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Office of Rail Regulation

Thameslink Programme Review

Deliverable B Report

8 May 2009

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Report to the Office of Rail Regulation

Thameslink Programme Review

The Nichols Group

May 2009

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Executive summary

Background

The Nichols Group was commissioned to undertake this review by the Office of Rail Regulation. The brief for the review was two-fold. The first aspect looked at Network Rail's plans and processes for managing and delivering its future obligations on the project. The second aspect considered the interfaces between Network Rail's plans and processes and those of other key parties. In both cases we were asked to make recommendations.

This review commenced at the same time as Key Output zero (KO0) was concluding. This was the Thameslink Programme's first major deliverable and was seen as critical in setting a positive, "can do" tone for the Programme's staff, the public and the rail industry as a whole. KO0 was delivered on time, but not without significant effort, with parties going above and beyond that which the schedule demanded.

KO0 was a valuable lesson for all Programme partners and has served to strengthen resolve and clarified that all partners are "pulling in the same direction". However, all partners recognise that Key Outputs one and two (KO1 and KO2) represent a step-change in complexity from KO0.

We hope that this review will help to meet the challenges ahead.

The Thameslink Programme

The scale of the Thameslink Programme (TLP) should not be underestimated. It is a high profile set of complex projects, which involve many key stakeholders, with major track, stations and signalling work, new rolling stock and cascades, timetable changes and franchise changes.

The TLP covers a wide geographic area and as such overlaps with multiple railway routes and operators. The central London core section is constrained in tunnels. The main driver for the Programme – meeting growth in patronage – is also its major issue: how to keep the railway operational whilst doubling its capacity. Other issues which increase complexity include the lengthy planning history, the challenge of redeveloping London Bridge station and the ability to deliver 24 trains per hour in a busy metro environment.

The TLP has been structured to deliver a phased roll-out of benefits by means of three "Key Outputs". KO0 was completed in March 2009. KO1 increases capacity to 16 trains per hour through the core section (i.e. between Blackfriars and Farringdon) and enables 12-car operation on the rest of the Thameslink network. KO2 relates to increasing capacity through London Bridge Station to support the reliable operation of 24 trains per hour.

Our approach

This study, conducted over a two month period, has involved meeting key individuals within the TLP Programme partners, that is, DfT, Network Rail, TOCs and London Underground to discuss their TLP processes and plans. We have reviewed 54 key project documents received from ORR, DfT and Network Rail. We have not conducted any review of the safety arrangements or cost estimates of TLP.

During the period of our study the TLP has successfully delivered KO0 and has begun KO1. It is important to note that the Programme is changing. Even during the short time that has elapsed for this review, we have seen several changes, some structural, some more minor, which we believe speaks favourably of a culture that is willing to embrace change where it is necessary and justified. This is a vital characteristic for successful delivery.

Key findings

KO2 and London Bridge Station

This is arguably the major cause for concern across all elements of the TLP and poses a key risk to deliverability. There are two critical TLP reviews happening in summer 2009 – the Office of Government Commerce (OGC) Gateway Zero and Major Projects Review Group (MPRG) – and without a better articulation of a compliant solution for London Bridge station, KO2 is at risk.

Visibility

Much excellent work is being done by TLP teams in all Programme partners. However a criticism, most commonly levelled at Network Rail, has been the lack of visibility of their activities, plans and processes. This has raised issues between partners and, in particular, has led to a pervading lack of confidence in Network Rail's ability to deliver.

Timely decision making

The timescales for planning and construction are challenging, the issues diverse and the stakeholders numerous. These factors all combine to highlight the critical importance of robust and more rapid decision making for the TLP.

Programme partner culture

Behaviours, processes and plans need to be more collaborative, smoother and more focussed respectively.

An Integrated approach

A common theme running through the review was the lack of an integrated Programme-level approach to key activities.

Recommendations

We make the following recommendations for action and state to which organisation they apply: in many cases they apply to more than one.

No	Recommendation description	Proposed responsibility
	Section 2 – Programme baseline	
1.	Remind Programme partners of the key components of the business case.	DfT
2.	Review and agree the integrity and completeness of the Programme requirements.	DfT/NR
3.	Review and agree the process for re-baselining the Programme.	DfT/NR
	Section 3 – Governance	
4.	For each tier and meeting, re-affirm terms of reference and the roles and responsibilities for the attendees.	TLP
5.	Network Rail and DfT should consider revisions to Protocol in order to maximise its value.	DfT/NR
	Section 4 – Network Rail's Project Delivery	
6.	Adopt a consistent approach for reporting progress to Programme partners.	NR
7.	Extend the existing processes to identify the correct type, level and calibre of resources.	NR
8.	Provide greater assurance to DfT regarding how it will secure value for money and management of any overspend.	NR

No	Recommendation description	Proposed responsibility
	Section 5 – Programme management	
9.	Consider options to integrate the programme management function more thoroughly.	DfT/NR
	Section 6 – Collaboration and stakeholders	
10.	Encourage Programme partners to improve transparency of their plans and processes	DfT/NR/TOCs
11.	Network Rail needs to modify its management approach to DfT and TOCs and view them as Programme partners in delivery and not just as stakeholders.	NR
12.	Review the terms of reference for the TLP Communications Group to identify and map stakeholders, in order to make sure there are no gaps and that a strategic TLP-wide approach is maintained.	DfT/NR
	Section 7 – Integration	
13.	Trial the SIA immediately, identifying and agreeing success criteria and review points and ensuring clear definitions of roles and accountabilities.	DfT/NR/TOCs
14.	SIA to create and maintain an Integration Framework Document.	SIA
	Section 8 – Risk	
15.	Network Rail should follow its processes for risk management ensuring that risk registers are kept current for KO2.	NR
16.	Ensure clarity on the allocation and use of contingency budgets.	DfT/NR

Conclusion

In regard to Network Rail's plans and processes, we conclude that the basic structures for good project management are in place and are sound, that is, cost-loaded schedules, risk management, earned value management and stakeholder identification processes.

Interfaces between Network Rail's plans and processes and those of other key parties would benefit from being more open and transparent. Greater visibility of each others' plans, processes and progress will assist the Programme partners to meet the challenges ahead. In particular, Network Rail should fully involve Programme partners as *partners in delivery*, whilst still engaging other stakeholders in the planning of its remaining TLP commitments.

KO2 requires a specific focus to achieve an agreed, compliant solution within the timescales that the schedule allows. This is an immense challenge that needs the highest calibre of resource and support applied to it. Without a satisfactory resolution to KO2 and London Bridge the TLP is not deliverable within its current cost-quality-time parameters and will not meet its current objectives.

We believe that the interfaces between the partner organisations need to be integrated at an overall Programme level such that a unified approach is taken to key activities, for example, stakeholder management, risk mitigation and programme progress.

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Contents

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1. Introduction

1.1 Terms of reference

The Office of Rail Regulation (ORR) commissioned the Nichols Group to undertake a review of Network Rail's plans and processes for managing its future Thameslink work.

The agreed terms of reference were:

1. to review Network Rail's plans and processes for managing and delivering its future obligations on the project, identify where these are fit for purpose, and make robust recommendations in areas, which could be improved

2. to review the interfaces between Network Rail's plans and processes and the plans and processes of other key parties and to make recommendations.

The scope of work does not include reviewing Network Rail's performance on its works to date unless this is found to be particularly relevant in terms of lessons learnt. The scope of work also does not include a detailed review of Network Rail's forecast costs.

The main findings and recommendations of our review are set out in this report.

1.2 Programme context

The Thameslink Programme (TLP) is an extremely complex programme operating in an equally complex environment. The operational, engineering and construction challenges are significant in their own right and each inter-relate and must integrate. Further, there is a range of internal and external stakeholders who must be considered and consulted. The main Programme partners are Department for Transport (DfT), Network Rail, Transport for London (TfL) and three mainline train operating companies (TOCs). Where there are interfaces with its network, London Underground (LU) also plays a key role.

DfT oversee the delivery of the Network Rail Programme via the Protocol, which is a bi-lateral agreement between DfT and Network Rail. The Protocol is unique to the TLP

The TLP has a high profile within political, rail industry and public sectors and hence there are high expectations that need to be managed. In addition, the TLP has had a lengthy history during which its scope has been necessarily modified, such as to secure Transport and Works Act (TWA) Order consent. This accumulated history adds another dimension of complexity.

Current capability

The current Thameslink route has significant capacity constraints since it is restricted to trains of a maximum 8-car length and the route has numerous junction bottlenecks, which severely restrict the frequency of service that can be operated through the central London core section. The purpose of the TLP is to remove these constraints and provide a step change in capacity for the route thus providing significant congestion relief and capacity for future growth in passenger demand.

Objectives and future aspirations

The new Thameslink service will operate 12-car trains and up to 24 trains per hour (tph) through the central London core section between St Pancras International and Blackfriars, in each direction. This will provide inner and outer urban services to destinations to the north of London on the Midland and East Coast Main Lines and via London Bridge and Elephant and Castle to destinations to the south of London on the Brighton Main Line and other routes in Kent, Surrey and Sussex.

