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1 June 2010

Paul Plummer  
Director, Planning and Development  
Network Rail Infrastructure Limited  
Kings Place, 90 York Way  
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Dear Paul

### **Asset policies**

We have completed our review of the revised asset policies which you submitted at the end of January 2010, and the revised asset management plans you propose for CP4 (including that for signalling where your policy itself has not changed). I am writing to tell you our conclusions.

#### The information we received

I need to make some general points about the documentation we received. Although you provided context in presentations in January and February, we had difficulty understanding the rationales presented in the reports, which dealt solely with changes in work volumes. We had to refer back to your PR08 submissions and read them alongside the new policies, to gain a complete view of methodology. And although we set down when clarifying aspects of our PR08 Determination<sup>1</sup> that accepting material changes to asset management plans would depend, *inter alia*, on Network Rail demonstrating the sustainability of your policies in the long term, the documents provided little evidence on this key point.

On receiving the policies, nearly ten months into CP4, we expected to see comprehensive and convincing rationales which would enable us to complete our review quickly. Regrettably, what we had planned as an ambitious but achievable two-month process has needed considerably longer for you to produce and us to examine evidence which should have been in the policies when submitted. This presents important lessons for the future.

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<sup>1</sup> Letter from John Thomas to Paul Plummer, 18 December 2008



## Our assessment process

In reviewing your policies and plans we have applied two criteria; the policies and plans need to demonstrate robustness and sustainability. Neither is new, both having informed our PR08 Determination, but it may be helpful to confirm our definitions of these:

- **Robustness:** Is it reasonable to believe that the policy can deliver the required CP4 outputs, for England & Wales and for Scotland? Note that as Network Rail is committed to deliver the outputs, this test is relatively weak; a policy will pass the test unless there are strong grounds to believe that it would *not* deliver the outputs. In practice, if implementing the policy is not delivering them, Network Rail will have to take remedial action.
- **Sustainability:** If demand on the network were to remain steady, would application of the same policy continue to deliver the outputs specified for the final year of CP4 indefinitely? This is a stronger test to ensure that, in managing within CP4 funding, Network Rail is making genuine efficiencies and is not deferring essential work at the cost of inefficiently higher expenditure in later control periods.

We have assessed your proposals against these criteria through a series of “challenge” workshops. Many hundreds of pre-notified operational and engineering questions were posed and answered; questions and responses are recorded in detailed minutes agreed between us. Augmenting, and in some cases subsequent to the workshops, we examined your workbanks and viewed examples of field delivery. The latter meetings and visits are also recorded in agreed minutes.

## Summary of conclusions

We have concluded that your proposals satisfy our ‘robustness’ assessment and that, with the exception of that for civil structures (see below), they also appear to be sustainable.

These conclusions rely on projections about which there cannot be 100% certainty, although uncertainty is greater for some asset categories than for others. We therefore intend, as we made clear in PR08, to monitor activity levels and asset condition carefully through CP4. Should either fall materially below your own projections we will call on you to explain how this is consistent with meeting your asset stewardship licence obligations.

Having taken into account your assurances about the sustainability of your revised policies, we will of course expect to see this reflected in due course in your Initial Strategic Business Plan and other input to the next Periodic Review.

The following paragraphs summarise our conclusions for each asset category.

### Track

Your new policy re-prioritises renewals towards the more critical route sections, using Schedule 8 payments and incident frequencies as indicators of criticality. By placing more

emphasis on maintenance and refurbishment you also intend to reduce total renewal volumes for rail, sleepers, ballast and S&C by more than 10% compared with the assumptions on which we based the PR08 determination, which were themselves a little below the proposals in your 2008 Strategic Business Plan update.

We subjected the policy's underpinning to detailed scrutiny, focusing in particular on:

- Asset data, which had been cleansed and analysed for each of 308 Strategic Route Sections (SRS)
- Track service lives, which were ascribed from tonnage ranges
- Track engineering policy rules

We gave careful consideration to the rationales behind your substitution of refurbishment for some renewals. You explained that refurbishment comprises track component replacement that can be demonstrated to extend the life of a plain line section or S&C unit. This could be renewal of rail, ballast cleaning, renewal of rails and sleepers (but not ballast), or replacement of pads, clips and nylons. You explained that whilst your policy modelling gives indicative volumes by SRS (examples of modelled outputs were provided) the actual refurbishment workbank will be authorised by a special investment panel, after each item has been evaluated in a life cycle cost model, to demonstrate that it will result in added value for the track in question. We made field visits to view examples of refurbishments of the types proposed, all of which had been delivered competently and appeared to be well engineered. On the basis of the above, we conclude that the policy satisfies our 'robustness' criterion.

To establish sustainability you modelled your policy up to the end of CP7 and, subject to the validity of that modelling, the results we saw demonstrated sustainable asset stewardship (maintenance of condition without a material increase in work activity). We found no reason to believe that projecting beyond CP7 would alter that conclusion. We have therefore concluded that the policy satisfies our 'sustainability' criterion.

There are inevitably uncertainties about the long-run condition projections, and your ability to deliver more effective maintenance as an alternative to renewal still needs to be demonstrated. Insofar as long-run projections have been modelled using the ICM, we are satisfied that these are reasonably well founded, but where refurbishment is proposed you have not been able to use ICM as it does not contain a suitable degradation model. You have developed a separate spreadsheet model programmed with new but less well developed degradation profiles. This model does not, consequently, have the same proven validity as ICM, but it is based on the information currently available. For these and other reasons we will closely monitor both levels of activity and of track condition.

