Halcrow Group Ltd Vineyard House 44 Brook Green Hammersmith London W6 7BY

T 020 7602 7282F 020 7603 0095

Document Control Sheet

Project Title	Independent Reporter A
Document Title	WCRM, Network Rail Delivery Plan 2008 – Commentary
Revision	03
Status	Final
Control Date	May 2008

This document has been produced, checked and authorised in accordance with a Quality Management System accredited under BS EN ISO 9001:2000.

Record of Issue

Issue	Status	Author	Date	Check	Date	Authorised	Date
1_0	Draft	N P Stuart	16/04/08	D Simmons	16/04/08	D Simmons	16/04/08
1_1	Draft	N P Stuart	22/04/08	D Simmons	23/04/08	D Simmons	23/04/08
1_2	Final	N P Stuart	06/05/08	D Simmons	06/05/08	D Simmons	06/05/08

Distribution

Organisation	Contact	Copies
Office of Rail Regulation	Michael Lee, Andrew Burgess, Andrew Wallace, Mervyn Carter, Sukhninder Mahi	email
Halcrow Group Ltd	Project Manager	1

Contents

Doc	ument Control Sheet	1
Reco	ord of Issue	1
Distr	ibution	1
1	Executive Summary	3
1.1	Introduction	3
1.2	Commentary on Network Rail's Delivery Plan	3
1.3	Conclusion	5
2	Introduction	6
3	Commentary	7
3.1	General	7
3.2	Master Programme	8
3.3	Possession Plan	9
3.4	Programme Scope	10
3.5	Resource Plans	10
3.6	WCRM Programme Team	12
3.7	Risk Management	12
3.8	Contingency	13
3.9	Consultation with External Stakeholders	14
3.10	Commitment of Senior Management	15
4	Conclusion	16

Appendices

Appendix A – Network Rail Matrix of Outstanding Work and Output Dependency

1 Executive Summary

1.1 Introduction

The Office of Rail Regulation issued a Provisional Order¹ on 28 February 2008, requiring Network Rail to set out the steps that it is taking or will take to secure compliance with Condition 7 of its Network Licence in respect of the delivery of the infrastructure necessary to support the significant timetable improvements currently scheduled for December 2008 ("the Output").

This report comments on the content of Network Rail's submission in the context of its ability to deliver the Output.

1.2 Commentary on Network Rail's Delivery Plan

In accordance with the Provisional Order, Network Rail issued its Delivery Plan on 31 March 2008. Certain aspects of Network Rail's Plan, particularly the possession plan, were revised in an update that was issued on 25 April. The Plan has been reviewed and the key findings are set out below.

- The constituent elements of Network Rail's submission are considered to represent a delivery plan.
- There is evidence that good project management practice is being adopted by the Network Rail WCRM Programme Management team.
- Network Rail is proposing to adopt Option B, thereby enabling it to deliver the Output by December 2008. The reasons given by Network Rail for rejecting Option C are generally accepted.
- In response to our comments, Network Rail has confirmed that the WCRM Programme Master Schedule for Option B does include logic links between those projects that have interdependencies, namely Rugby, Nuneaton and Trent Valley 4-Tracking. The anomalies that have been discovered in the Rugby project programme are not considered to be material to the robustness of the Plan but do require further consideration with Network Rail.
- The 'Additional Access' possessions identified in Option B are considered to be the minimum required, over and above the pre-existing possessions, to enable the delivery of the Output. The 'Firewall' (contingency) possessions provide Network Rail with contingent access and should be retained until such time as it can be clearly demonstrated that they are not required. The removal of the Milton Keynes 'Firewall' is accepted on the proviso that resources will be made available, if required, from other non West Coast schemes if the Rugby Stage J 'Firewall' is used.

¹ Railways Act 1993 (as amended), section 55, Provisional Order, dated 28 February 2008