The stated primary objectives of the TLP are to:

- reduce overcrowding on Thameslink and other London commuter services
- reduce overcrowding on the London Underground network
- reduce the need for interchange between mainline and underground train services
- provide for the introduction of new cross-London services in order to improve public transport accessibility in South-East England, including access to areas of expected demand growth such as the London Bridge area, Docklands, the land adjacent to King's Cross/St Pancras Stations and London's airports
- facilitate the dispersal of passengers from St Pancras station.

Thameslink Programme elements

The DfT TLP comprises three key elements:

- Network Rail will undertake major infrastructure works to accommodate 12-car trains and remove key capacity bottlenecks (this is known as the NR Programme)
- DfT will specify and procure new rolling stock

- DfT will manage changes to existing, and letting of new, railway franchises to accommodate the revised Thameslink services.

Key outputs

The TLP has been structured to deliver a phased roll-out of benefits by means of three "Key Outputs". At the time of review, the Programme has completed Key Output Zero (KO0), which included:

- establishment of new routes and timetable established for Southeastern Railway's destinations in South-East London and Kent with First Capital Connect stations
- closure of the branch line from Farringdon to Moorgate to passenger service
- closure of Platforms 1-3 at Blackfriars with all services running through Platforms 4 and 5.

Key Output 1 (KO1) relates to increasing capacity from the north of London as well as an increase in the capacity of the core section (i.e. between Blackfriars and Farringdon) up to 16 train paths per hour by December 2011. This requires 12-car capability and completion of associated works at Blackfriars, Farringdon and a number of stations to the north and south of London.

Key Output 2 (KO2) relates to increasing capacity through London Bridge Station to support the reliable operation of 24 trains per hour through the core section by December 2015. This requires the remodelling of London Bridge Station, 4-tracking to the north of the station, a new viaduct near Borough Market and major railway systems changes, such as signalling.

Rolling stock

New trains are being procured by DfT from Bombardier to support the 12-car operation scheduled for KO1 in 2011.

Between 2012 and 2015 the trains will increase from 8-car to 12-car and also there will be an increase to 16 trains per hour through central London enabling the capacity issues to be improved significantly.

A contract will be awarded to a train manufacturer to deliver 12-car trains that provide higher capacity and improved performance and energy efficiencies for 2015 and facilitate 24 trains per hour through Central London.

For KO2, 300 4-car units will be needed to run 24 trains per hour operation. The new trains must allow for swift passenger egress and access and be compatible with future signalling technology such as Automatic Train Operation (ATO).

Franchises

Current franchisees are Southern, Southeastern and First Capital Connect (FCC). These franchises are due to end in 2009, 2014 and 2015[1] respectively.

On the completion of TLP, a franchise will be awarded that will incorporate all the routes within the programme. This will need a policy change from DfT to enable this to take place, as it has an impact on the South Central and Southeastern franchises.

1.3 Background to this review

The ORR's periodic review determination ('Determination of Network Rail's outputs and funding for 2009-14', published October 2008) provides Network Rail with £2.7bn of funding in the current control period (CP4) for its work on the TLP. This is the largest single provision for any project.

The ORR is responsible for holding Network Rail to account and, specifically, for monitoring the delivery of its obligations on enhancement projects. The ORR's approach is forward looking to decide if Network Rail is likely to deliver on its obligations and to provide assurance to customers and funders. Within the TLP, Network Rail and its Programme partners have already achieved successful delivery of KO0. It is believed that this is an appropriate time to take stock and review whether Network Rail has the plans and processes in place to deliver its remaining obligations in respect of KO1 and KO2, and how these will be integrated with the wider programme.

1.4 Our approach

Our review was conducted in two parts. In the first part, we gained an understanding of the size, shape and complexity of Network Rail's future Thameslink work and gained an appreciation of their approach to delivering that work. In the second part of our review, we conducted a detailed review of specific aspects associated with the management of the Programme. We also held a series of internal Nichols workshops to discuss our findings and develop recommendations to support the successful delivery of KO1 and KO2.

[1] FCC franchise is 5 years to 2011 with a 2 year extension to 2013 and then an opportunity for another 2 years to 2015.

Over the course of the review, we interviewed key people from the Programme partners and reviewed key documents. These are detailed in Appendices A and B respectively.

Our review of the TLP was based on our generic programme/project review methodology. In summary, the process includes:

- consolidating and reviewing data
- holding meetings and interviews with key players
- analysing findings from data review and meetings/interviews
- testing and validating conclusions from analysis
- forming recommendations
- producing report.

Our methodology is summarised in Figure 1 below.

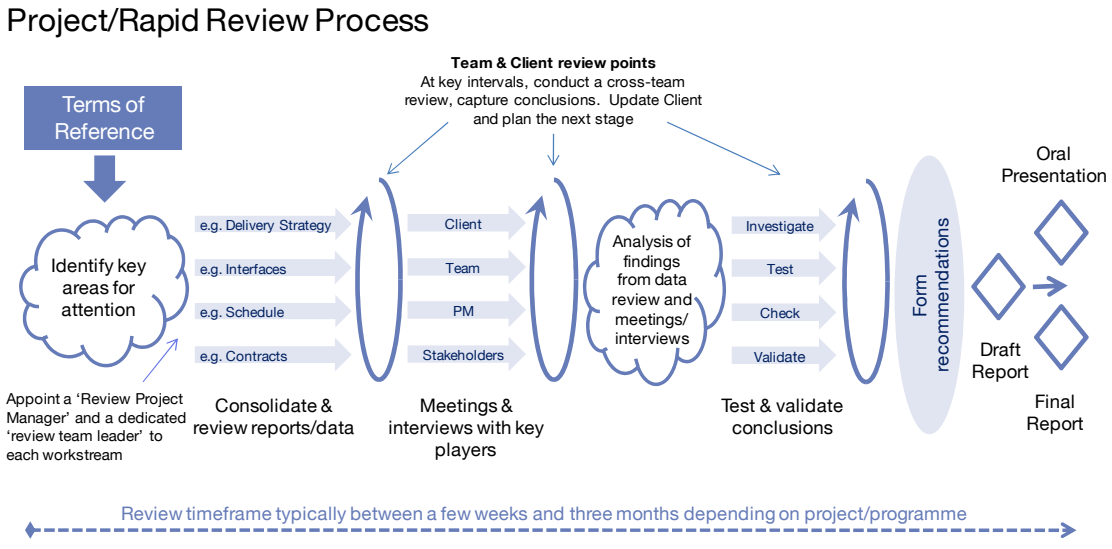

Figure 1: The Nichols Project/Rapid Review Process

1.5 Structure of the report

Through our analysis, we have grouped our findings under the following headings, each of which forms a section of the report:

- programme baseline
- governance

- Network Rail's project delivery
- programme management
- collaboration and stakeholders
- integration
- risk.

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2. Programme baseline

2.1 Introduction

This section deals with issues around the strategic case for TLP, the Programme's baseline and requirements.

The baseline is derived from the strategic case, the detail of which is contained within the Business Case document. This is owned and managed by DfT, on behalf of the Secretary of State. The original TLP Business Case was produced in 2006 by Atkins on DfT's behalf. It is continually updated: the last iteration was in February 2009. The document has not been made available to the TLP Review team as it contains sensitive commercial information.

The Protocol, at Clause 5.1, introduces the concept of Network Rail's Baseline Programme Plan which sets out how Network Rail will deliver the infrastructure element of the Client Requirements. It states, at Clause 7.9, that DfT owns an "integrated plan", which co-ordinates the outputs of the three elements of the Programme. Network Rail is instructed, at Clause 8.5, to compile and co-ordinate an integrated DfT TLP plan. This should include information on all three elements and identify where action is required to achieve compatibility.

DfT has established its Client Requirements as well as a Train Service Specification (TSS). Network Rail has established a database called 'TReqS' in which it maintains a requirements hierarchy for the infrastructure.

2.2 What we would expect to see

The business case should clearly demonstrate the strategic case for the project, and its *raison d'être*. It provides the framework for planning and management. The business case should be supported by relevant and realistic information to provide a reliable basis for decision-making.

The baseline is a defined point in a project's lifecycle at which the position on scope, cost, schedule, project execution and control activities is fixed. The baseline documentation comprises the scope, a schedule to deliver that scope, a budget for achieving it and a process for reviewing it. Having this in place enables the Programme to be measured, controlled and monitored. For major programmes, we would expect there to be a need to re-baseline more than once.

Requirements are a statement of the project's needs and should be comprehensive, well-structured, clear, traceable and testable. We would expect them to be used as the baseline for change control and provide the basis against which the TLP's success can be quantified.

Figure 2 demonstrates some typical interrelationships that exist between Programme elements and how changes to one element's requirements could impact on the others. For example, a change to the signalling design may have an impact on rolling stock design and its procurement and ultimately may impact on the overall Programme objectives. Good requirements management ensures that all of the relationships are established, understood and maintained so that the impact of changes anywhere in the hierarchy can be analysed and the resulting change managed.

