



# Enhancements improvement programme

Review of implementation in  
Scotland

September 2016

# Contents



<b>Executive summary</b>	<b>3</b>
<b>Background</b>	<b>4</b>
<b>EIP progress</b>	<b>7</b>
<b>Scotland implementation of the EIP</b>	<b>11</b>
<b>Summary conclusions</b>	Error! Bookmark not defined.

## Executive summary

This report sets-out Network Rail's progress in implementation of the Enhancements Improvement Programme (EIP) in Scotland. Further commentary on the conclusions of this report will be included in the Scotland Network Rail Monitor (Quarters 1 & 2 2016/17).

Network Rail finalised its EIP in October 2015. This was also when we found the company in breach of its Network Licence regarding the management and delivery of enhancement projects. The scope of the EIP is wide, covering issues from governance of the enhancements portfolio to considering safety in the project design stages.

Network Rail has made significant progress with delivery of the EIP since it was finalised in October 2015. There have been changes to some workstreams, for example due to the influence of external factors such as the Bowe and Hendy reviews, affecting England and Wales. A few workstreams have been delayed, but not significantly, and sometimes to make timescales more realistic with greater benefits planned. Some examples of significant EIP deliverables are the introduction of a project peer review process and development of a new delivery portfolio reporting system.

Network Rail is now moving to the phase of embedding some of these improvements in its business. This is where we have more concerns as it is not clear how Network Rail will provide itself assurance that benefits are delivered. We expect NR to provide evidence how it is holding itself to account (for example, using its new peer review process), to make sure the EIP is delivering improvements to its delivery of the enhancements portfolio. Until NR has these self-assurance processes in place, we will review how the EIP is affecting enhancement projects closely, using our standard monitoring processes.

Implementation of the EIP in Scotland could have been quicker in some areas, including agreement of governance arrangements with Transport Scotland for the enhancements portfolio. NR is starting this process and needs to agree these governance arrangements quickly if the Scotland portfolio of enhancements is to be managed effectively in the remainder of CP5. For some other areas of the EIP, implementation in Scotland is aligned with the rest of the network, for example the implementation of a new delivery portfolio reporting system.

There will be variances in how the EIP is applied across Network Rail, as greater devolution allows each operating route to focus capability improvements on the needs of its customers. Our future monitoring of EIP implementation will provide coverage of all routes, to allow us to compare how Network Rail's capability is improving to deliver the benefits of enhancements to train operators, passengers and freight customers.

# Background

Network Rail's delivery of CP5 enhancement projects in Scotland has been mixed. The Borders new railway project successfully achieved its GRIP 6 regulated milestone in June 2015, with the successful introduction of a passenger service on the new line following in September. However, other Scotland enhancements have encountered issues in CP5, for example Aberdeen to Inverness and rolling programme of electrification. These issues strengthen the need for Network Rail's enhancements capability improvement plans to be implemented in Scotland, as reviewed in this report.

## Purpose

This report sets-out Network Rail's progress in implementation of the Enhancements Improvement Programme (EIP) in Scotland. Further commentary on the conclusions of this report will be included in the Network Rail Monitor (Scotland), which will provide an overview of Network Rail's performance in Quarters 1 & 2 of 2016/17. Structure of the report

We have summarised why Network Rail started the EIP and provided an overview of the content and objectives of the improvement programme. The report also discusses Network Rail's current Great Britain wide EIP progress. It then reviews implementation of three of the EIP workstreams in Scotland. The three workstreams were selected where Network Rail has reported good progress and we expect the benefits should mitigate issues affecting Scotland projects.

The majority of Network Rail's work on the EIP to date has been driven centrally. This is because new processes have developed to improve enhancements performance across the network, before being embedded in its operating routes and functions. This is reflected in the content of this report, with a greater percentage of the report outlining background and general progress in delivering the EIP, before embedment in the Scotland route is considered in the last section.

## Network Rail licence breach

Network Rail missed approximately a third of its Great Britain wide regulated outputs (GRIP<sup>1</sup> 3 or project completion milestones) for enhancement projects in 2014/15, the first year of Control Period 5 (CP5). These missed milestones included two completion

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<sup>1</sup> GRIP (Governance for Railway Investment Projects) is Network Rail's management and control process for delivering projects on the operational railway. For more information:

<http://www.networkrail.co.uk/aspx/4171.aspx>

milestones in Scotland, for R&C electrification and the first phase of the Motherwell area stabling project. Subsequently we found the company in breach of its licence in October 2015, regarding planning and delivery of enhancements. In its response, Network Rail set out the steps it was taking to improve its capability in the planning and delivery of enhancement projects. We subsequently accepted that the company was taking reasonably practicable steps to remedy the breach through its EIP and some associated improvement activities. We are now closely monitoring Network Rail's delivery and implementation of the EIP to check if the company is continuing to take all reasonable steps to achieve compliance with its network licence.