- Network Rail has summarised the outputs that contribute to the delivery of the Output. While we have previously verified that the passenger service outputs will be met, that has not been possible for the freight outputs as the development of the freight timetable is still in progress with the freight operators.
- The Resource Plans for key resources signal testers and OLE linesmen represent a more manageable situation than that presented previously.
- The delivery of the scope 'To Go' requires a step change in access that is consistent with Option B.
- The WCRM Programme Management team is and will be under significant pressure and should be fully resourced. The team is currently below strength, with 10% of the positions vacant. Network Rail has confirmed that positions are being filled through extensions to current contracts, including Bechtel's, transfers internally within Network Rail and the recruitment of agency staff.
- Network Rail has carried out a Schedule Quantitative Risk Assessment (SQRA) on the Programme. Without the 'Firewall' possessions there is an 82% probability of delivering the December 08 timetable. With the reduced number of 'Firewall' possessions, coupled with the implementation of enhanced risk mitigation measures and increased confidence in scope delivery since February, Network Rail has confirmed that the probability remains high at over 90%.
- The 'Firewall' possessions are a key element of the contingency plan. Network Rail has identified further contingencies in its planning of the possessions and in the deployment of resources. In addition, Network Rail has re-stated its management plan, following the overrun at Christmas, to improve the accuracy of contractor reporting and liaison with train operators.
- Consultation with external stakeholders has resulted in mixed views concerning the preference for Option B or Option C (this defers the timetable implementation to May 2009). While most prefer Option B, the freight operators (disruption and commercial issues) and Virgin (driver training issues) have objected to Option B. Network Rail's recent removal of 'Firewall' possessions has addressed some of the concerns expressed by Virgin. Others have been addressed by deferring noncritical outputs. Network Rail has struggled to resolve the concerns expressed by the freight operators and these will inevitably be left to take their course through the industry process.
- Network Rail has entered into an agreement with Virgin concerning the use of 'Firewall' possessions for signal commissioning works. This agreement creates a potential risk that the 'Firewalls' that remain in November and at Christmas, and protect the delivery of signal commissionings, will be compromised if Virgin's prior agreement cannot be obtained. Network Rail has expressed confidence in its delivery plans and in its ability to address any adverse effects should they arise.

1.3 Conclusion

The possession plan associated with the latest revision of Option B represents a significant increase on the pre-existing plan and is consistent with the access that is now necessary to deliver the infrastructure improvements that are required to support the timetable improvements planned for December 2008. With the provision of the 'Firewall' possessions Network Rail's SQRA indicates a greater than 90% probability of success. However, this success is reliant on the cooperation of the industry in working constructively to mitigate the impacts of the possession plan and in developing driver training plans that support the bringing into use of the new infrastructure.

The WCRM Programme still remains a challenge to Network Rail. The Programme Management team and its contractors must remain focused so that they continue to build on their achievements at Easter. The next round of signal commissionings are at Rugby and Trent Valley at the end of May. Network Rail, as a result of the success at Easter, has decided that it no longer requires the 'Firewalls' in June (for Rugby), October (for Nuneaton) and January 2009 (for Milton Keynes). The remaining two 'Firewalls' remain under review as Network Rail continues with the delivery of the Programme and its confidence grows. However, we consider that, as a key element of the contingency plan for the Programme, these 'Firewalls' should be retained until such time as it can be clearly demonstrated that they are not required.

We will continue to monitor the delivery of the WCRM Programme and will follow up on our findings relating to the Rugby Project Schedule. In addition we will continue to pursue the other issues that we have raised with Network Rail concerning the reliability and maintainability of the new infrastructure once the December 2008 timetable is introduced.

Network Rail Delivery Plan 2008 – Commentary

2 Introduction

The Office of Rail Regulation issued a Provisional Order² on 28 February 2008, requiring Network Rail to set out the steps that it is taking or will take to secure compliance with Condition 7 of its Network Licence in respect of the delivery of the infrastructure necessary to support the significant timetable improvements currently scheduled for December 2008 ("the Output").

The Provisional Order required Network Rail to produce and deliver a plan, on which it had consulted persons providing services relating to railways, Passenger Focus, London TravelWatch and relevant funders. The plan must:

- a) be delivered to ORR by 31 March 2008;
- b) demonstrate how Network Rail will deliver the Output in accordance with the reasonable requirements of persons providing services relating to railways and relevant funders to the greatest extent reasonably practicable having regard to all relevant circumstances ("the Delivery");
- c) set out milestones for the Delivery including design and key commissioning dates;
- d) take full account of the risks associated with achieving the Delivery, including the availability of materials, design and/or design approvals, possessions, on-track plant, competent and sufficient manpower, occurrence of adverse weather conditions, and operational and timetabling resources to reduce the impact of possessions on operators; and,
- e) contain adequate contingency plans in respect of Delivery.

In accordance with item a) above, Network Rail issued its response to the Provisional Order on 31 March 2008. An update was issued by Network Rail on 25 April to reflect the ongoing consultation with train operators, in particular Virgin and the freight operating companies. This report comments on the content of Network Rail's submissions in the context of items b) to e).

