
To : Network Rail and Office of Rail Regulation
Subject : West Coast South Reliability Programme
Paper : Final Report and Recommendations
Submitted By : Chris Gibb
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1 Purpose of Paper

This paper is a final progress report, conclusions and recommendations of the West Coast South Reliability Programme to improve performance of all trains between Rugby and Euston. The initiative has been overseen by the West Coast South Joint Board ("WCSJB") chaired by David Higgins and attended by the MDs of all the passenger and freight operators involved in this section. The initiative has been undertaken by a small team led by myself, consisting of people from NR, VT and LM on secondment to NR. We have sought to bring together a wide range of existing initiatives, add some focus and fill some gaps where needed. We have had enthusiastic support from all levels in all organisations. The initiative has run from 18th June to 24th November, 2012.

2 The Priority Delay Categories

Work has been undertaken to analyse the emerging Network Rail led initiatives, review their quality and the risks to delivery of the delay minutes savings and better understand the implementation profile.

There are more than 330 initiatives underway that impact on Rugby to Euston performance, contained in more than eight different improvement plans. Analysis and investigation of these has been completed, and it is now possible to confirm how these initiatives are expected to reduce delay minutes. Of particular interest are the five priority delay categories, which are now forecast to reduce as follows over the next year. The outcomes are more difficult to forecast accurately the further one looks into the future.

<u>Period 1-7 Rugby - Euston</u>	<u>2012/13</u>	<u>2013/14</u>	
Track Faults	30,622	28,363	7% better
OHLE / third rail defects	23,511	8,558	64% better
Fatalities and Trespass	18,058	10,068	44% better
Point Failures	16,753	10,190	39% better
<u>Axle Counter / TC failures</u>	<u>18,608</u>	<u>15,886</u>	<u>15% better</u>
Total	107,592	73,066	32% better
Other	93,696	85,677	9% better
Grand Total	201,288	158,743	21% better

It is believed that a 21% reduction in total delay minutes along with benefits these will provide in the reduction of cancellations is sufficient to meet JPIP PPM and CP4 delay minute targets in 2013/14. In coming months the NR team will ensure these plans are robust and ready for inclusion in TOC / FOC JPIPs for 2013/14, and Virgin Trains' JPIP from 9th December. Ben Roberts will remain on secondment from VT to NR, until 31st March, 2013 to support the IPAT programme management that will manage and monitor the implementation of the plans.

We have engaged with the NR HQ team leading the L&SE Recovery Plan to understand how this relates to LM performance. Whilst most initiatives in the Recovery Plan are already envisaged in the LNW plans, it is hoped that some new ideas can be adopted to improve LM performance. Paul Robinson and Ben Roberts will continue this work until 31st March, 2013, working closely with Steve Longmore in LM.

It is recommended that NR support the above approach.

3 Suicide Prevention

Previous plans have included insufficient initiatives to achieve more than a 12% reduction in delay minutes, and, that left unchecked, this will continue to be a major contributor to delay minutes in a year's time. We undertook a project to create more initiatives as quickly as possible. Progress on this is as follows:

- Plans are now being finalised for physical suicide prevention measures at nine LM stations between Euston and Rugby, totalling £0.8m of NR capex expenditure with LM as the delivery agent. The target is for physical completion by 31st March, 2013 but this is challenging. Project completion will be supported by an initiative to encourage station staff to adopt the scheme and get the maximum possible benefit from the physical suicide prevention measures. It is recommended that NR continue to support and complete this project.
- The Samaritans awareness campaign was re-launched externally and amongst staff. A multiple train naming (LM, VT and DRS) event took place on 4th October at Euston. This was an opportunity to show the diverse industry united in support of this national initiative, both externally and internally. The event is being used to communicate the Samaritans project within our organisations.
- Samaritans station staff training has been stepped up amongst staff at stations between Euston and Rugby.
- We made a suggestion to NR to create a national suicide investigation unit that investigates each "non suspicious" death with an aim of proposing prevention measures, both locally and nationally, in a manner similar to that undertaken by RAIB for accidents. This is being considered by NR, and it is recommended that this or a similar initiative is adopted by 31st March, 2013.
- The role of the British Transport Police is key in suicide prevention. The BTP have done excellent work in improving incident response and delivering partial reopening quickly, in particular on Rugby – Euston / the BTP London North Area. This activity now needs to move to more of a "crime prevention" project, in a similar manner to that adopted for cable theft. BTP have the capability to lead this work, with NR, the TOCs and the Samaritans in support roles. It is recommended to NR that they engage with BTP to adopt such an approach, starting with the BTP London North Area, and that agreement is reach to apply from April, 2013.

