those made by the External Experts. Through their involvement in these reviews, the IIPAG has contributed by endorsing the recommendations of the External Experts and providing their own supplementary recommendations on ways to improve the likelihood of project success.

1.10 Where reviews raise issues that need to be addressed, whether identified by the External Experts, TfL’s Investment Programme Management Office (IPMO) or the IIPAG, detailed action plans are put in place to ensure improvement. Prior to formal submission to the TfL Board and Finance and Policy Committee, the IIPAG are invited to the local management approval meetings to discuss the issues raised in the reviews and ensure all issues have agreed plans for resolution. Details of these action plans are provided to the TfL Board and Finance and Policy Committee at the time of approval and are discussed with the IIPAG in attendance at the meetings.
1.11 The IIPAG has suggested that both the reviews undertaken by project teams and interim reviews need to be more rigorous and more frequent. TfL is exploring ways to balance the frequency and intensity of reviews with the necessity of avoiding distracting project teams from the delivery of their projects.

1.12 Further engagement with the IIPAG has taken place through topic-specific meetings on issues such as asset management plans, benchmarking, and the delivery of the change initiative – Project Horizon.

1.13 The IIPAG’s proposal that the establishment of a single Pan-TfL Programme Management Office (PMO) should be an interim step towards a single project delivery directorate has been discussed in detail with the Commissioner, the
Project Horizon Directors and TfL Chief Officers. We do not believe that the creation of a single projects directorate for all large projects within the organisation would offer worthwhile advantages over the current arrangements, particularly since the vast majority of the projects are rail projects within LU. The remaining Surface projects are better handled alongside the routine maintenance and capital renewal of the road network. Furthermore, the vital link to the operational businesses would be weakened, which would adversely affect the day to day operation of the transport network; the extravagant possessions of the operating railway for capital upgrades which were embedded in the former PPP arrangements are more than adequate testimony of what can happen when the management of the operating railway does not have supremacy. TfL has welcomed the assignment of one member of the IIPAG to be the main contact for engagement on the development of Project Horizon, in particular the Project Horizon work stream that has examined the opportunities to improve the approach to project assurance. This review has established key principles including the establishment of a single PMO, simplification and removal of duplication of review and checking activities, greater use of internal skills through peer reviews and sharing of skilled staff across the organisation and the establishment of a common project delivery framework and supporting systems.

1.14 The proposed single PMO will provide significant advantages over the current arrangements by providing an integrated approach to project delivery across TfL. The single PMO will ensure high quality, efficient and effective processes are in place for reporting of project delivery, provision of independent assurance and development, and sharing of best practice across projects. It is deliberately not tasked with the delivery of projects to allow it to provide an unbiased view of the performance of projects and is able to identify and progress activities necessary to promote continuous improvement in project delivery. A core function of the single PMO will be a Project Management Centre of Excellence that will develop and promote best practice, including those areas identified by the IIPAG.

1.15 As a precursor to the establishment of the single PMO, the IPMO is working with representatives across TfL to undertake a feasibility study into the viability of developing a single project management framework and system for the entire organisation. This review is nearing completion and the IIPAG are expected to provide significant input into its conclusions.

1.16 The IIPAG has highlighted TfL needs a culture that supports the behaviours required to successfully deliver complex projects. Aligned to the aims of Project Horizon, further initiatives are underway to enable culture change within the organisation. The “C-Change” initiative in the Sub Surface Upgrade
Programme (SUP) has made a significant step ensuring the activities required to be delivered by London Underground (LU) as part of the delivery of the new Automatic Train Control Signalling contract are achieved. C-Change calls for a coordinated approach to managing the signalling contract effectively. Each LU team that is directly or indirectly involved with the contract has formally agreed to the C-Change principles and behaviours. In particular, the standards and approvals processes have been examined and challenged in detail, making them more streamlined, modern and robust. LU is now strengthening the approach to C-Change, enabling it to encompass not just the SUP programme but the whole capital programme.

1.17 From the reviews of individual projects and supporting engagements, the IIPAG have identified several systemic issues that have been explored in detail. Reports on systemic issues are submitted to the Finance and Policy Committee for endorsement of the proposed action plans. A list of all systemic issues arising from discussions with the IIPAG, which includes senior management owners and target completion dates of each action, is maintained and progress on the actions is discussed in regular meetings between the IIPAG and the TfL Commissioner and the Chief Officers. The actions list is used as a live document and is updated as new issues are identified.

1.18 One of these systemic issues was the approach to project risk management and the control of management contingency. The IIPAG supported by IPMO undertook a review of the existing approach and a number of actions were approved by the Finance and Policy Committee in May 2011. The first action, which has been completed, was the removal of management contingency from individual project budgets and the establishment of processes that require any use of management contingency by a project to be approved by the original authorising body.

1.19 An information protocol has been produced detailing the minimum regular information that TfL will provide to enable the group to fulfil the requirements of its terms of reference. In this way, the IIPAG receives significant regular management information, in addition to review-related material, that provides an overview of progress in all areas covered by their terms of reference.