² Railways Act 1993 (as amended), section 55, Provisional Order, dated 28 February 2008

3 Commentary

3.1 General

Network Rail issued its response on 31 March 2008. Our commentary has reviewed the following aspects of Network Rail's submission.

- The integrated master programme schedule for the delivery of the Output, together with the programme for the delivery of the Rugby Station remodelling.
- The possession plan.
- The scope to be delivered by the various projects and their respective contribution to the delivery of the Output.
- The resource plans for labour, plant and materials (including key dates for the procurement of long lead items).
- Details of the WCRM programme management team.
- The risk register for the programme and the outcome of a Schedule Quantitative Risk Assessment (SQRA).
- Contingency.
- Consultation with other rail users, Passenger Focus, London TravelWatch and funders.
- Evidence of commitment from senior management to the delivery of the Output.

Network Rail has proposed two options, Option B and Option C. Option B facilitates delivery of the Output by December 2008, Option C delays the delivery until May 2009.

Network Rail has stated that both Options B and C have been discussed with stakeholders and funders and modifications have been made as a result of feedback. In the case of Option C, the date was brought forward from December 2009 to May 2009. In the case of Option B, the proposed commissioning and possession arrangements were revised to better accommodate the requirements of TOCs and reduce the impact on passengers.

While there are disadvantages with both options, it is considered that the disadvantages that have been identified by Network Rail with Option C, coupled with the responses that have been received following the consultation process, justify the adoption by Network Rail of Option B, with modifications, as the basis for delivering the Output, albeit that Option C provides more time.

Network Rail has developed Option B in detail and this option forms the basis of its submission.

© Halcrow Group Ltd

3.2 Master Programme

Further to the issue of the Delivery Plan, Network Rail was requested to provide copies of the WCRM Master Programme schedule and Rugby Nuneaton project programme schedule in P3e format to enable us to carry out a more detailed check.

The intention of the detailed check has been to establish the following:

- The extent to which the project programmes / activities are linked and the sensitivity to changes in project / activity durations;
- The projects / activities that are on the critical path;
- The sensitivity of the critical path and the extent to which it is influenced by changes in project / activity durations;
- The early finish / late finish dates to determine the 'float' in the programme:
- Whether the programme has been manipulated to 'force' the desired result.

The outcome of the analysis that has been possible to date of the WCRM Master Programme schedule and the Rugby Nuneaton project schedule is summarised below.

WCRM Master Programme

- There is a work breakdown structure that is in a logical order.
- There are circa 250 activities, including milestones, in the programme. Most of these activities are held on the date shown in the programme using constraints rather than logical links.
- In the absence of logical links it is not possible to identify the critical path and the sensitivity of the programme to changes in activity durations. Where changes in activity durations do occur, the impact on delivery dates has to be entered manually.

Since we are aware that there are interdependencies between the various projects that are being delivered by the WCRM Programme, e.g. between Rugby and Nuneaton and between Nuneaton and Trent Valley 4-Tracking (TV4), this should be reflected in the master programme. Network Rail, in its submission, has illustrated the interdependencies in its WCRM Level 1 plan summary (Section 4, Appendix 4.1).

It is considered that Network Rail should have a master programme that includes logical links between the various projects / activities so that the impact of changes to project durations and the overall delivery of the Output can be readily understood and managed. In response to questions raised on the plan, Network Rail has confirmed that the plan does include logic links to reflect the interdependencies that exist between Rugby, Nuneaton and TV4. However, Network Rail has also confirmed that, notwithstanding the dependencies highlighted above, the projects are relatively independent and schedule

analysis is conducted at a project level. Where projects compete for resources, the Programme team has implemented management plans to ensure that demand and supply is effectively managed (see commentary on 'Resources' below).

Rugby Station Project

- The file provided has been filtered to remove almost all prior progress (completed activities). Whilst this may explain the absence of predecessors for many activities, it does not explain the absence of successors.
- The PDFs that were supplied with the schedule do not include the Hillmorton interlocking (SSI 05) in stage J. Most of the activities that have negative float are in the above interlocking, as advised by Network Rail in its covering letter.
- The schedule does not have resources or costs, nor does it have a Work Breakdown Structure (WBS) other than the mandatory level 1 WBS created by P3e. Instead, the schedule uses codes.
- Multiple calendars have been used, as would be expected. Over 800 activities are assigned a 7 day working calendar out of 990 in total.
- Partial three point estimates (TPE) have been entered into user defined fields (UDF), but only on stage J. These estimates indicate that some of the original durations (centre points) have been altered since the estimate was made.
- There are no summary activities present in the schedule.
- There are multiple critical paths.
- There are two different sets of user dates present and these are being examined further to determine what they represent.
- 238 activities have some form of constraint imposed on them.
- Schedule QRA's have been carried out for two scenarios associated with the Stage J commissioning, the first retaining the anomalous TPE data and the second excluding it. The outcomes of the SQRAs for both scenarios indicate very low probabilities (3% and 10% respectively) of success by November 2008. These probabilities increase to 83% and 99% respectively for delivery by the end of the 'Firewall' possession on 29 December 2008.