## **Network Rail's Enhancements Improvement Programme (EIP)**

Network Rail's EIP is planned to improve the governance, management and delivery of the enhancements portfolio, across the rail network in England, Scotland and Wales. Network Rail started development of the EIP from late 2014, after a number of issues had materialised with the cost and performance of the enhancements portfolio. These same issues informed our decision to find Network Rail in breach of its network licence, in October 2015.

Network Rail had already started plans to improve the performance of some aspects of enhancements management and delivery before early 2015. Examples included developing a peer review process and making improvements to its cost planning processes. Network Rail then added a new set of initiatives to improve other areas of enhancements delivery and management weakness that it had identified in early 2015. This collation of new and already underway initiatives forms the EIP.

The EIP is split into seven workstreams as summarised below:

### *Workstream 1: Clienting and governing the enhancement portfolio*

This workstream seeks to establish a clear operating model for enhancements with high level roles and accountabilities clearly defined. It also seeks to facilitate executive control and decision making by implementing good practice, governance for the enhancements portfolio.

### *Workstream 2: Project sponsorship and transition management*

This should strengthen accountabilities and responsibilities within Network Rail's organisation for projects and programmes during the transition from each development and delivery stage, ensuring clear ownership throughout. It should also improve the competency of project sponsors across the organisation.

### *Workstream 3: Cost planning, estimating risk and value management*

This aims to improve the estimating resources within Network Rail both at the centre and in the routes. It should improve systems, data and processes both within Network Rail and in its supply chain. In addition, this workstream should improve the company's ability to model and forecast risk and value, particularly at portfolio level.

### *Workstream 4: Project governance and gateway assurance*

This workstream should achieve better quality control and internal challenge throughout key stages of the project lifecycle. It should ensure that projects pass certain strict criteria before being authorised to progress to the next stage of development or delivery so that, for example, costs and risks have been properly understood before planned completion dates are made into firm commitments.

### *Workstream 5: Project and portfolio monitoring*

This should improve Network Rail's understanding of its investment portfolio, so it can better identify and manage common risks or issues, and report up the management hierarchy accurate and meaningful information.

### *Workstream 6: Project and portfolio delivery capability*

This workstream aims to take further the medium and long term resource planning tools Network Rail has developed so that it can better understand critical resource shortfalls in its forward plan and take steps to mitigate them. For example, it should be able to identify shortages of plant and machinery sufficiently early that it can order additional equipment where it makes business sense to do so.

### *Workstream 7: Safety by design*

This aims to improve Network Rail's ability to identify and mitigate safety risks at the early design stage, and then demonstrate that the risk has been sufficiently managed. Shortcomings in this area have led to ORR (in its role as the authorising body for interoperability), rejecting interoperability submissions.

## **EIP progress**

This section provides an overview of Network Rail's progress in delivering the EIP. As described earlier in this document, after several months of development, the EIP was finalised in October 2015. We have been monitoring Network Rail's progress since this date.

### **Governance and management of the EIP**

Network Rail created a project management office (PMO) to drive forward delivery of the EIP and introduced governance structures for the programme.

Network Rail's Investment Portfolio Review (IPR) meeting reviews progress against the EIP each 4-week period. This group is also the approval body for any changes proposed via the EIP change control process. Network Rail uses this meeting to escalate any EIP issues internally. In addition to the IPR, Network Rail reports progress quarterly to its Major Projects Delivery Committee (MPDC). Also, as part of the governance structures the PMO has also initiated a change control process, to manage any changes to the scope or schedule of the EIP.

Network Rail reports and discusses progress and any changes to the programme with the ORR at a four weekly review meeting, following the IPR. ORR uses this meeting to determine if there are any issues it needs to escalate internally and/or with Network Rail.

The governance processes Network Rail has put in place for the delivery phase of the EIP are robust and appropriate for the scale of the programme.

### **EIP delivery progress**

Network Rail is reporting good progress in delivering the EIP with 80% of its deliverables, completed against a plan of 83%, at the end of July 2016. The main variance was a delay in the cost planning improvement workstream. This has been subject to some re-planning to take account of emerging activities and the EIP schedule is now being amended using Network Rail's change control process.