### Operational property

The new policy uses the recently-established M17 (SSM) measure for station asset condition, and the equivalent M19 (DCI) for depots, in combination with a developing risk matrix, to prioritise a variety of intervention types. It sets out a range of maintenance, refurbishment and renewal triggers, related to different levels of condition and risk. We

spent considerable time assessing the appropriateness of the various triggers, and concluded that the methodology was well constructed.

The absence of either cost or volume information created particular difficulties for us in quantifying the policy's outcomes. We therefore revisited the reports of our Technical Panel's 2008 site visits to Paddington, Victoria, Kings Cross and Waverley stations, and cross-checked the new policy's proposed interventions against the quality and extent of work delivered at these locations. We also visited York to confirm that current standards of work remain consistent with what we observed in 2008. We found no reason to believe that the new policy cannot deliver the required stable or improved levels of SSM and DCI for each asset category, and therefore we believe that it satisfies our robustness criterion.

The operational property estate is extensive and heterogeneous. These factors have hitherto militated against long-term modelling of volumes or costs. In the absence of any such hard evidence to demonstrate sustainability, you provided the following statement:

*'We have not yet developed a model for using the OPAS condition information to forecast long term activity levels, and work is currently underway to develop this modelling capability to support the PR13 submission process. However, there are a range of factors that provide us with sufficient confidence that the level of activity planned for CP4 will not result in activity levels in future control periods in excess of those forecast in the SBPu, including:*

- the Station Stewardship Measure is forecast to be maintained over CP4*
- a detailed review of the CP4 workbank has not resulted in the identification of work that should be carried out in CP4 being deferred to later control periods; and*
- our plans are not resulting in faults and customer complaints increasing"*

We are content to accept that the policy is sustainable on the basis of this reasoning.

### Telecommunications assets

You now believe that components of the network can reliably be operated for periods longer than previously anticipated. The new policy is therefore predicated on reassessed asset lives, which are applied through a Decision Support Tool (DST) to generate renewal intervals for elements of the telecoms infrastructure. You provided convincing examples of key assets, such as concentrators, that demonstrate greater longevity and function through improved fault reporting, more reliable remote working and the introduction of LED technology. Network Rail's adoption of proven transmission technology, with commensurate high levels of reliability, and your operation of a comprehensive network management system, also provides confidence that the policy is soundly based. You also now propose to include renewal of certain station information and surveillance assets (SISS) in your plans, which had not been specifically funded by PR08. We therefore believe that the policy satisfies our robustness criterion.

A long-term programme of maintenance and renewals, capable of being delivered at CP4 funding levels, and supported by well developed plans, was provided as demonstration of sustainability. Whilst *prima facie* credible, we note that your planning at asset or location specific levels normally only extends to 2-3 year workbanks (i.e. unlike track, you have not yet developed comprehensive degradation profiles for other asset groups). However you have assured us that this is a reliable projection of renewal requirements in future control periods. We are therefore satisfied that the policy meets our sustainability criterion.

### Civil engineering structures

We have agreed that this policy requires thorough review by an expert structural engineering consultant, and we expect a study by the independent reporter to commence shortly. It is not, therefore, necessary to rehearse the policy's deficiencies in this letter. We have satisfied ourselves that, provided that it is properly implemented, it is reasonable to expect that the policy will safely deliver the required CP4 outputs pending any change resulting from the independent reporter study. We therefore conclude that our robustness test has been passed.

You have expressed doubt that the policy is sustainable beyond CP6, and this issue must be fully investigated by the independent reporter.

### Signalling

While there has been no fundamental change to the policy proposed in Network Rail's PR08 Strategic Business Plan, you have reassessed specific individual asset lives, and rephased early ERTMS work. Our review also considered the proposed change of emphasis from complete to partial SEU renewals.

You provided convincing examples of signalling assets operating satisfactorily over lives similar to those modelled. This evidence included condition assessments for level crossings and for interlockings using various technologies. These were derived from a proven, comprehensive, Signalling Infrastructure Condition Assessment (SICA) tool. We also saw demonstrations of improved signal head reliability and longevity, and reduced maintenance burden, resulting from the use of LED technology. Consequently, we have been able to confirm that the activities proposed appear commensurate with the outputs required and that our robustness criterion is satisfied.

As for telecommunications assets, you provided a far-sighted M&R programme for scrutiny. The proposed volumes are consistent with the PR08 submission and Periodic Review settlement we therefore see no requirement for a further test of sustainability.

### Monitoring

Having accepted your policies and plans for CP4 we will now need to be assured that you are operating in accordance with them, and that they are delivering the anticipated asset condition.

The PR08 determination explained that we would monitor using a dashboard of KPIs (table 4.7). Your revised Delivery Plan proposes an update to this table. We are giving urgent consideration to the new measures you have proposed, and to others which we might wish to introduce, in the light of the characteristics of your revised policies. We will work with you to agree a new set of KPIs within the next few weeks.

#### Looking ahead

As you acknowledged in your letter of 11 February, you still have much to do in this area to enable you to make a robust and convincing submission to the 2013 periodic review. While you have demonstrated the sustainability of all except the structures policy, none of the policies has yet been shown to be optimal on a whole-life cost basis and there is therefore likely to be scope for further refinement and greater efficiency in CP5. You will also need to be better able to demonstrate how changes in the required network outputs impact on activity and expenditure levels. We will discuss this in greater detail going forward.

I am copying this letter to Peter Henderson and placing a copy on our website.

Yours sincerely,

Michael Lee

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**Michael Lee**