The output of the review of the project programme will be considered further with Network Rail. The outcome of the SQRAs illustrates the importance of retaining the 'Firewall' for Stage J.

3.3 Possession Plan

The possession plan is critical to the delivery of the work necessary to deliver the outputs.

Option B increases the pre-Christmas plan by 934 'Additional Access' hours (equivalent to 116 x 8 hr shifts or 78 x 12 hr shifts) and 168 (following the deletion of 'Firewalls' in June (Rugby), October (Nuneaton) and January 2009 (Milton Keynes)) 'Firewall' hours (21 x 8hr or 14 x 12 hr shifts). It is also important to note that the nature of this additional possession time is predominantly 'All Line Blocks', thereby providing full access to the railway. We agree with Network Rail that the 'Additional Access' is necessary to deliver the remaining work. The 'Firewalls' provide contingency access and protect the delivery of the Output, should works not be completed as required during the 'Additional Access' possessions. Whilst Network Rail has determined that it no longer requires the 'Firewalls' in June, October and January 2009, our agreement to the relinquishing of the January 'Firewall' is on the understanding that resources will be prioritized for the West Coast Programme should the Rugby 'Firewall' at Christmas be required. This prioritization may result in the deferral of works on other projects that are currently planning to utilize the Christmas period.

We consider that the remaining 'Firewalls', at Northampton in November and at Rugby over Christmas, should be retained for as long as possible and certainly until such time as Network Rail can demonstrate categorically that they are no longer required.

3.4 **Programme Scope**

Network Rail, in its Delivery Plan (Section 2), has summarised the outputs that will be delivered by the West Coast Programme. It has subsequently provided a matrix (see Appendix A of this report) identifying the outstanding works and the outputs that they support.

We are satisfied that the infrastructure that Network Rail is planning to deliver will support the various outputs that are consistent with the customer reasonable requirements. In our monitoring role, we have previously checked Network Rail's working timetable for December 2008 and, in so doing, have verified that the proposed timetable will deliver the passenger train outputs that have been specified. It has not been possible to verify the delivery of the freight requirements as the freight timetable development is still in progress with the freight operating companies.

3.5 Resource Plans

3.5.1 Manpower

Network Rail has identified that the two critical areas for labour resources are signalling testers and OLE linesmen. The resource schedules that have been provided for signal testers and OLE linesmen appear to indicate that demand will exceed supply on a number of occasions. Network Rail has stated that it will amend the plan (the 'demand') to balance the supply.

The supply of signal testers is recognised as a major risk to achieving the commissioning dates for the WCRM Programme. The original planning in 2006 was based on a national tester weekly capacity limit of 250, but this was reduced in April 2007 to 220. As part of the investigation earlier this year into the work over Christmas, Network Rail provided a copy of its demand schedule, as at November 2007. This schedule indicated that there were a number of peaks in demand in May 2008 and through July and August 2008 that significantly exceeded the available supply. The latest schedule has reduced the number

and extent of these exceedences and is considered to represent a more manageable position.

The production of resource schedules for OLE linesmen is a new development and follows the problems that were encountered by Network Rail during the Christmas blockades. Network Rail has identified a national weekend resource capacity of circa 320 linesmen (applying an average of 80% of full capacity), with an increase to circa 360 (90% capacity) over the Christmas / New Year period (2008/9). The number and extent of the breaches of available linesmen, as with the signal testers, is considered therefore to be manageable.

In order to avoid the situation where the lack of other resources impacts on the delivery of the planned works, Network Rail now requires its contractors to identify all resources that they propose to use on major possessions for their respective projects, irrespective of discipline. This is a significant step-change.

3.5.2 Plant

Network Rail has stated that it produces demand schedules for all key 'on track' plant, including tampers and specialist (Kirow) cranes. This is consistent with evidence that Network Rail has provided previously as part of a review of the delivery of the West Coast Programme in July 2007.