Neither operators nor NR can meet current JPIP/CP4 targets if the historic level of suicides continues at 10-13 per annum between Rugby and Euston. At a Samaritans campaign launch on 19th September we learnt that in the UK suicide levels fell for 20 years to 2008, and have been rising steadily since (4,200 per annum, of which c.6% are on the railway), and also that the experts advise that closing one suicide means does not result in people seeking out another. The projects and forecast minutes' savings are being added to NR's IPAT database and will therefore be ready for inclusion in JPIPs for 2013/14. They will also contribute to NR's stated aim of a 20% reduction each year over the five year partnership with the Samaritans.

On 29th October (period 8) a suicide at Apsley severely disrupted services. The incident occurred at 1540, and it was not until 1730 that two tracks reopened for services to resume. The delay in reopening was due to the widespread dispersal of body parts and the gathering darkness. This was yet another fatality involving a train on the Down Fast, however, unlike many recent fatalities the victim did not gain access to the railway from a station platform. The point of access was at a footbridge 1km north of Apsley. The Up side of the bridge is a residential area, but the Down side is a field or area of scrub land, and is quite isolated. Beer and personal effects were found at the scene. The fence at this location was only of the post and wire type, and there was also a small gap between the bridge and the fence post. It is unknown whether the victim climbed over the fence or went through this small gap. The NR Off Track team installed 6' chain link fencing on 30th October on the Down side of the bridge at this location to increase security. The Up side already has palisade fencing in place. Further analysis of fencing effectiveness between Rugby and Euston will be undertaken.

The one incident above caused 8,709 delay minutes, 82 full and 53 part cancellations and severe customer service issues for LM and Virgin Trains for the rest of the day. The schedule 8 cost is approximately £850,000. The delay minute breakdown for the operators is:

Virgin Trains – 4090	Southern – 260
London Midland – 2305	LOROL - 224
DBS – 538	Cross Country - 124
Freightliner – 373	Rest – 795

This single incident was sufficient to prevent Virgin Trains meeting its JPIP target for the period. David Johnson will remain on secondment from VT to NR, until 31st March, 2013 to manage the suicide prevention project for Rugby to Euston.

NR has recently introduced a new fencing standard, and plans to comply with this between Rugby and Euston are being developed. If we wish to effectively limit access to the WCML between Rugby and Euston for trespassers, cable thieves, suicidal people and animals, we should seriously think about upgrading fencing to HS1 standards. At present, as with so many other aspects of the infrastructure, West Coast South is a patchwork of high security fencing and post and wire. The service frequency on WCML and performance challenges, compared to HS1, suggest that this would have a business case, especially in the more populated section between Cheddington and Euston. Rather than assess risk on a metre by metre basis, and fence short sections at very high per metre costs, it is suggested that a single project be undertaken to deliver compliance for all of Euston to Cheddington, Euston to Hanslope Junction or Euston to Rugby. Limited enquiries made to France's RFF suggest they experience over 400 suicides annually at present (they had a record of 45 in October), but that less than 3% are on LGV routes with HS1 standard fencing and few accessible platforms.

It is recommended that NR assess the cost, practicalities and benefits of adopting the HS1 fencing standard for all or part of Euston to Rugby, and comply with the standard before 31st March, 2014. This work must be co-ordinated with the work to improve access points – see section 8.