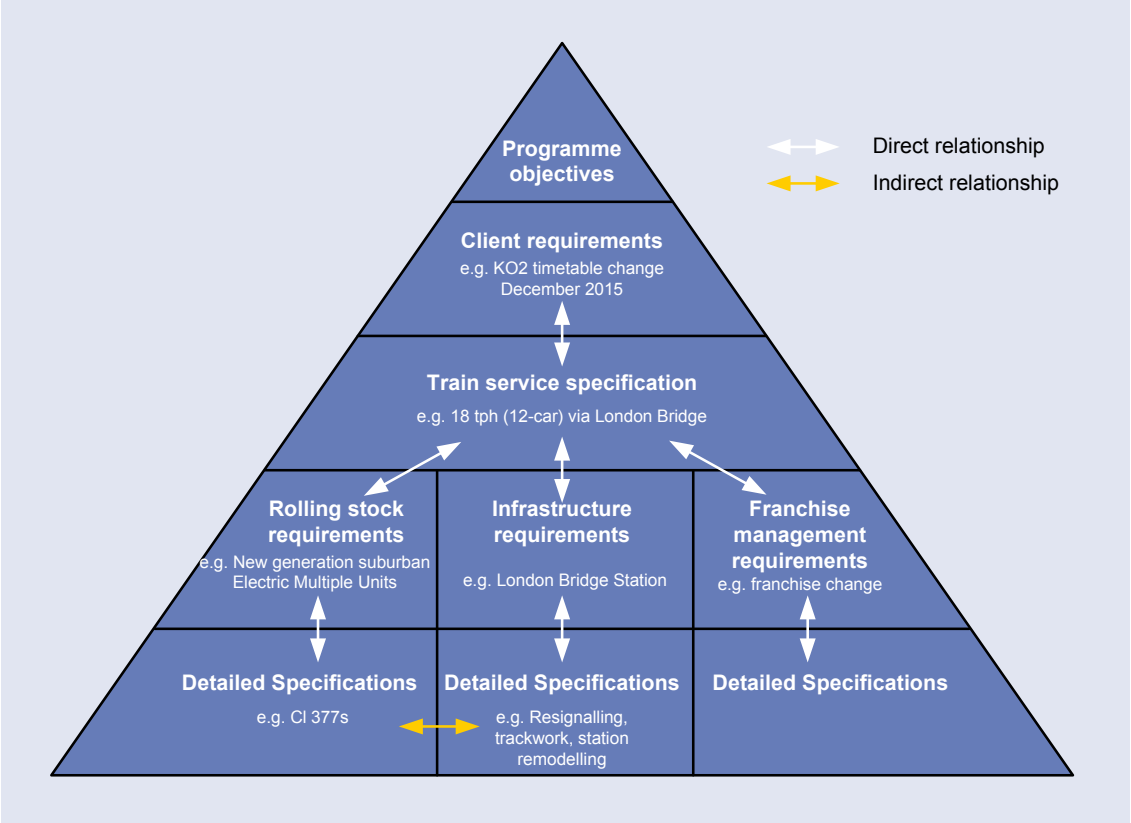

Figure 2: Hierarchy of Programme requirements

2.3 Key findings

These can be summarised as:

3. Programme partners do not have a sufficient awareness of the key components of the business case, such as success criteria and assumptions.

4. Whilst there is an integrated *plan* (schedule), there does not appear to be a Programme-level *baseline*. Further work is required to produce and maintain a baseline for the Programme as a whole.

5. There is no hierarchy of requirements to link the infrastructure, rolling stock and franchise elements together at the Programme-level.

The strategic case for Thameslink

DfT has informed us that the Business Case documentation covers fundamental issues such as cost-benefit analysis, value for money and affordability metrics as well as a WebTAG[2] assessment. In addition, it contains a Wider Economic and Agglomeration benefits analysis. The Business Case for TLP is subject to the Government's OGC Gateway review process; OGC Gateway zero review commences in May 2009. The TLP has been designated as a Major Project by the Treasury and is thus subject to Major Projects Review Group (MPRG) reviews at key points, the first of which is in June 2009.

From interviews with Network Rail and TOCs, we conclude that the key components from the Business Case are not understood consistently by all Programme partners, for example, the success criteria.

2.4 The Programme baseline

It is important to make a distinction between the baseline for the Programme and the Network Rail Baseline Programme Plan which, as defined in the Protocol[3], describes how Network Rail will deliver the infrastructure elements.

The baseline scope is set out in DfT's Client Requirements, the Protocol and the TSS. The baseline schedule is established in the integrated DfT TLP plan. The baseline budgets for the Network Rail Programme are set out in the Protocol. A change process is set out in the Protocol.

Hierarchy of Programme requirements

DfT's Client Requirements document sets out, at the highest level, DfT's high-level requirements for the Programme e.g. TSS, network performance, passenger demand etc.

The Network Rail TReqS database establishes requirements management for the infrastructure works. The database links 'DfT requirements' to detailed infrastructure project specifications via the Functional Specification. This hierarchy also establishes links with:

- TWA Inquiry commitments

[2] The DfT's web-based Transport Appraisal Guidance

[3] Thameslink Network Rail Programme Protocol v1.0, section 8

- planning conditions and consents
- Railway Group Standards
- Network Rail Standards
- external interfaces.

There are critical programme-level linkages between DfT's Client Requirements and the three elements of the Programme. However the processes of how these are managed and the traceability of changes are not visible to us. Consequently, it is not clear how consistency between the key programme requirements and documentation is being maintained. For example, the Functional Specification is not currently aligned with the TSS being progressed by Network Rail.

2.5 Recommendations

We make the following recommendations:

1. Remind Programme partners of the key components of the Business Case.

Notwithstanding any commercial sensitivity, we recommend the production of a summary of the key components from the business case - vision, objectives, success criteria and expected benefits. This will provide a platform for consistent, effective communication and will promote better understanding and thus ownership of the overall Programme.

This business case summary document should demonstrate the critical linkages between the three elements of the TLP. This will facilitate understanding of the whole industry costs and benefits of the Programme and encourage a closer team structure.

We recommend holding a 'watching brief' over the document with regular reports to the TLP Board. This will have the dual advantage of promoting greater commitment to the Programme and will assist DfT to prepare for Treasury reviews of the Programme.

2. Review and agree the integrity and completeness of the Programme requirements.

In our experience, this hierarchy should demonstrate how high-level objectives are linked to detailed work packages. These links should be traceable and quantifiable. By doing this, changes and conflicts between requirements and other documents can be quickly analysed, managed and resolved. We note that DfT's view is that the requirements are already broken down to the level necessary, but we recommend linkages and traceability is improved.

3. Review and agree the process for re-baselining the Programme.

The purpose of this is to ensure that changes to scope, budget and schedule are captured, agreed and consequent impacts understood across the Programme. We expect this to be maintained throughout the programme lifecycle through change management processes and configuration control. Currently the process is too slow and poorly defined, for example, we have seen different versions of the TSS being referred to by Network Rail, DfT and the TOCs. Addressing this recommendation will minimise the confusion caused from working on a baseline in flux and it will enable better monitoring of what progress is being made in the Programme as a whole.

3. Governance

3.1 Introduction

There are three co-existing governance arrangements (see Figure 3) relating to:

1. the delivery and integration aspects of TLP
2. the Network Rail Programme
3. the management of franchises and procurement of variations, which is overseen by DfT.

This section deals with the first two. Franchise management is outside the scope of this review.

All Programme partners recognise the need for strong programme governance to help manage the challenges of KO1 and KO2. Delivery and integration are managed via a 4-tier meeting structure, headed by the Thameslink Programme Board (TPB), working within agreed terms of reference. The governance structure for delivery and integration is presently under review by Network Rail and DfT in recognition of the challenges that lie ahead and reacting to the lessons learnt so far.

DfT oversee the delivery of the Network Rail Programme via the Protocol, which is a bi-lateral agreement between DfT and Network Rail. The Protocol is unique to the TLP[4]. The Protocol sets out:

- the contents of the Network Rail Baseline Programme Plan and how the Network Rail Programme will be delivered
- roles and responsibilities for DfT, Network Rail and the ORR
- pain/gain sharing incentivisation arrangements between DfT and Network Rail.

[4] Although we note that the Thameslink Protocol was used as the basis for the agreement being developed for use on Crossrail.