As an example NR has provided a copy of its demand profile for plain line tampers. This indicates a high demand from now until December, so issues of reliability as well as availability will need to be carefully managed.

3.5.3 Quantities

Network Rail regularly reports the delivery of Programme quantities across asset types and activities in its four-weekly period reports. As part of its Delivery Plan, Network Rail has provided schedules for:

- The delivery and installation of switches and crossing (S&C).
- The installation of rail, sleepers and ballast.
- The commissioning of Solid State Interlockings (SSIs).

Network Rail has advised that other materials that are monitored in a similar manner for quantity installed and quantity delivered are Overhead Line Electrification structures, axle counters, TPWS (Train Protection Warning Systems), signal cabling and TASS (Tilt Activation and Speed Supervision).

While the volume of composite track (the combined yardage of rail, sleepers and ballast) to be installed by December 2008, from Network Rail's schedule, is approximately 50% of the volume delivered in 2007/8, the number of S&C units to be installed is greater (74 vs 63). The installation of S&C requires long disruptive possessions. To achieve the delivery plan set out by Network Rail requires a step change in possessions through

2008/9 compared to that enjoyed in 2007/8. The possession plan set out in Option B provides the level of access required to deliver the volume of S&C planned, notwithstanding the delivery problems that Network Rail is currently experiencing, as illustrated by the S&C delivery tracker (Appendix 4.12 to Network Rail's Delivery Plan).

A review of the SSI commissioning schedule shows a reasonable correlation with the major commissioning milestones and the WCRM Programme Master Schedule. The only anomaly appears to be with the SSI commissionings at Northampton in October 2008.

From the WCRM Executive Report for Period 13, our assessment of the forecast quantities 'To Go' and comparison against previous years, supports the findings from the review of the S&C installation plan. The volumes demand a step change in the rate of delivery compared to last year. This step change is not inconsistent with what has been achieved in previous years on West Coast, but this time the achievement of the volumes is facilitated by the more extensive access to the railway where previously high output equipment was being used and track renewal volumes were four times that planned in 2008/9.

Network Rail has confirmed that all long lead items have been procured for all of the projects and are now being monitored through to delivery using tracker schedules, an example of which has been provided for S&C, as noted above.

3.6 WCRM Programme Team

The WCRM Programme Management team will be under significant pressure and should be fully resourced. The current organization chart that has been supplied by Network Rail indicates that there are over 65 vacancies (10% of the overall team). Network Rail has stated that it is employing a number of measures to fill the vacancies, including redeployment from the Infrastructure Investment Group and functional departments within Network Rail. Examples of the application of these measures have subsequently been provided and include:

- The introduction of a team of experienced signalling engineers led by the former professional head of signalling;
- The transfer of the Northampton project to Infrastructure Investment to enable the current team to be redeployed to line speed profile works on Route Section 12;
- The extension of the Bechtel contract and a number of existing posts;
- Approval has been granted for the appointment of nineteen agency staff.

3.7 Risk Management

Network Rail has provided a copy of its complete Programme risk register. The risk register is regularly updated and contains risks that are likely to have an impact on a number of the constituent projects of the WCRM Programme, or risks emanating from a single project that may have consequential impacts on other projects in the Programme. Network Rail has confirmed that the risk register is used to determine the Programme

cost contingency and delivery probability. It also contains details of the mitigation measures that Network Rail proposes to adopt to reduce the likelihood and consequence of the event giving rise to the risk.

Having reviewed the risk register, it is considered that the risks identified are reasonably comprehensive. An omission is the potential impact of a serious incident on the rail network that may necessitate the redeployment of resources or directly impact on access to the railway.

Network Rail has carried out an SQRA on the Programme risk register. Without the 'Firewall' possessions there is an 82% probability of delivering the December 08 timetable. With the original Option B 'Firewall' possessions the probability increased to over 95%. Network Rail has re-run the SQRA on the basis of the reduced number of 'Firewall' possessions and has confirmed that the probability remains high at 92%. This is due to the increased confidence that has been generated through the successful delivery of work across the WCRM Programme since February, particularly at Easter, and the risk mitigation measures that Network Rail has implemented.