Although Network Rail is making good progress with the EIP, we are closely monitoring this as its "percentage complete" reporting of for the EIP needs to be understood in the context of the EIP programme structure and governance arrangements. The reasons for this are described below.

## Variety of EIP deliverables

The EIP includes a wide variety of deliverables, depending on the workstream, and each is measured against a milestone in the EIP. Some examples of deliverables are listed in the table below.

**Table 1: Examples of EIP deliverables**

EIP Workstream	EIP Deliverable examples
1: Clienting and governing the enhancements portfolio	<ul style="list-style-type: none"> <li>- Complete MOU briefings</li> <li>- Establish DfT/Network Rail joint working group - Embedding</li> </ul>
2: Project sponsorship and transition management	<ul style="list-style-type: none"> <li>- Recruit sponsorship discipline team incl, Head of Sponsorship</li> <li>- Develop and launch capability assessment tool</li> </ul>
3: Cost planning improvement plan	<ul style="list-style-type: none"> <li>- Develop estimate management plan</li> <li>- Industry adoption of Rail Method of Measurement (RMM)</li> </ul>
4: Project governance (stage gate assurance)	<ul style="list-style-type: none"> <li>- GRIP for programme published</li> <li>- Review of peer review process effectiveness</li> </ul>
5: Project portfolio monitoring	<ul style="list-style-type: none"> <li>- Learning visit to Shell</li> <li>- Implement standard investment portfolio reporting suite</li> </ul>
6: Project delivery capability	<ul style="list-style-type: none"> <li>- Create a programme, commercial and development function in IP</li> <li>- CP6 procurement strategy issued in draft</li> </ul>
7: Safety by design	<ul style="list-style-type: none"> <li>- Create the "Prevention through engineering and design strategy"</li> <li>- Introduction of integrated systems engineering approach for all Network Rail enhancement projects</li> </ul>

As can be seen in the above table, these deliverables range from a reasonably straightforward deliverable (ie the learning visit to Shell), to a complex deliverable that requires far more buy-in from external stakeholders (industry adoption of RMM). Therefore, we are monitoring the achievement of all deliverables to assure ourselves that Network Rail is not just ticking-off the quick-wins.

## Duration of activities to complete deliverables

The EIP schedule shows the duration of activities to complete deliverables varies widely. For example, some workstreams have activities with durations, towards the end of the workstream, of well over 200 days. However, there is a rationale for some of these long activity durations, as some of these plans are subject to uncertainty due to a dependency on external factors before these activities can be further developed.



## Changes to the EIP baseline schedule

As set out earlier, the EIP has a robust change control process in place. This means the programme baseline can only be varied if the change has been approved in-line with this governance process. There have been some changes approved, so delivery of the EIP is no longer measured against the October 2015 (finalised EIP) programme. Two examples of changes to the baseline are set out below:

- Following review, Network Rail revised workstream two (project sponsorship and transition management) to a longer term and more ambitious programme, to improve sponsorship capability across Network Rail. This workstream will now complete in December 2017, compared to the original planned completion date of June 2016. This is a more realistic timescale to achieve the outputs of this workstream, including development of a sponsorship governance model and introduction of externally accredited portfolio and panel reviews.
- Workstream six (project delivery capability) is led by the Network Rail Investment Projects (IP) directorate, who held a workshop in January 2016. The purpose of this workshop was to review all of IP's improvement initiatives, including those included in the EIP, to make sure they are effectively integrated. This resulted in some changes to the EIP programme that have been managed via change control.

## Embedding EIP improvements

Network Rail is now reaching the end of its delivery phase for some elements of the EIP and is starting to embed these changes in its business. New governance arrangements have been agreed with the Department for Transport and are being applied to the England & Wales portfolio of enhancements. A peer review process has been initiated to complete "health-checks" of projects, with several reviews completed and around 35 planned over the next year. Also, a new delivery portfolio reporting system is now being demonstrated to IP functions and is expecting to go-live in early 2017.

The focus of our monitoring is also now changing to reflect that EIP improvements should be starting to make a difference, in Network Rail's management and delivery of enhancements. We will be using our standard project monitoring processes to review if the EIP improvements are proving to be effective. For example, we will be discussing with a sample of projects if the recommendations from peer reviews are being translated into action plans that are being followed-up. We will also be monitoring indicators of Network Rail's enhancements performance, such as schedule adherence, to determine if the EIP is improving overall performance.