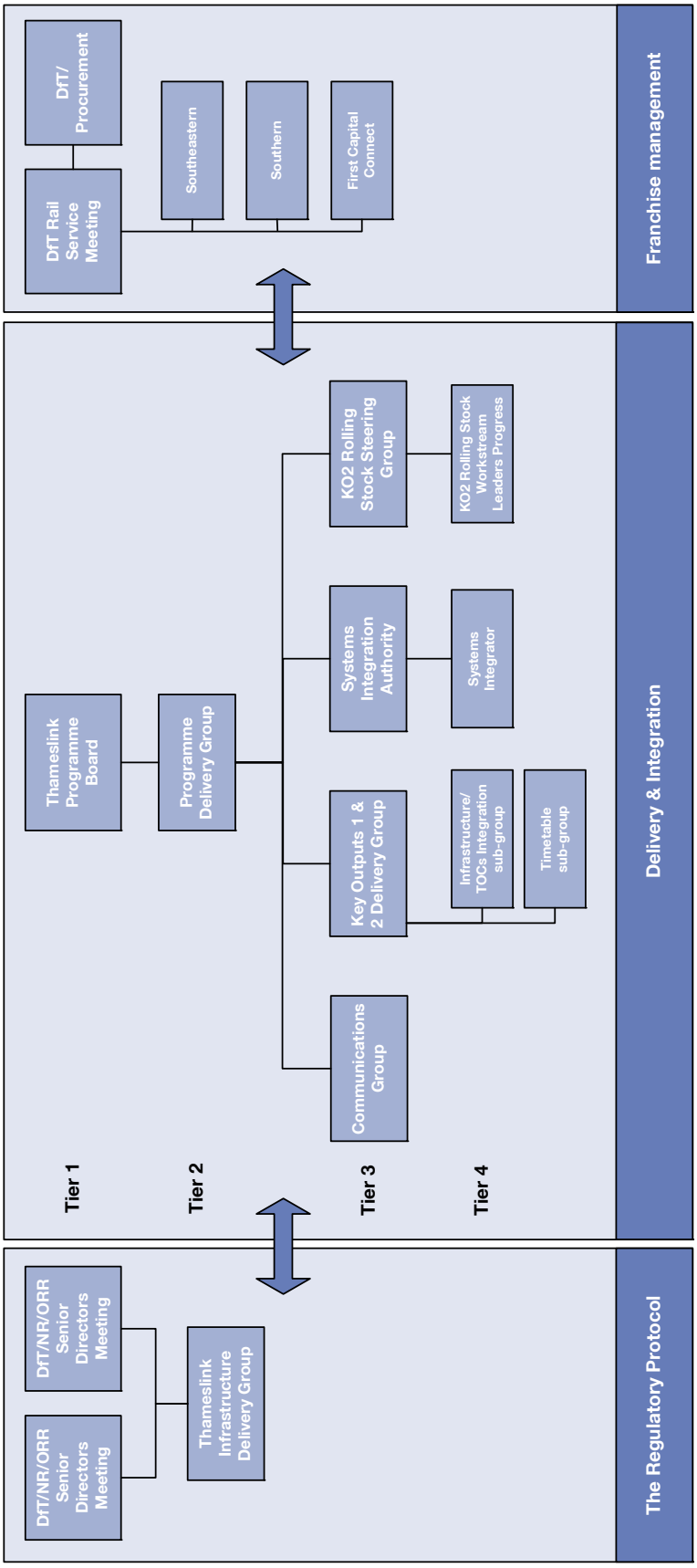

Figure 3: The TLP co-existing governance arrangements

3.2 What we would expect to see

The TLP's multi-stakeholder programme demands a governance structure that establishes a strong chain of accountability from the client through to the delivery agents and key stakeholders. It must facilitate consensus-building, promote good information flow and aid swift and timely decision-making.

In our experience, good governance on a major programme should exhibit the following characteristics:

- a board with overall responsibility for the Programme
- an empowered hierarchy that escalates risks and issues, facilitates timely and sound decision making, integrates all aspects of the Programme and provides assurance
- clear roles, responsibilities and performance criteria throughout the governance hierarchy
- disciplined governance arrangements for attendance, agenda and supporting papers
- representation from Programme partners with the competence, authority and supporting resources to enable sound and timely decisions
- a culture of improvement, collaboration and consensus building enabling frank internal disclosure of project information.

3.3 Key findings

Our key findings are:

1. the overarching governance arrangements are generally sound and understood by all Programme partners although we have found some issues with implementation; these arrangements are being refined
2. the Protocol is a useful programme document and its role could be strengthened.

Current governance arrangements

The current governance arrangements are broadly sound and the terms of reference are clear. The Programme partners demonstrate a shared understanding of those arrangements and the terms of reference. However, through discussions with Programme partners, we have identified issues specific to the delivery and integration governance:

- the degree to which terms of reference are being followed

- its administration and support, such as the provision of agenda and timeliness of papers, could be improved
- although maturing, the relationships do not yet support the required collaborative and partnering culture. In part, this stems from a lack of visibility of Network Rail's plans and processes for delivering its Thameslink commitments.

Presently, DfT and Network Rail are in discussion about how to improve the governance arrangements. Key changes under discussion include strengthening the role of the TLP Board.

Thameslink Programme Board (TPB)

The existing terms of reference are adequate in respect of their purpose and required seniority of membership. From our interviews, we conclude that the TPB meetings would benefit from more closely reflecting the terms of reference. Specifically, the TPB should:

- adopt a more strategic focus, such as reviewing overall programme-level progress and the deliverability of key outputs[5]
- be attended by senior directors from all the Programme partners
- receive, in advance, a structured agenda and papers on material issues requiring programme-level discussions and decisions.

The Programme Delivery Group (PDG)

The PDG has established itself as the key forum for progress review and decision-making and seems to be working well. Through our interviews, we learnt that Programme partners agree that the group was very focused on KO0 at the expense of a more medium- to long-term view. Whilst this was a key determinant in the successful delivery of KO0, such an approach will not be adequate for the more challenging KO1 and KO2.

The Protocol

Further value can be gained from the Protocol thus:

- increase the degree to which it can influence Programme Partners' performance and behaviour on TLP; this from both a DfT and Network Rail perspective
- consider enhancing the pain/gain arrangements to further motivate and incentivise Network Rail

[5] TLP Terms of Reference document (v2.1)

- using it to manage change to the TLP or its context.

3.4 Recommendations

We make the following recommendations:

4. **For each tier and meeting, re-affirm terms of reference and the roles and responsibilities for the attendees.**

It would be opportune to do this at the same time as the governance structure review. It is important to ensure that the right people attend and are empowered to make decisions at the meetings. The governance meetings are a prime opportunity, and should be used as such, for Programme partners to be more open about plans and to build consensus and commitment around those plans. The operation of the new governance structure should be reviewed after six months.

Consideration should be given to strengthening the role of the TPB by making it a true *board*, that is, a formal decision-making authority. This could be achieved by having an agreed schedule for decisions on key issues. This would have the advantage of facilitating timely and efficient decision-making, which is key to TLP success.

5. **Network Rail and DfT should consider revisions to the Protocol in order to maximise its value.**

As the Programme moves into a new phase, we believe there is merit in considering a further development of the Protocol to re-focus it on the new challenges of delivering KO 1 and 2. This review should ensure the Protocol remains a relevant and effective document but not distract attention from the main goal of delivering the TLP. Specific areas we highlight are:

- addition of key performance indicators (KPIs), for example, turnaround times for documents in the change control process
- to aid reference, it would be useful to see reference documents incorporated into one document.

We believe comparison with the Crossrail Project Development Agreement will be a useful exercise: http://www.dft.gov.uk/pgr/rail/pi/crossrail/fundingandgovernance/pda.pdf as this goes into a greater level of detail.

4. Network Rail's Project Delivery

4.1 Introduction

This section covers the plans and processes that Network Rail have in place to deliver its future obligations on the TLP. This includes scheduling, progress reporting, cost and budget management, change management and resource plans. Risk is covered in section 8 of this report.

Network Rail produces a Period Management Report on a four-weekly basis, which is used to update DfT. This uses a 'dashboard approach' to present information on progress against schedule, achievement of milestones, cost trends, update on consents, earned value, change management and health and safety metrics. It is currently under review and a shorter report is planned for use in future.

Network Rail produces two types of Programme-wide schedule: one at a detailed work package level; the other at a one-page summary level. The planning and scheduling for KO1 is at a more detailed level than that available for KO2, reflecting the fact that KO1 has started.

The ORR's periodic review determination ('Determination of Network Rail's outputs and funding for 2009-14', published October 2008) provides Network Rail with £2.7bn of funding in the next control period (CP4) for its work on the TLP. The overall budget for TLP is £3.55bn.

Network Rail's CP4 Delivery Plan 2009 Deliverability Assessment outlined its resourcing requirements for the current regulatory period, including that required for TLP.

4.2 What we would expect to see

We would expect to see comprehensive reporting of progress against scope, schedule, cost and budgets including any value management, safety and risks.

For all major projects, there are key resource pinchpoints and there will be competition for certain critical resources; in the rail industry, signalling is a common resource constraint. For this reason, we expect to see a resource plan for the Programme and how that fits within Network Rail's portfolio. This in turn must be cognisant of wider rail industry supply issues.

The criticality of KO2 to the overall success of TLP cannot be overstated. Treasury MPRG reviews this summer will demand an articulation of a deliverable and affordable solution, which currently does not exist.

4.3 Key findings

Our key findings are:

1. the Period Management Report is comprehensive but onerous and is being revised to make it a more effective management tool
2. an examination of the schedule provided to us for KO1[6] has concluded that it does not appear to reflect best practice planning and scheduling techniques
3. Network Rail has not articulated a compliant solution for KO2 and London Bridge station. Plans that are emerging look challenging, costly and disruptive. The MPRG and OGC Gateway reviews will undoubtedly view this as a key risk to the TLP
4. the Business Management Report for Period 12 reports that costs are escalating and there is already contingency drawdown
5. critical resources have been identified and processes are underway within Network Rail to secure them.

Reporting

The Period Management Report is a comprehensive document covering the key areas necessary for good reporting. However, both DfT and Network Rail agree that it is too onerous. That is, there is too much information from which it is difficult to extract key messages. At the same time, the management reports are not sent out sufficiently in advance to enable informed discussion.

To this end, Network Rail is reviewing this report with a view to producing a more succinct document for Period 1 of 2009/10. We have viewed the proposed shortened version and believe this demonstrates a marked improvement.

Additionally, we believe its continued efficacy should be monitored and constructive feedback encouraged.