3.8 Contingency

In section 7 of its Delivery Plan, Network Rail has set-out the main contingencies that have been built into the Plan and the extent to which they will allow the Plan to be delivered with a high probability of success. In developing its contingency plan, Network Rail has endeavoured to balance the competing and conflicting factors associated with access to the railway and minimising disruption to train and freight operators and their respective passengers / customers. Network Rail's contingency plan consists of:

- Access to the Railway Additional possessions and 'Firewall' possessions have been incorporated within the Option B proposal (see section 3.3 above). It is considered that the additional possessions are necessary to deliver the Plan and, as such, have limited contingency value. The 'Firewall' possessions are a valuable contingency and should be retained.
- Possession durations 'Small' possessions are planned on the basis that work should be complete 90 minutes before the end of the possession. 'Long' possessions have an allowance of several hours. This approach provides greater certainty of completing the planned works in the possession without impacting on the resumption of train services.
- Resources Network Rail has stated that it is planning its resource levels at 10% higher than that required to deliver the Output, and further resources will be on standby. In addition, spare materials, consumables and plant are planned to be available for all major possessions.

The other contingencies proposed in Network Rail's Plan concern the planning of possessions and re-phasing of work to future possessions to enable the railway operation to be restored as planned. These include the improved management arrangements to ensure accuracy of reporting of progress by the contractors during possessions and to

address the operational interfaces with train operating companies. These are not considered to be true contingencies in the context of delivering the Output itself.

3.9 Consultation with External Stakeholders

As directed by the Provisional Order, Network Rail has consulted with persons providing services relating to railways, Passenger Focus, London TravelWatch and relevant funders. Responses were received from 23 organisations.

While some of the responses expressed no particular preference for Option B or C, others expressed strong views for and against both options. The freight organisations and Virgin have stated that they are firmly against Option B. Funders, including the DfT and Transport Scotland, passenger organisations, West Coast 250, and the majority of train operators prefer Option B. With no option with unanimous support, Network Rail has decided that it will adopt Option B.

The concerns expressed by the freight companies are that Option B will significantly disrupt their operation to the extent that it will threaten their long term business. Network Rail has stated that it will work with the freight operators to minimise the impact of the proposed possessions. However, despite the further consultation that has been possible since the initial submission on 31 March and the update on 25 April, the key issues relating to the possessions through the Trent Valley and at Crewe-Weaver during August and September remain. The only recourse available to the freight operators is through the industry processes. Notwithstanding this, Network Rail has stated that it will continue to negotiate with the freight operators in an effort to resolve some of the detail issues.

Virgin has stated that it does not believe that there are any available driver training solutions for Option B except for a reduced train service, which will create a less safe situation. Network Rail considers that there are potential solutions and is continuing to work with Virgin to establish an acceptable arrangement. The DfT and ORR have also been involved in meetings with Virgin to explore the options that are available. Following detailed negotiations with Virgin the driver training issue has been resolved by agreeing a phased introduction into operation of specific parts of the new infrastructure. Network Rail has proposed to:

- defer the full commissioning of the line speed profile works planned for August 2008 on the Colwich to Cheadle Hulme route will be deferred until Easter 2009. Additional possessions will be required at that time to complete these works;
- continue the physical works between Colwich and Cheadle Hulme during 2008, subject to these works not triggering unacceptable levels of driver training;
- remove all Temporary Speed Restrictions (TSRs) where possible on the Colwich to Cheadle Hulme route until the line speed profile works are complete;
- modify the timing controls at the Aston by Stone Level Crossing to avoid any further erosion of the journey times through this section of the route, over and above that caused by the deferral of the line speed profile works;

- commission the bi-directional signalling as planned in September 2008 as part of the Trent Valley 4-Tracking project, but defer the bringing into use until August 2009 when the bi-directional signalling is commissioned as part of the Nuneaton project;
- seek the express agreement of Virgin prior to using any 'Firewall' possession, where retained in the possession plan, for signal commissioning. Virgin's agreement is not to be withheld unreasonably.

Network Rail considers that the above modifications to the delivery plan will allow the Output to be delivered for the December 2008 timetable change and allow Virgin to train its drivers without undue disruption to the present services.

While we are in general agreement with Network Rail's proposals, the agreement with Virgin concerning the 'Firewalls' creates a potential risk that the 'Firewalls' that remain in the plan and clearly protect the delivery of signal commissionings will be compromised if Virgin's prior agreement cannot be obtained. At a meeting with senior managers on 1 May, Network Rail expressed confidence in its delivery plans and in its ability to address any adverse effects associated with using the remaining 'Firewalls' in November and at Christmas.