4. Track Condition Monitoring

LM, DBS, Southern and VT have provided a group of twelve chosen drivers to engage with a NR TME on a regular basis by email, highlighting, in an agreed manner, track

standard variations that may lead to subsequent bump reports if no action is taken. The drivers met with the NR team on the NMT on 17th October, and have commenced their communications. They all drive over Rugby – Euston on a daily basis, and their knowledge and observations will be useful to the NR team to supplement the technology led condition monitoring.

It is recommended that this is reviewed by NR in February, 2013, before the end of the trial period, and the outcome of the review adopted for the future.

5. Network Rail Organisation

Dyan Crowther has been appointed to the post of Route Managing Director, LNW, and has taken her post. An immediate task will be to press ahead with re-organisation as set out below, which I fully support in respect of LNW Route.

It is approximately one year since Network Rail began its process of devolution. Much has been achieved, but much remains to be done. In order to empower devolved decision making even further into the organisation the key objective of this change is to push accountability down another level beyond Route Managing Directors by creating Area Directors (AD) who are responsible for all day to day delivery of inspection, maintenance and operations within the area. Also considered essential is the separation of delivery of CAPEX work to a new post reporting to the Route Managing Director (RMD), and a new 'route services' role to lead those activities which remain route based.

The first key principle of this change is the creation of the Area Director (AD) post which will replace the existing Route Infrastructure Maintenance Director and General Manager roles. As a guide, each AD will have approximately one thousand miles, two Delivery Units, and where appropriate a ROC.

As a minimum, operational management posts, Infrastructure Maintenance Delivery Managers, and possession management will report into the Area Director organisation although sizing and other factors within routes may vary this structure.

The AD role will 'own' their patch in a very proactive manner, much as RMDs do for their routes, but with a clear focus on day to day delivery of operations and maintenance.

It is recommended that the reorganisation is implemented on the NR LNW Route at the earliest possible opportunity in 2013.

6. Network Rail Frontline Staff

We have visited a number of NR accommodation facilities in the Watford – London area, which we have found to be of a very poor standard when compared with the new facilities at Milton Keynes, Sandwell & Dudley etc.. Some of the locations are facing imminent demolition as a result of projects such as Crossrail, HS2 etc., and others have leases which expire soon. NR is about to acquire Wembley Yard from DBS, bringing with it land and more accommodation. The NR team are aware of these issues. It is recommended that a project is undertaken as soon as possible to improve and rationalise accommodation in this area. This is especially important given the criticality to performance of the staff involved and their low morale compared to other NR teams, as described in the Q12 staff engagement survey.

In addition to accommodation, the issue the frontline staff most want progress on is access points. In the urban area these are generally in poor condition, and unsuitable for use by a lot of equipment. As well as being difficult to work with, they determine the efficiency of the teams, response times and efficient use of possessions. This is discussed further in paragraph 8 of this report.

We have met with lots of NR frontline staff and local managers in recent weeks in the Cheddington – Euston area, and now have a fair understanding of their issues. Staff engagement is key to resolving these and the relatively new management team is making real progress in authentic engagement. Nevertheless it is important for NR to measure and understand effective engagement and, with NR having decided not to hold the Gallop “Q12” survey in 2012, we organised a workshop of front line staff to discuss the issue and to understand what they believe is important. A suggestion to NR has been made, which will be followed up by a presentation to Richard Doyle on 28th November. ORR are asked to note this, but not to take a regulatory interest in either the process or the eventual results; NR need to be free to do this in the manner of a normal unregulated business, and whilst all operators do staff engagement surveys, none are obliged to present this information to ORR.

An important element of motivating the maintenance teams is recognition by the industry of what they do and how important it is. We have suggested to the NR Communications team in particular that they aim to be more balanced between attention given internally and externally to major new projects and to the more general, but less glamorous, renewal and maintenance activity. It is recommended that NR and other industry partners support this approach.