1.20 The IIPAG now attends a number of business meetings in TfL in addition to dedicated meetings with the Commissioner and Chief Officers twice a year. It meets regularly with the LU Management Team and with the Surface Transport Directors. As part of the review of large projects, it is proposed that the IIPAG will also attend project and programme boards as appropriate.

1.21 Together, the above arrangements provide the IIPAG with a number of means to form and consolidate their views and recommendations.
1.22 TfL recognises the usefulness of benchmarking as a tool to focus management action on areas for improvement. The input of the IIPAG into the refinement of the existing benchmarking processes is a positive step that enables different perspectives to be considered. The IIPAG’s role in benchmarking is unique in that its terms of reference requires the group to direct (rather than advise on) benchmarking. With the recruitment of two part-time benchmarking specialists reporting directly to the group, the IIPAG is now in a position to direct significant resources to the task. The IIPAG has proposed a structure and approach to benchmarking. The initial work is focused on a review of the current benchmarking work streams, drawing on the recently completed London Underground Benchmarking Report. This report, the first since the incorporation of Metronet and Tubelines, emphasises that benchmarking will continue to be used by management as a key tool in running the business effectively and efficiently. LU’s Benchmarking Analysis Team is working closely with the IIPAG benchmarking specialists to prioritise the work plan and structure the teams accordingly.

1.23 Alongside benchmarking, whole life asset management will continue to play a central role in driving TfL’s investment plans, ensuring that investment decisions are based on the best possible long term option. Following on from the PPP, asset management is firmly embedded in LU, which has recently achieved PAS55 accreditation from the Institute of Asset Management in recognition of its progress. Now internationally recognised, PASS55 is the British Standards Institution’s specification for optimised asset management. LU looks forward to sharing its experiences and practices in detail with the IIPAG in the coming months.

1.24 A review of value management and value engineering has been undertaken by the IIPAG in conjunction with the IPMO and TfL’s Internal Audit department. The review built upon a previous review in 2008 and an internal audit carried out in 2010. The IIPAG has made a number of significant recommendations in its report to the Finance and Policy Committee that TfL will address. In particular, TfL has developed specific training for project managers that will begin to affect the cultural changes that the IIPAG believe are required. TfL agrees with the IIPAG that processes and systems are only enablers to a value management culture and that significant change requires sponsorship at the highest level, and will take time.

1.25 The IIPAG has noted inconsistency in the approach to budget ownership and the sponsorship of projects. A review of the sponsorship arrangements across the organisation is being arranged that will complete in December 2011. This review will coordinate with London Underground’s own review of project delivery capability, which is currently underway. TfL will engage fully with the IIPAG throughout this review.
1.26 TfL acknowledges the value of the advice provided by the IIPAG. The engagement with the IIPAG on both gateway reviews of individual projects and systemic issues has progressed well since the group was established.

1.27 TfL will continue to provide the necessary support to the group to delivery its remit in accordance with the agreed terms of reference.
Dear David

Independent Investment Programme Advisory Group Annual Report for 2010/11


I am pleased to see that the engagement between TfL and IIPAG is turning out to be both challenging and productive. It is clear to me that your joint work has already borne fruit in helping to improve the delivery of TfL’s huge investment programme. The £150m-plus savings identified in the course of your work over the last year speaks for itself, as do the case studies of individual projects that have benefited from your team’s advice and experience.

IIPAG has rightly been putting TfL’s investment programme under tough scrutiny. You have raised some key issues and helped TfL to make some significant savings across the investment programme as well as improving project management.

IIPAG’s report highlights examples of good practice, where projects are being delivered on time and in some cases also with significant savings. This good practice must be spread throughout the business and I know you are working with Peter towards that end. The report also shows how over the last year TfL and IIPAG have been working together increasingly effectively to identify and tackle issues across a range of projects. I appreciate the effort that has gone in from both sides on this.

The oversight of major project reviews and the advice provided by IIPAG directly to the Finance and Policy Committee and the TfL Board has also significantly strengthened the assurance and governance that the Board can provide over the massive investments being made by TfL.
I welcome the recommendations made by IIPAG on broader systemic issues which need further serious discussion and development. I know that you already hold regular meetings between IIPAG and TfL senior management to discuss IIPAG’s findings and to agree how IIPAG recommendations are taken forward by TfL, and that these actions are tracked systematically. I will be looking at IIPAG’s work programme for 2011/12 to see how you and TfL propose to take the issues identified in the annual report forward. I propose that we meet in the early autumn to discuss this and to see how these issues are progressing.

I am confident that IIPAG’s recommendations will help TfL to become even more effective in delivering step-change improvements to our vital transport system.

Thank you and your team again for your hard work, energy and engagement on these issues. I look forward to seeing the continued results from your work in the coming months.

Yours ever,

[Signature]

Boris Johnson
Mayor of London

Cc: Rt Hon Philip Hammond MP, Secretary of State for Transport