It is noted that the other train operators that use the West Coast Main Line have expressed the view that Option B would be better for them in respect of driver training as they already have plans in place. Any changes would require replanning and rework.

3.10 Commitment of Senior Management

lain Coucher, in his letter of 31 March 2008 to Bill Emery, has confirmed that Network Rail's Board is committed to delivering the Output based on the principles outlined in the WCRM Delivery Plan. This is interpreted as being a firm commitment to provide the WCRM Programme with the financial resources that it needs together with staffing support and prioritisation on access to the railway and to contractor resources where a conflict may exist with other Network Rail projects. The latter may be tested should the Christmas 'Firewall' be required to enable the commissioning of Rugby Stage J.

4 Conclusion

The possession plan associated with the latest revision of Option B represents a significant increase on the pre-existing plan and is consistent with the access that is now necessary to deliver the infrastructure improvements that are required to support the timetable improvements planned for December 2008. With the provision of the 'Firewall' possessions Network Rail's SQRA indicates a greater than 90% probability of success. However, this success is reliant on the cooperation of the industry in working constructively to mitigate the impacts of the possession plan and in developing driver training plans that support the bringing into use of the new infrastructure.

The WCRM Programme still remains a challenge to Network Rail. The Programme Management team and its contractors must remain focused so that they continue to build on their achievements at Easter. The next round of signalling commissionings are at Rugby and Trent Valley at the end of May. Network Rail, as a result of the success at Easter, has decided that it no longer requires the 'Firewalls' in June (for Rugby), October (for Nuneaton) and January 2009 (for Milton Keynes). The remaining two 'Firewalls' remain under review as Network Rail continues with the delivery of the Programme and its confidence grows. However, we consider that, as a key element of the contingency plan for the Programme, these 'Firewalls' should be retained until such time as it can be clearly demonstrated that they are not required.

We will continue to monitor the delivery of the WCRM Programme and will follow up on our findings relating to the Rugby Project Schedule. In addition we will continue to pursue the other issues that we have raised with Network Rail concerning the reliability and maintainability of the new infrastructure once the December 2008 timetable is introduced.

APPENDIX A - Matrix of Outstanding Work (as at April 2008) and Output Dependencies

ut	tput Dependencies.																				
	<u>OUTPUTS</u>	London - Birmingham / Wolverhampton Journey Time	London - Manchester via Stoke Journey Time	London - Manchester via Crewe Journey Time	London - Liverpool Journey Time	London - Chester / N.Wales Journey Time	London - Preston Journey Time	London - Carlisle Journey Time	London - Glasgow Journey Time	Journey Times for London Midland	Journey Times for Trans Pennine Express	Journey Times for Cross Country	Service enhancement for Virgin West Coast	Service enhancement for London Midland	Service enhancement for Trans Pennine Express	Service enhancement for Northern Rail	Service enhancement for Cross Country	Service enhancement for East Midlands	Route capacity improvement for freight (all FOCs)	Depot access improvement for London Midland	Performance
																					