7. Procurement for Performance and OHLE

I have held a concern that NR’s procurement process has been dominated by standards compliance, shelf price and project timescales, and that long term performance and maintainability has not been important enough. I chose to investigate this by picking one component key to WCML performance – the neutral section – and exploring the process of procurement, maintenance, OEM role and performance, and comparing this to what I know about train components. I have attended a range of meetings, site visits and engaged with maintenance staff, and seen one being changed in an overnight possession. I regret to say that my concerns appear founded, and there are significant issues. In respect of this particular component I am confident a much more collaborative way forward has now been identified, but the lessons need to be learnt across many areas of procurement. This represents a considerable opportunity for performance improvement and cost savings for NR.

All 125mph neutral sections are to be changed to the so-called “Red Label” Arthur Flurry neutral section. The manufacturer claims to have recommended this in 2008, but NR cannot trace such a request, and also claims the current “Yellow Label” version was never intended for 125mph operation. It appears that the West Coast Route Modernisation project team were more focussed on within budget / on time delivery of the project, than the medium / long term component performance, and this approach has clearly cost NR and the industry dearly in terms of poor performance.

The example shows the lack of effective engineering change control, component bench testing, OEM two way engagement and influence over long term component performance. It is recommended that NR redevelops key supplier relationships into a new model that gives incentives for good component performance and shares

component performance experience with suppliers in a way that encourages a continuous cycle of higher performing components. The aim should be to reach a position where brands, reputations and global sales flourish around components seen as reliable, and fall where the components fail. The current situation is one where NR suppresses all component branding in favour of its own, and only the NR brand and reputation is at risk.

It is also recommended that NR involves suppliers more in the setting of specifications, and that these specifications are less detailed in a way that leaves the supplier feeling responsible for component design and manufacture. The infrastructure is a complex system of inter-related and inter-dependent components of different origins and ages, from different suppliers and performing different roles, and it is fully recognised that this is neither easy or can be quickly achieved. However many train operators have achieved this with newly built train fleets, in a complex system involving depots, movement and mixed fleets, and it is essential to bring suppliers to the table in this way if component performance is to improve.

A programme for the neutral section changes is being established, and is supported. In the short term enhanced inspection is in place, although this will not prevent a sudden component failure, which is a major risk to performance at present. During the component change programme there will be a risk of new component failure, as correct installation is difficult and disturbs other nearby components, the condition of which is not fully understood.

In 2009 NR invested £200k in a contact wire monitoring system which is installed on the pantograph of two Pendolinos and fully operational. It detects irregularities in the contact wire, and feeds the information to NR directly, to a data monitoring centre at Derby. The output is easily readable (see appendix 1) and highlights a potential problem location as a red alert. After witnessing the removal of a faulty neutral section at Wembley that had been identified using a visual inspection (camera on a pole), I asked for the download, which is appendix 1. If this had been spotted at Derby, it had not been acted on, and no alert had been passed to the maintenance team. I believe this information is not being effectively used, as this scenario has happened frequently before, and the handling of it should be immediately reviewed. In my view the linkages between OHLE, track and train performance, all available data should be reviewed in one location by the Route team, and in as near real time as can be achieved. It is recommended that the monitoring of this data is immediately moved from Derby to the LNW Route, and incorporated within the team monitoring other data streams relating to track, S&C and signalling. Changing a neutral section costs approximately £8k, and yet the schedule 8 cost of a failure between Rugby and Euston would normally be between £500k and £1,500k, and could easily prompt ORR enforcement action costing far more.

Further work is recommended between Rugby and Euston, and more widely on the WCML, to establish the identity, age and condition of OHLE components in use, establish a change control process and develop a more effective maintenance regime that changes components before failure in almost all situations. The further work should directly involve Virgin Trains, LM, Alstom, Siemens and Brecknell Willis, and OHLE component suppliers where relevant. The use of consultants should be avoided if at all possible. This work should be completed during 2013.