[6] Thameslink Programme Key Output 1 Industry Plan Doc Ref: N000-01000-NRT-PLN-PC-00002

Planning and scheduling

Currently, a detailed schedule exists for KO1 but not for KO2, where plans are still emerging. At a high level, Network Rail intends to have greater clarity on its plans for KO2 and its solution for London Bridge Station by June 2009 and a preferred option at GRIP 3 level by December 2009. As a result, we have not been able to review Network Rail's schedules for KO2.

The KO1 schedule that we reviewed[7] does not:

- clearly reflect the work breakdown structure
- link the activities to describe a logical flow for work delivery
- identify milestones or constraints
- define the critical paths and float.

However, the detailed programme metrics (SPI, CPI, EV, COWD) contained within the Period Management Report suggests a schedule with a much greater level of detail exists. We have not seen it, nor conducted any analysis of it.

Key outputs

There is general acknowledgement that KO0 occupied the focus of the Programme partners thus diverting attention from KO1 and KO2.

There is a general feeling among Programme partners that KO1 is deliverable, but there are concerns over the costs of that delivery. However, there is not the same degree of confidence in the overall deliverability of KO2, where Network Rail's plans are still emerging. Neither DfT nor the TOCs share Network Rail's confidence in these outline plans.

The work at London Bridge Station entails huge construction, technical and operational complexity, which arguably has never been faced before. The critical issue is that Network Rail has yet to demonstrate a viable solution that can be delivered within time and cost constraints. There are two critical TLP reviews happening in summer 2009 – the OGC Gateway Zero and MPRG – and without a better articulation of a compliant solution for London Bridge station, KO2 is at risk.

There is insufficient evidence to judge whether Network Rail can deliver KO2 and therefore it must be considered to be a risk to the TLP. However, there are positive signs that Network

[7] Thameslink Programme Key Output 1 Industry Plan Doc Ref: N000-01000-NRT-PLN-PC-00002

Rail is shifting its focus to KO2, for example, it has appointed a programme director for KO2 and commenced engagement with TOCs. Nevertheless, specific concerns remain around:

- the lack of a deliverable option, within budget
- the schedule for reaching GRIP 3 by the end 2009 for London Bridge Station, which appears very challenging
- the step-change in complexity of KO2, and particularly London Bridge Station.

Cost management

A high-level review of Network Rail's Period Management Reports shows that costs and budgets are being tracked against work done and value achieved (via Earned Value Management). However, a similar review of the Period 12 Business Management Plan would indicate that project costs in KO1 and KO2 are escalating and there is already contingency drawdown.

Critical resources

Network Rail's CP4 Delivery Plan 2009 Deliverability Assessment outlined its high-level resourcing requirements for the next regulatory period, including those required for TLP. However, we have not been provided with sufficient information to be able to ascertain its detailed plans for delivering the TLP.

Notwithstanding that, we understand that Network Rail has undertaken a number of activities to resource the TLP, including:

- making efforts to secure the right people for the TLP senior management team
- strengthening the senior delivery team, including the appointment of a programme director for KO2
- resource planning for critical signalling resources is underway.

4.4 Recommendations

We make the following recommendations:

6. Adopt a consistent approach for reporting progress to Programme partners.

This recommendation seeks to:

- enable Programme partners to gain quickly a strategic view of Programme progress, risks and issues
- demonstrate how the various schedules interface, that is, the one-page summary, the Industry Plan and the schedule that drives the Management Reports
- clarify the role that the schedules perform, that is, are they a snapshot in time, or are they truly linked to real time events, showing consequent slippage and to whom are they are directed
- consider creating a one-page schedule summary for TPB and a more detailed report, showing linkages, to PDG.

The advantage of this recommendation will be to provide Programme partners with a better sense of schedule progress, risks and inter-relationships and thus increase confidence levels in the overall deliverability of KO1 and TLP. The same approach should be adopted for the KO2 schedule.

7. Network Rail to extend the existing processes to identify the correct type, level and calibre of resources.

This approach is particularly relevant to resources in short supply such as signallers, electrification engineers and project management capability. The approach should be applied to KO2 to meet the unique set of challenges it presents. Of critical importance is to ensure that these staff are appropriately secured for TLP and priorities across Network Rail's business are discussed with DfT and structured accordingly.

8. Network Rail should provide greater assurance to DfT regarding how it will secure value for money and management of any overspend.

This should be achieved by improving visibility and transparency of:

- its value management/value engineering activities on KO1 and KO2
- how decisions are being taken to secure best value for money for the rail industry as a whole
- its process to manage potential overspend.

5. Programme management

5.1 Introduction

This section relates to the overall programme management of the TLP.

Programme management responsibility is shared by DfT and Network Rail. DfT manages the DfT Thameslink Programme[8] and owns the integrated DfT Thameslink Programme plan[9], which Network Rail compiles and co-ordinates. Network Rail also identifies where action is required to secure compatibility between the three elements.

The TLP interfaces with the rail industry's 'business as usual' projects within HLOS and CP4 and the resourcing of all of these needs to be co-ordinated. Similar issues will exist moving forward into CP5.

5.2 What we would expect to see

The objective of programme management is distinct from project management, as it co-ordinates and integrates the management of the constituent projects and business as usual activities. For example, in the case of TLP, specific elements include rolling stock procurement and platform lengthening, whereas business as usual includes track renewals and maintenance activities.

The programme management role is extremely powerful and has wide-ranging responsibilities[10]:

- ability to accelerate, decelerate, re-define, terminate and initiate projects
- managing interdependencies and conflicts between projects and business as usual, for example resourcing
- managing risks, issues, and change and exploiting opportunities
- defining and realising the strategic benefits.

[8] Protocol clause 1.1.2

[9] Protocol clause 7.9

[10] Adapted from the Association for Project Management Book of Knowledge version 5

5.3 Key findings

Our key findings are:

1. overall programme management for the TLP is shared by DfT and Network Rail, which blurs accountabilities
2. key interfaces with other CP4 and HLOS projects need to be identified and optimised to secure best value whole industry cost.

Programme management

Programme management activities are shared by DfT and Network Rail, which blurs accountabilities. The following activities are all variously being done within TLP, but it is not clear to us where these roles are brought together to form an integrated Programme-level view of TLP.

- systems integration
- stakeholder management and communications
- change and configuration management
- programme assurance
- requirements management
- risk and issue management.

TLP interfaces with CP4 and CP5

Whilst the Programme partners are aware of issues around interfaces with other projects, plans to manage these are still being developed by Network Rail.

There is vital synergy between the TLP and other railway projects such as other CP4 and HLOS commitments. For example, scheduling the platform extensions in the outer areas ahead of the London Bridge station works, would allow fewer and longer trains to run. Fewer and longer trains would allow more flexibility for the remodelling of London Bridge station.

The TLP is not due to complete until 2015. This means that there is a funding and resourcing dependency on the CP5 settlement.

5.4 Recommendations

We make the following recommendation:

9. Consider options to integrate the programme management function more thoroughly.

We believe the management of the TLP should be integrated and this role undertaken by a single body acting across the programme. The benefits of this approach over maintaining the status quo have been set out earlier in this section.

Five suggested options to improve programme management are as follows:

- maintain the status quo
- programme management by DfT
- programme management by Network Rail
- independent third party programme manager management body
- programme management by a team constituted from the Programme partners, that is, DfT, NR, and TOCs.

The choice of the option to adopt will have to consider:

- costs of and time required to make the necessary changes, for example, contract a third-party
- the availability of resources levels and competencies within the Programme partner organisations
- the scale of the change and its potential impact on baseline schedules and existing relationships, particularly if bringing in a new party.

We recommend that the final option is implemented, that is, programme management by a team constituted from the Programme partners. This would replicate the TLP's Systems Integration Authority (SIA) integration model discussed in section 7 – Integration, so that the programme management is provided by a clearly identified and empowered team composed from the Programme partners. This would maximise the benefit from the existing experience and knowledge of the Programme partners, avoid the learning curve required by a third party, clarify accountability and ownership, as well as improve relationships through increased collaboration, teamwork and buy-in across all Programme partners.

6. Collaboration and stakeholders

6.1 Introduction

This section covers two key areas of the TLP. First, it considers the relationships between the Programme partners, how they are developing and where they may need to improve. Second, it considers the effectiveness of Network Rail's stakeholder management and the ownership of Programme-level stakeholder management.

In general, all Programme partners agree that relationships between them are improving and are focused on making the TLP a success. The level of trust between Programme partners has improved as a result of KO0. There is awareness that efforts must be augmented to manage the challenges of KO1 and KO2 through increased collaboration and partnership.

Network Rail has a comprehensive stakeholder management process in place although we have not reviewed its effectiveness. The TLP Communications Group, which reports to PDG, is charged with ensuring consistent messages are conveyed. This is particularly useful when communicating with passengers.

6.2 What we would expect to see

The delivery of a project as complex as TLP, requires partners to adopt an open, consensus-building, team-centred approach. We do acknowledge that this cannot be completely artificially created but takes time to achieve.

For a project of this complexity, we would expect to see a Programme-level approach to stakeholder management. This would encompass stakeholder identification, analysis and a plan for managing them, both from a Programme level and at the individual element and Programme partner level.