				1																	
_																					
									I								I				

APPENDIX A - Matrix of Outstanding Work (as at April 2008) and Output Dependencies.																							
				ton																	Γ		
				ondon - Birmingham / Wolverhampton ourney Time				1															
				erhe	ke	9Mé															for	for	
			လု	/olv	via Stoke	Crewe		les							Ι.			Ι.	Ι.	Ι.	improvement s)		
			OUTPUTS	× /	via	via		N.Wales					ss		t for	t for	t for ss	t for	t for	t for	ver	eme	
			린	nam	ster	ster	-				_		bre:		neni t	Jeni	pre	ner	Jeni	Jen	pro	rov	
			5	ingh	ches	che	ood	ster	ton	sle	gov	s for	s for Ex	s for	cen	cen od	EX	cen	cen	cen	(im (S	d pi	
			O	me	lan me	/an me	iver me	ches me	res	arli me	slas me	mes dlar	mes nine	mes ntry	han t Co	han dlar	han nine	han tail	han ntry	han nds	FO	ess dlar	e
				Ц Ц Ц	- ⊥ L	Γ.Υ	Ξ- Γ-	- T	Ξ	- T	j − ⊐	ΞΥ	y Ti ⊃en	y Ti Cou	e en Ves	e en Mi	e en Den	e en rn R	e en Cou	e en idla	cap; (all	acce Mi	nan
				lune	London - Manchester Journey Time	.ondon - Manchester ourney Time	London - Liverpool Journey Time	London - Chester / N Journey Time	London - Preston Journey Time	London - Carlisle Journey Time	London - Glasgow Journey Time	Journey Times for London Midland	Journey Times for Trans Pennine Expr	Journey Times for Cross Country	Service enhancement for Virgin West Coast	ervice enhancement for ondon Midland	Service enhancement for Frans Pennine Express	Service enhancement for Northern Rail	Service enhancement for Cross Country	Service enhancement for East Midlands	Route capacity im freight (all FOCs)	Depot access improvement London Midland	erformance
				Lor	Lor Jou	Lor Jou	Lor Jot	Lor Jol	Lor Jol	Lor Jou	Lor Jol	Lor	Jou Tra	Jor Crc	Sel Virg	Sel Lor	Sei Tra	Sei	Sel Cro	Sei Ea:	Ro frei	Lor	Pel
Location of Works	Nature of Works	<u>Comments</u>																					
Primrose Hill - Queens Park	LSP improvements																		1		Τ		
Willesden West London Junction	Removal of TSR	Territory renewals of S&C																			1		
Watford Tunnel	LSP improvements																						
Tring	Signalling and LSP improvements	Slow Lines only.																					
	LSP improvements	Up Line only - signage issue	_																<u> </u>	<u> </u>	—		┝──┤
Bletchley Milton Keynes	Remodelling and resignalling Remodelling and resignalling	Mostly 2009 - 2010 Christmas 2008 commissioning	_																				┝──┤
Hunsbury Hill	Signalling and LSP improvements	Chinatinas 2000 commissioning																					
Northampton	Signalling re-control		+		t		1	1	1	1													
Northampton	Platform extensions	Route / Territory scheme						L															
Rugby	Remodelling and resignalling																						
Coventry	LSP improvements																						
Berkswell and Tile Hill	Platform extensions	Route / Territory scheme				_																	
Birmingham International	Signalling improvements	MUL/EDD simples instants (UDT, UD issue	_																		—		
Rugby - B'ham - Wolves - Stafford	Differential Speed Signage	MU / EPS signage instead of HST - HQ issue. Some functionality deferred until August 2009.																			-		
Nuneaton Trent Valley	Remodelling and resignalling 4-tracking	Some functionality defended until August 2009.																					
Atherstone	LSP improvements																						
Armitage - Colwich	LSP improvements			İ															İ		1		
	LSP improvements																						
Sandbach - Wilmslow	LSP improvements																						
Cheadle Hulme	LSP improvements	Up Line only	_	<u> </u>			<u> </u>	<u> </u>															
Stone	Signalling improvements	Commissioning "Warner" route	_				<u> </u>																
	Signalling improvements Remodelling and LSP improvements	Commissioning "Warner" route	_			_		+															
Stoke - Longport Weaver Junction	Remodelling and LSP improvements																						
Runcorn - Ditton - Halewood	LSP improvements					+															1		┝──┤
Barton & Broughton	LSP improvements	Territory renewals of S&C																			\uparrow		
Garstang & Catterall	LSP improvements	Renewals of S&C																					
Oubeck	LSP improvements	Territory renewals of S&C																					
Lancaster	Signalling improvements	Turn-back facilities in P3 and P4																					
Carnforth	LSP Improvements	Territory renewals of S&C	_		ļ							<u> </u>									┥───		
	LSP improvements	Up Line only.	+			+						<u> </u>									──		\vdash
Shap - Low Gill Penrith	LSP improvements LSP improvements		_																		──		\vdash
Plumpton	LSP improvements	Territory renewals of S&C				-		+													+		\vdash
	LSP improvements					1															1		
Upperby Bridge	LSP improvements			İ		1	1	1											İ		1		
Beattock - Abington	LSP improvements																						
Harthope Viaduct	LSP improvements																						
Various Off Pouto Works Affort	Auto Transformer / Power Supply Upgrades	Some work in CP4 and CP5		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>						<u> </u>	<u> </u>				
Off-Route Works Affect				<u> </u>		1				1										1		1	
Manchester Airport Olive Mount Chord	New platform Re-instatement of goods line	Route / Territory scheme Route / Territory scheme	+			+													ļ		╘		
	Signalling improvements and double-tracking	Route / Territory scheme	+								ł												
ISCOW & SOUTH WASTER POUTE			_	 		+	+	+	ł	+	+										-		
	Signalling improvements	Route / Territory scheme																					
Settle and Carlisle Route Blackburn - Hellifield	Signalling improvements Signalling improvements	Route / Territory scheme Route / Territory scheme																					