Renewal of infrastructure between Rugby and Euston involves high unit costs, largely because of the access limitations. The unit costs are believed to be higher than most other sections of UK railway in comparison. In the ORR's portfolio of targets that are set

for NR, volume of renewal is a key measure. To meet this target in the most affordable manner, NR selects assets to renew that involve lower unit costs than the section between Rugby and Euston. The unintended consequence of this policy is that the infrastructure on this section is not getting the level of renewal required to sustain high levels of performance, and is perceived as “inefficient”. An example of this is the number of infrastructure faults relating to the Up Fast line, which is the most difficult (expensive) to access, requiring the Down Fast and Down Slow to both be blocked for any significant work to be undertaken, as clearances are very tight. There are significantly more track faults and poor condition OHLE on this line than the other three tracks, and this situation will worsen as the years of this policy go by.

It is recommended that the ORR note the unintended consequence of the setting of national volume targets, and consider how target setting can be improved going forward to better support the performance of intensely used sections of infrastructure and be more consistent with the delivery of performance targets. The outcome of these deliberations should be implemented in CP5.

8. Future maintenance strategy

Common themes about the challenges of maintenance have arisen throughout this project, particularly regarding Euston – Cheddington. These are the difficulties of access around the train service, the difficulties of access to the railway in an intensely populated area, the need for frequent inspection and maintenance to keep the ageing equipment going and the poor efficiency possible with conventional manpower to do all this. I have heard of a range of ideas of how to do this better, some of which involve running less trains and therefore earning less revenue, but one idea has attracted my attention, which is set out in Appendix 2, titled the “Mobile Maintenance System”. In my view such a unit working continually between Euston and Cheddington could be very effective, versatile and efficient : mostly without a possession it can change rails, maintain S&C, inspect track, S&C, OHLE, tunnels and lineside, act as a lighting and CCTV platform and potentially maintain OHLE with a suitable roof platform. By using a rail vehicle to access the track, the need for efficient access points is reduced. Such equipment operates extensively in Europe. It is recommended that a trial of such a unit between Euston and Cheddington should be considered, and a decision taken soon enough to influence maintenance procedures on this section in CP5.

The section between Watford and Euston is some of the most difficult to maintain and ageing infrastructure, passing through an urban area which limits access to and alongside the railway whilst influencing the railway with earthworks issues, trespass and other “neighbour” issues. The current possession arrangements are barely enough to hold the infrastructure in its current condition, which in turn is not good enough to sustain good performance. We examined alternative ways to provide more access, allowing more work to be done and reducing costs. Our conclusion is that from 2015 a radical new approach to maintenance/renewal on this section is required, based on the following:

1. Signalled Passenger train access to/from DC lines at Watford, as part of Watford Re-signalling project at Christmas, 2014. “Passive provision” is currently part of the project, and must be stepped up to “active provision” at the earliest possible opportunity.
2. By agreement with DfT, with the support of ORR, new LM and ICWC franchise agreements with SLC/PSR requiring the following:
3. Complete closure of Bushey - Euston to AC traction, and block of all AC only lines, for the following periods: 2200 Sat-0715 Sun and 0005 - 0500 Mon, every weekend. Renewal of most OHLE components during these periods over a 5-10 year period. Power supply to Wembley Depot must be maintained. Extensive track work, S&C maintenance, drainage work, vegetation, tunnel work, HS2

work all enabled with all OHLE off. DC lines power supply is to be reviewed to establish that it can support LM/Southern train sets.

4. Between these periods LM/Southern/diesel hauled trains diverted to DC lines between Watford and Willesden Junction/Euston. Options for Southern (Thameslink by then) or LOROL to run the MK - Euston service during this period at night, as all trains are DC active and many spare, and the trains can be diverted from Willesden to Victoria when Euston shut for HS2 work. VT trains operate north of Watford only (turning at Watford possible post re-signalling).
5. MMS style unit doing round the clock maintenance/incident response between Cheddington/Watford and Euston, operating from a rail connected base/store at Willesden/Wembley where the core of the maintenance team could be based. The maintenance team availability to be planned around the two regular access opportunities described in paragraph 2, rather than daytime weekdays.
6. Fully HS1 standard fenced secure railway, with improved standard of access points in conjunction with an MMS strategy.
7. Entire section covered by CCTV in conjunction with VT communications system proposal.
8. LUL Metropolitan line running in to Watford Jn at some point, offering alternative connections route to Central London.