6.3 Key findings

Our key findings are:

1. although relationships have developed through KO0, there are some misgivings among Programme partners
2. Network Rail's stakeholder management process and documentation is comprehensive
3. there is no visible programme-level approach to stakeholder management.

6.4 Collaboration between Programme partners

There are some misgivings among Programme partners, for example:

- between DfT and Network Rail and their respective level of involvement in technical detail
- concerns about Network Rail's ability to take on the role of the systems integrator
- concerns that DfT needs to do more to challenge Network Rail on their plans and progress.

Relationships between the Programme partners were tested and strengthened during KO0 and further improvement is needed. For example, Network Rail is working to improve the management of assurance with LU. It is also actively engaging with TOCs in the planning and delivery of KO2 as well as co-locating TOC staff with the TLP team.

These misgivings, if left unchecked, could render the TLP vulnerable particularly during the more complex delivery phases. As a result, collaboration and overall teamwork amongst the Programme partners will have to improve still further so that it becomes a consistent core value of the programme. The key areas relate to:

- having a shared vision and objectives for TLP, as well as a better understanding of each others' strategic risks and business needs
- better visibility and transparency of processes, documentation and activities amongst the Programme partners
- having the appropriate governance structure to drive the right behaviours and emphasise the chain of accountability.

Our interviews with Programme partners have highlighted the general dissatisfaction with the manner and timeliness with which Network Rail communicates. For example, the lack of visibility of their plans for London Bridge Station and for passenger management at Blackfriars Station does not reassure Programme partners.

6.5 Stakeholder management

Network Rail has comprehensive plans and processes for managing its relationships with external stakeholders and Programme partners. These:

- describe formal mechanisms for stakeholder identification, profiling and analysis
- set out how the relationships will be managed by means of RACI (responsible, accountable, consulted, informed) analysis and Stakeholder Accountable Managers (SAMs) and Stakeholder Responsible Managers (SRMs)

- describe how ongoing stakeholder satisfaction will be measured.

Network Rail's stakeholder management plans do not draw the critical distinction between their Programme partners and conventional stakeholders, such as local authorities. We believe each requires a distinctive approach.

The TLP Communications Group ensures consistency of messages that are communicated via Programme partners to stakeholders. Although this represents a degree of programme-level stakeholder co-ordination, we believe this should be expanded to seek assurance that this has identified and mapped all affected stakeholders.

6.6 Recommendations

We make the following recommendations:

10. All Programme partners need to be encouraged to improve transparency of their plans, processes and activities.

Much excellent work is being done, but lack of visibility of it causes uncertainty, mistrust and reduces confidence. The partners need to work to improve both formal and informal information flows and encourage open, consultative and consensus-building behaviour amongst themselves.

11. Network Rail needs to modify its management approach to DfT and TOCs and view them as Programme partners in delivery and not just as stakeholders.

Network Rail's current stakeholder plans do not accord full weight to the importance of the TOCs, and in particular DfT. By adjusting their outlook to one of greater inclusivity, that is, this is a joint programme and we are all mutually responsible for successful delivery, then the Programme stands a greater chance of success.

12. Review the terms of reference for the TLP Communications Group

The current terms of reference are too narrow and should be broadened to encompass a specific responsibility for stakeholder management, of which communications is only a sub-set. As a first step, the group should conduct, from a Programme perspective, a thorough stakeholder mapping and analysis exercise. This will ensure there are no gaps or overlaps and that a strategic TLP-wide approach is maintained.

7. Integration

7.1 Introduction

This section considers technical, programme and operational aspects of integration.

Network Rail, DfT and the TOCs have been actively discussing ways in which systems integration can be assured. Considerable progress has been made in agreeing the role of a Systems Integration Authority (SIA), and this seeks to address Programme partner concerns, particularly from TOCs, that operational aspects have not been given sufficient priority.

7.2 What we would expect to see

Best practice measures we would expect to see include:

- a common understanding of the requirements for integration, and who is responsible for each
- a strategy to ensure integration topics are managed, and that there is common agreement on how this should be achieved
- clear roles and authorities, and these are agreed by all stakeholders
- the approach to integration considers all aspects required for the safe and successful operation and maintenance of the railway within the required budgets and timescales, and within a collaborative delivery culture.

We have found a useful tool to support effective integration is to maintain an Integration Framework Document. This provides a common understanding, in non-technical terms, of the required railway system at various stages of delivery. We have described this in Appendix C.

7.3 Key findings

Our key findings are:

1. all Programme partners recognise the importance of systems integration and are keen to ensure it is done well. DfT, Network Rail and the TOCs have been working together to define and implement an SIA, although issues remain regarding reporting lines. As yet, the strategy for implementing the SIA is not agreed

2. we found there is an opportunity to revisit risk identification and analysis for integration issues.

7.4 The Systems Integration Authority

We see the agreement of the establishment of an SIA as a significant positive achievement for the programme. The proposed SIA could be an effective forum for the management of systems integration issues, but will only be effective if supported by:

- collaborative behaviours
- clearly defined terms of reference for the board including roles, responsibilities and accountabilities
- effective governance systems, especially change management.

In our experience, one way of supporting the function of the SIA is through the provision of an Interface Framework Document, sometimes referred to as a 'Yellow Paper'. Appendix C describes the purpose and potential structure of the Interface Framework Document.

7.5 Risks

Through the course of our internal review workshops, a key theme raised by participants was the importance of robust risk identification and management, focussing on maintaining safe and reliable railway systems at all times. We recommend a further risk workshop is held to identify and capture risks relating to integration. The workshop should also agree action/mitigation plans and agree what decisions need to be made and when. This should be reported to the PDG, and TPB if relevant, via the SIA.

7.6 Recommendations

We make the following recommendations:

13. Trial the SIA immediately.

The SIA needs to be accompanied by an agreed series of review points and a clear definition of success criteria. The TOR must include clear definitions of roles and accountabilities, and this should be agreed by all key Programme partners (DfT, ORR, Network Rail, LU and the TOCs). It would be helpful to hold an integration workshop in the early stages of the SIA's development. This would have the advantage of identifying technical, programme and operational integration issues, so that the SIA has a fresh and agreed perspective of integration challenges. This needs to be supported by a robust change management process.

14. SIA to create and maintain an Integration Framework Document, as described in Appendix C.

This recommendation seeks to ensure that all parties have a common understanding of the size of the integration challenge and what integration is required to maintain a safe and reliable railway system at each stage in the TLP.

8. Risk

8.4 Introduction

The overarching risk strategy is defined in the DfT Risk Management Plan. This states that DfT maintains a TLP Programme Risk Register, which is regularly reviewed, and which is informed by Risk Registers from Network Rail, the TOCs, and the Rolling Stock Risk Register.

The DfT Risk Management Plan requires each key stakeholder to develop and manage their own risk management plans in accordance with their normal company processes. They are requested to share their registers and plans with DfT at least every four weeks.

The DfT Programme Controls and Risk Manager will collate an industry-wide Programme risk register for each of the Key Outputs (i.e. 0, 1 and 2), and one for the rolling stock procurement project. The DfT Programme Controls and Risk Manager will ensure these risks are reviewed by the key stakeholders at the tier 4 Integration Meetings (see Figure 3 in the Governance section) and that they are updated at least every four weeks.

The top five risks are included in the four-weekly reports, which are submitted to the Programme Delivery Group for review and action where required.

8.5 What we would expect to see

Best practice measures we would expect to see in place for risk management include:

- an overarching risk strategy for the programme
- risk strategies from each of the Programme partners (TOCs, Infrastructure, rolling stock) aligning with the overarching strategy
- methods for identifying, assessing and quantifying risks
- risk co-ordination managers with the responsibility of delivering the risk strategies
- risk products, including risk registers, at each of the tier delivering the requirements from the strategies
- evidence that risks are being revisited to ensure completeness, and that plans include required actions
- all risks have mitigating actions with owners and timescales
- evidence of risk quantification and management on an ongoing basis

- methods for escalating and closing down risks.

8.6 Key findings

Our key findings are:

1. Network Rail and DfT have Risk Management processes in place. Our review found that risks are being identified, monitored and managed
2. we have seen insufficient evidence that Network Rail has updated its risk registers for KO2.

8.7 Risk management process

DfT has provided a presentation describing its risk reviews for Period 12, March 2009, and this provides evidence that risks are reviewed for KO1 and KO2, and for the Rolling Stock Project. Assessment of the risks is consistent with the methods stated in the DfT Risk Management Plan. We have not had sight of the collated industry wide Programme Risk Registers for the KO1 and KO2 and the rolling stock procurement project. We would expect these would have details on the management of the top risks, including owners, actions and timescales.

ORR maintains a strategic risk register, and the TLP is listed on this as a single line entry, with the risk related to network failure and adverse public perception of the industry.

The TOCs indicated that they include the TLP as single-line entries on their own strategic risk registers.

Network Rail has robust risk management processes in place, and we have reviewed the KO2 Risk & Value Management Plan, supported by the KO2 Strategic Risk Register, KO2 London Bridge Register, and the KO2 Railway Systems Register, dated 08 April 2009. These provide evidence that Network Rail has the processes in place to identify, monitor and manage risks. However we have not found evidence of how those KO2 risk registers are being updated.

Some of the Network Rail risks identified do not have descriptions of the mitigating actions. In addition, actions are not time-constrained, which may limit the ability to plan and monitor mitigation activities.