It is recommended that NR LNW Route develop this initiative as a single package linking across disciplines and stakeholders, as to progress each element individually would undermine the overall short and long term effectiveness of the package. The package, if adopted, should be implemented in time for it to apply throughout CP5.

9. Office of Rail Regulation

With specific relevance to WCML performance, I recommend that ORR find more effective ways of encouraging NR to perform better than repeatedly taking enforcement action and imposing fines, which I have found have a largely negative effect on all levels of the NR team, and their output. There are many things NR needs to do better, but for this to happen in a sustainable way their people need to be encouraged, motivated, rewarded and have pride in what they are doing. Industry leaders, including the ORR, need to play a visible part in this. We need some of the industry's best managers running the railway between Rugby and Euston as it is so challenging, and to have this we must collectively create an environment where it is an attractive career step. At present it is seen as a tough, thankless and risky career step, with little encouragement or opportunity compared to the many equally high profile project roles in the industry.

10. The future of the West Coast South Reliability Project

The project formally finishes on 24th November, with Chris Gibb returning full time to Virgin Trains on this date. However it has been agreed to continue the following:

- David Johnson to remain on secondment from VT to NR until 31st March, 2013 to see through to completion the suicide prevention project on West Coast South.
- Ben Roberts to remain on secondment from VT to NR until 31st March, 2013 to support the NR team in the performance programme development (IPAT).
- Paul Robinson (NR) will manage the above people and support Dyan Crowther with the implementation of the measures and recommendations outlined in this report.
- Tina Cranley from VT will continue to provide part time support to the above team arranging meetings etc., and ensuring the established easy access between teams continues.

Steve Longmore of LM will return full time to his new role of Acting Performance Manager, LM. Steve has made a huge contribution to the work of the team.

The team would like to thank the leadership of NR and all the operators for their support and encouragement during this project.

The two secondments from VT to NR will continue at VT's cost, with NR providing a desk and IT equipment.

At the final meeting of the West Coast South Joint Board the passenger and freight operators and NR expressed a wish to continue meeting in 2013, to support and encourage the initiatives outlined in this paper. Dyan Crowther is recommended to develop a programme of meetings for 2013 which will involve a range of locations and activities focussed on the Rugby to Euston line which is so important to the success of so many operators. The first meeting will focus on the proposed constituent parts of the 2013/14 JPIPs and their freight equivalents.

11. Conclusion

Network Rail and the Office of Rail Regulation are asked to note the contents of this report.

Summary of Recommendations

Number	Paragraph	Subject	Who	Date
1.	2	2013 JPIP development	NR	March 2013
2.	3	Suicide Investigation	NR	March 2013
3.	3	BTP role with suicide prevention	NR	March 2013
4.	3	HS1 fencing standard application	NR	March 2014
5.	4	Track condition monitoring by drivers	NR	February 2013
6.	5	LNW Re-organisation	NR	2013
7.	6	Euston DU accommodation review	NR	2013
8.	6	Communications agenda	Industry	2013
9.	7	Supplier contracts	NR	
10.	7	Component specification setting	NR	
11.	7	OHMS monitoring move to Route	NR	Immediate
12.	7	OHLE condition assessment	NR	end 2013
13.	7	Role of volume targets	ORR	
14.	8	Mobile Maintenance System	NR	2014
15.	8	DC Lines and Maintenance Strategy	NR	2014
16.	9	Effective Regulation and Leadership	ORR	
17.	10	2013 Industry engagement	NR	2013