8.8 Risk identification and management

Although there are robust processes in place to manage those risks identified, there is insufficient evidence that there is a comprehensive process to quantify programme-level risks and allocate contingencies.

8.9 Recommendations

We make the following recommendations:

15. **Network Rail should follow its processes for risk management ensuring that risk registers are kept current for KO2.**

This process will confirm that they include adequate risk assessment and quantification, and that appropriate contingencies can be identified. Based on the outcome of the risk workshops, the plan should be revisited and re-baselined, to accommodate risk mitigation.

16. **Ensure clarity on the allocation and use of contingency budgets.**

This is particularly pertinent as issues start to arise from systems integration.

9. Principal recommendations

For convenience, the main recommendations set out in the sections above are summarised below with a reference in each case to where the recommendation was given. For each of the main recommendations, a cross reference to the associated findings is provided.

No	Recommendation description	Proposed responsibility
	Section 2 – Programme baseline	
1.	Remind Programme partners of the key components of the business case.	DfT
2.	Review and agree the integrity and completeness of the Programme requirements.	DfT/NR
3.	Review and agree the process for re-baselining the Programme.	DfT/NR
	Section 3 – Governance	
4.	For each tier and meeting, re-affirm terms of reference and the roles and responsibilities for the attendees.	TLP
5.	Network Rail and DfT should consider revisions to Protocol in order to maximise its value.	DfT/NR
	Section 4 – Network Rail's Project Delivery	
6.	Adopt a consistent approach for reporting progress to Programme partners.	NR
7.	Extend the existing processes to identify the correct type, level and calibre of resources.	NR
8.	Provide greater assurance to DfT regarding how it will secure value for money and management of any overspend.	NR

No	Recommendation description	Proposed responsibility
	Section 5 – Programme management	
9.	Consider options to integrate the programme management function more thoroughly.	DfT/NR
	Section 6 – Collaboration and stakeholders	
10.	Encourage Programme partners to improve transparency of their plans and processes	DfT/NR/TOCs
11.	Network Rail needs to modify its management approach to DfT and TOCs and view them as Programme partners in delivery and not just as stakeholders.	NR
12.	Review the terms of reference for the TLP Communications Group to identify and map stakeholders, in order to make sure there are no gaps and that a strategic TLP-wide approach is maintained.	DfT/NR
	Section 7 – Integration	
13.	Trial the SIA immediately, identifying and agreeing success criteria and review points and ensuring clear definitions of roles and accountabilities.	DfT/NR/TOCs
14.	SIA to create and maintain an Integration Framework Document.	SIA
	Section 8 – Risk	
15.	Network Rail should follow its processes for risk management ensuring that risk registers are kept current for KO2.	NR
16.	Ensure clarity on the allocation and use of contingency budgets.	DfT/NR

10. Conclusion

Conclusion

The TLP is a high profile, complex programme involving several key parties, with major track, stations and signalling work, new rolling stock and cascades, timetable changes and franchise changes. This review has come at the time when the Programme has successfully delivered KO0, but at the same time is subject to change. This is an appropriate time to take stock of the TLP and review whether Network Rail has the plans and processes in place to deliver its remaining obligations and whether the interfaces with partner organisations are fit for purpose.

We conclude by referring back to our terms of reference.

In regard to Network Rail's plans and processes the basic structures for good project management are in place and are sound, that is, cost-loaded schedules, risk management, earned value management and stakeholder identification processes. However, visibility of these to partners and stakeholders needs to increase.

Interfaces between Network Rail's plans and processes and those of other key parties would benefit from being more open and transparent. Greater visibility of each others' plans, processes and progress will assist the Programme partners to meet the challenges ahead. In particular, Network Rail should fully involve Programme partners as *partners in delivery*, whilst still engaging other stakeholders in the planning of its remaining TLP commitments.

The critical issue is that Network Rail has not yet articulated a viable solution for London Bridge Station that can be delivered within the time and cost constraints. Consequently, there is not yet sufficient evidence to conclude whether Network Rail can deliver KO2, and therefore this must be considered a significant risk. KO2 requires a specific focus to achieve an agreed, compliant solution within the timescales that the schedule allows. This is an immense challenge that needs the highest calibre of resource and support applied to it. Without a satisfactory resolution to KO2 and London Bridge Station, the TLP is not deliverable within its current cost-quality-time parameters and will not meet its current objectives.

We believe that the interfaces between the partner organisations need to be integrated at an overall Programme level such that a unified approach is taken to key activities, for example, stakeholder management, risk mitigation and programme progress. We suggest that this could be done via an integrated programme management team.

We believe the TLP will benefit from adopting our recommendations which will enhance its ability to achieve its programme objectives and benefits, whilst demonstrating it is delivering good value for money.

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Abbreviations

APM	Association for Project Management
TO	Automatic Train Operation
COWD	Cost of work done
CP	Control Period, as in CP4 and CP5
CPI	Cost Performance Index
DfT	Department for Transport
EV	Earned value
GRIP	Guide to Railway Investment Projects
HLOS	High Level Output Statement
IFD	Integration Framework Document (also known as 'Yellow Paper')
KO	Key Output
KPI	Key Performance Indicator
LU	London Underground
MPRG	Major Projects Review Group
NR	Network Rail
OGC	The Office of Government Commerce
ORR	Office of Rail Regulation
PDG	Programme Development Group
P3E	Primavera Enterprise
SAM	Stakeholder Accountable Manager
SIA	Systems Integration Authority
SPI	Schedule Performance Index
SRM	Stakeholder Responsible Manager
TfL	Transport for London
TLP	Thameslink Programme
TOC	Train Operating Company
TOR	Terms of Reference
TPB	Thameslink Programme Board
tph	Trains per hour
TReqS	Network Rail's Technical Requirements Management System
TSS	Train Service Specification
TWA	Transport and Works Act

Appendices

- Appendix A – Review interview list
- Appendix B – Review document register
- Appendix C – IFD contents pages

Appendix A – Review interview list

The following were interviewed in support of the review.

Interviewee	Organisation	Position
Michael Lee	ORR	Director Access Planning and Performance
John Larkinson	ORR	Deputy Director Access Planning and Performance
Michael Hurn	DfT	Deputy Director, Rail Projects (London)
Patrick Bateson	DfT	Principal Sponsor Thameslink
Simon Kirby	Network Rail	Director, Infrastructure Investment
Andy Mitchell	Network Rail	Programme Director
Simon Blanchflower	Network Rail	Lead Sponsor
Martin Jurowski	Network Rail	KO2 Programme Director
Paul Harwood	Network Rail	Principal Route Planner
Bob Mitchell	London Underground	Programme Director
Jon Kirkup	London Underground	Network Development Manager
Elaine Holt	First Capital Connect	Managing Director
David Statham	First Capital Connect	FCC Programme Director for TLP
Tom Smith	The Go Ahead Group plc	Managing Director – Rail Development
Charles Horton	Southeastern Trains	Managing Director
Vince Lucas	Southeastern Trains	Commercial Director
Anne Clark	Southeastern Trains	Head of Franchise & Access
Chris Burchell	Southern	Managing Director
David Scorey	Southern	Programme Director

Appendix B – Review document register

The following documents were reviewed in the course of the assignment.

	Document Title	Version	Author/Owner
1.	ATO INVESTMENT PAPER	Not known	Network Rail
2.	FUNCTIONAL SPECIFICATION	V7.1	Network Rail
3.	GRIP COMPLIANCE PLAN	V4	Network Rail
4.	INVESTMENT AUTHORISATION PROCEDURE	5765075/ V3.0	Network Rail
5.	PERIOD MANAGEMENT REPORT PERIOD 10 2008-09	Jan 09	Network Rail
6.	PERIOD MANAGEMENT REPORT PERIOD 11 2008-09	Jan 09	Network Rail
7.	PERIOD MANAGEMENT REPORT PERIOD 12 2008-09	Feb 09	Network Rail
8.	PROGRAMME MANAGEMENT STRATEGY	2204747/ V2.0	Network Rail
9.	TARP MINUTES 16 FEBRUARY 2009	Not known	Network Rail
10.	090312-P-SYSTEMS INTEGRATION ON TLP	Not known	Network Rail
11.	090318 SYSTEM INTEGRATION GOVERNANCE SLIDE	Not known	
12.	GOVERNANCE	Not known	Not known
13.	PROTOCOL	V1a	DFT/ Network Rail
14.	SYSTEMS INTEGRATION GOVERNANCE	Same as item no. 8	Network Rail
15.	TLP EMAIL FROM GOAHEAD TO JL 250209	Not known	TSMITH
16.	TLP EMAIL FROM MH DFT 110209	Not known	MHURN
17.	TLP ISSUES RAISED BY ALL PARTIES	334095.01	ORR
18.	TLP PROGRAMME DELIVERY GROUP MINUTES 12 MARCH 2009	Not known	DFT
19.	TLK DFT PROGRAMME GOVERNANCE	v4.0	DFT

	Document Title	Version	Author/Owner
	ARRANGEMENTS TERMS OF REFERENCE		
20.	CONSULTATION OF NR DELIVERY PLAN	Not known	Network Rail
21.	FINAL ENHANCEMENTS DOCUMENT 250209	Not known	Network Rail
22.	FINAL OUTPUTS DOCUMENT	Not known	Network Rail
23.	LETTER TO M LEE 270209 RE CP4DP STATEMENT OF OUTPUTS	Not known	Network Rail
24.	LETTER TO TOCS 270209 RE CP4DP STATEMENT OF OUTPUTS	Not known	Network Rail
25.	RE CONSULTATION ON NETWORK RAIL'S CP4 DELIVERY PLAN - STATEMENT OF OUTPUTS	Not known	Network Rail
26.	THAMESLINK RISK MANAGEMENT PLAN	1	DfT
27.	THAMESLINK PROGRAMME CLIENT REQUIREMENTS	4.01	DfT
28.	GOVERNANCE ARRANGEMENTS	Not known	DfT
29.	THAMESLINK PROGRAMME: PROGRAMME SPONSOR - STAKEHOLDER MANAGEMENT PLAN KEY OUTPUT 2	Nov 08	Network Rail
30.	KO2 SMP STAKEHOLDER LIST	Not known	Network Rail
31.	KO2 STAKEHOLDER ISSUES LOG	Not known	Network Rail
32.	KO2 RISK REGISTER: STRATEGIC	April 09	Network Rail
33.	KO2 LONDON BRIDGE RISK REGISTER	April 09	Network Rail
34.	KO2 RAILWAY SYSTEMS RISK REGISTER	April 09	Network Rail
35.	THAMESLINK PROGRAMME KEY OUTPUT 2 RISK & VALUE MANAGEMENT PLAN	Oct 08	Network Rail
36.	KO2 N231 LONDON BRIDGE STATION	March 09	Network Rail
37.	090312-R- NRKO1 INDICATIVE CRITICAL PATH	Feb 09	Network Rail
38.	THAMESLINK PROGRAMME HIGH-LEVEL SUMMARY SCHEDULE	Jan 09	Network rail
39.	KO1 INDUSTRY PLAN	Mar 09	Network Rail

	Document Title	Version	Author/Owner
40.	SCOPE DEFINITION STATEMENT	Not known	Network Rail
41.	NETWORK RAIL: CP4 DELIVERY PLAN 2009 DELIVERABILITY ASSESSMENT	Not known	Network Rail
42.	080924-PLAN-COMMUNICATIONS PLAN VERSION 1.0-RW.1	Version 1.0	DfT
43.	081029 THAMESLINK COMMUNICATIONS PROTOCOL [DRAFT UPDATE]-RW	Nov 08	DfT
44.	090312-THAMESLINK COMMUNICATIONS GRID-RW	Version 10.0 Mar 09	DfT
45.	090325-TLP TERMS OF REFERENCE FOR COMMS GROUPS	version 3.2 July 2008	DfT
46.	080912 NR SYSTEM INTEGRATOR PROPOSAL V4 & 090423 SYSTEM INTEGRATION GOVERNANCE SLIDE (presented to TPB May 2009)	Not known	Network Rail
47.	KO102.XER	Not known	Network Rail
48.	TLP MILESTONE PLAN (ORIGBASELINE(1))	V1.17 March 2008	Network Rail
49.	TLP KEY OUTPUT 1 INDUSTRY PLAN (JUNEBASE2008)	June 2008	Network Rail
50.	KO2 RAILWAY SYSTEMS GRIP 3 PROG 20090424 (N400-NR-PRG-PC-000001)	May 2009	Network Rail
51.	EAST MIDLANDS TRAINS STAKEHOLDER MANAGEMENT PLAN	Not known	Network Rail
52.	TLP STAKEHOLDERS, GROUPS & OWNERS	Not known	Network Rail
53.	090310-P-DFT THAMESLINK PROGRAMME RISKS PERIOD 12 ALL -RL	Period 12	DfT
54.	THAMESLINK PROGRAMME RISK MANAGEMENT PLAN	November 2007	DfT

Appendix C – Integration Framework Document

To ensure the TLP success, the SIA, TPB, and the PDG must share a common understanding of the railway system at key delivery milestones. This necessitates a clear and agreed appreciation of the integration challenge required to maintain a safe and reliable railway system, as the TLP evolves through KO1 and KO2. We would recommend that the TLP SIA creates and maintains an Integration Framework Document (IFD). This is illustrated in Figure 4 below. We have also included a sample table of contents.

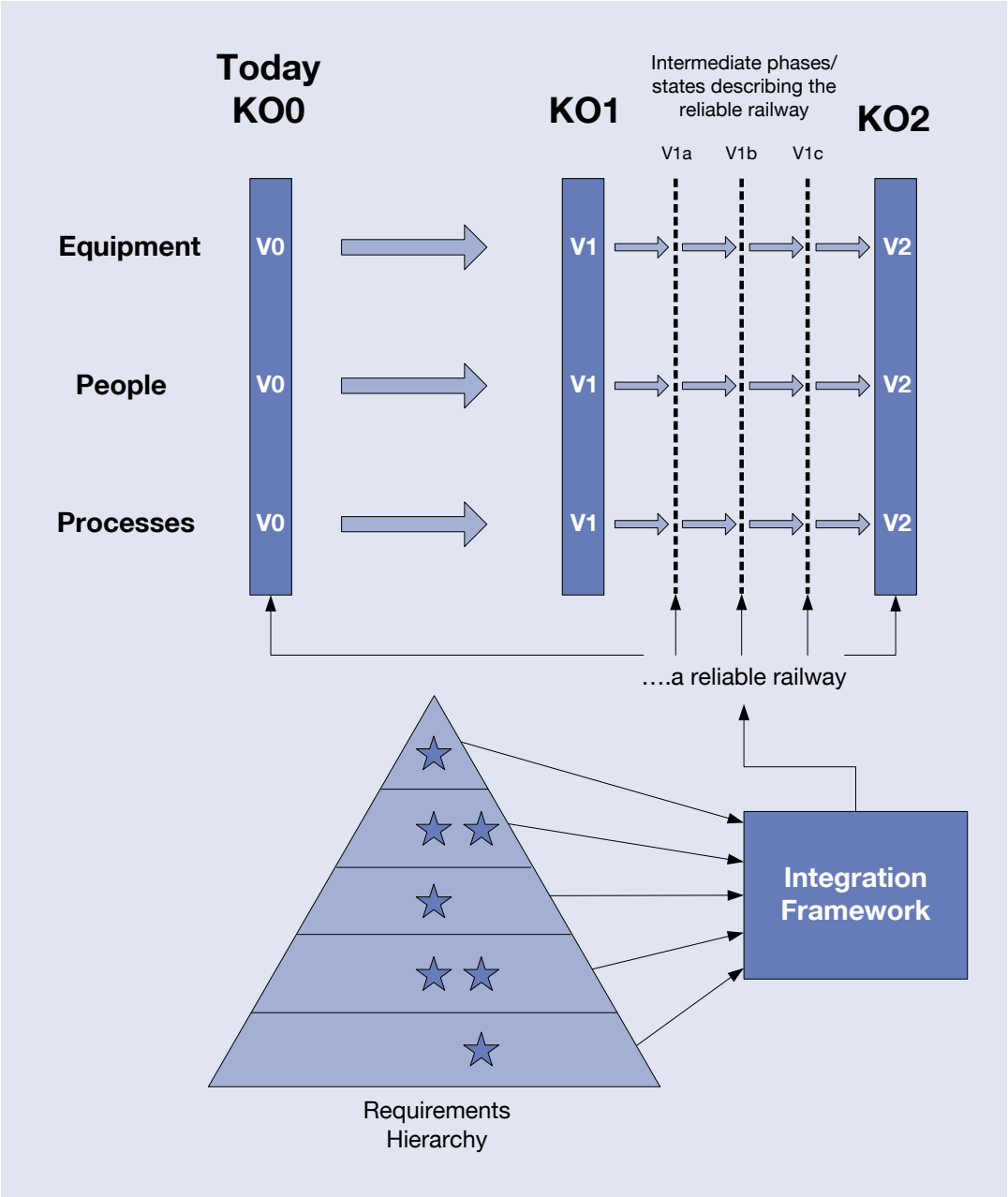

Figure 4: Integrated Framework Document

We would make the following key points:

- the IFD should not be seen as a technical document, but as a tool to ensure there is a common understanding of the scope of the railway system, and to communicate that to all stakeholders, supporting decision making and management
- the first issue of the IFD should reflect the Railway System as it is today, describing all components including technical (equipment and infrastructure), people (staff, engineers, passengers, etc), and processes
- the IFD should be developed to describe intermediate phases aligned with the programme plan, describing the equipment, people and processes, and the key activities required to deliver each phase and maintain a reliable railway systems at all times. The intermediate phases should address the key requirements, at a level of detail sufficient to give a clear picture of the railway system at key milestones
- the IFD should be a key component of the programme baseline for each milestone, with full agreement and buy-in from all stakeholders
- we believe that creating and maintaining the IFD has many benefits, e.g. facilitating an understanding of the scope of railway systems integration, clearly communicating scope, supporting transparency and clarity of planning, facilitating the change management and decision making process, contributing to the maintenance of a reliable railway system throughout the development of the Thameslink programme.

A sample Table of Contents for an IFD is shown overleaf.

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IFD Contents Pages

X Line Upgrade

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