Network Rail's own assurance processes are concentrated on completion of EIP deliverables. It plans to use the peer review process to check if some improvements are delivered in projects. However, we are concerned NR's plans are not yet fully in-place for the organisation to assure itself that it is realising the expected benefits of the EIP. This area of review is also important so Network Rail can make changes to the EIP if elements of it are not delivering the expected benefits.

## Scotland implementation of the EIP

As described in the last chapter of this document, Network Rail is starting to move from the “delivering” to the “embedding” stage of EIP. This section reviews Network Rail’s progress with implementation of the EIP in Scotland, following the cost and capability issues reported for Scotland projects in Network Rail monitor<sup>2</sup>.

This review has considered the following three EIP workstreams. :

- Workstream 1: Clienting and governing the enhancement portfolio;
- Workstream 4: Project governance (stage gate review); and
- Workstream 5: Project portfolio monitoring.

We have considered the above workstreams, as Network Rail has reported good progress in each and we expect the benefits should mitigate problems affecting Scotland projects. For example, increases in cost estimates for Scotland projects are beginning to put pressure on Network Rail’s borrowing cap for CP5, as we reported in the [Network Rail Monitor \(Scotland\) for Quarter 3 & 4 2015-16](#). Improved governance (workstream 1) and portfolio reporting (workstream 5) should deliver benefits in Network Rail’s ability to manage cost of the portfolio within its borrowing cap. In addition, we have reviewed workstream 4, where improved compliance with the GRIP framework (using a peer review process) will mitigate some of the issues that have resulted in increases to cost estimates during the development of projects.

For each of the above workstreams we have assessed Network Rail’s overall progress with the EIP deliverables and implementation, for the England, Wales and Scotland network. We then reported on progress with implementation of each of these workstreams in Scotland and we made an assessment if this progress demonstrated that Network Rail was taking all reasonable steps to delivery in Scotland.

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<sup>2</sup> Network Rail Monitor (Scotland) Quarter 3 & 4 2015-16:

[http://orr.gov.uk/\\_data/assets/pdf\\_file/0017/22346/network-rail-monitor-scotland-2015-16-q3-4.pdf](http://orr.gov.uk/_data/assets/pdf_file/0017/22346/network-rail-monitor-scotland-2015-16-q3-4.pdf)

## Clienting and governing the enhancements portfolio

### *Overall progress*

This workstream has been largely influenced by external reviews that were completed in 2015, in particular the Bowe Review in England & Wales. This review recommended the roles and responsibilities of the DfT and Network Rail should be clarified for the delivery of Government funded enhancement projects. The DfT and Network Rail agreed a Memorandum of Understanding (MoU) on rail enhancements in response to this recommendation. This MoU applies to enhancements in England & Wales.

Network Rail has instigated processes to put this MoU into action. This includes setting up an enhancements portfolio board (attended by DfT, Network Rail and ORR), reporting regular standardised portfolio information and agreeing a portfolio change control process with DfT. The change control process means any change to programme output, cost baseline or schedule, needs to be approved by the portfolio board, meaning the impact on the overall affordability and benefits delivered can be managed at portfolio level.

There has been an extensive MoU briefing activity, carried out jointly by Network Rail and DfT to routes and central teams.

Network Rail now is taking steps for ongoing improvements as part of business-as-usual and is continuing with project team briefings on the new governance arrangements.

### *Progress in Scotland*

Network Rail reports regular schedule and cost information to Transport Scotland and ORR at an individual project level. It also outlines high-level financial information, comparing portfolio level costs against the Scotland funding cap, to a quarterly trilateral (Network Rail, Transport Scotland and ORR attending), after we requested this was reported to the meeting. However, this trilateral is not a decision making board for the enhancements portfolio and there is not a robust governance process for managing changes to the Scotland portfolio. Robust governance is required to ensure any agreement to change to project outputs, baseline costs or schedule considers the impact on the affordability and benefits delivered by the total portfolio of Scotland enhancements.

Progress on this workstream has mostly been limited to governance of the England & Wales enhancements portfolio. Network Rail's EIP included application of this workstream in Scotland, but later than in England & Wales. This is because it did not consider there was as much pressure on the Scotland portfolio of enhancements. In September Network

Rail and Transport Scotland started to discuss an MoU to agree roles, responsibilities and how governance of the Scotland enhancements portfolio will operate.

Transport Scotland initiated the establishment of a major rail projects portfolio board in July 2016, with the first meeting held on 2<sup>nd</sup> August 2016. Network Rail, Transport Scotland, ORR and ScotRail attended the meeting. The main purpose of this first meeting was used to discuss terms of reference and arrangements for future meetings.

### *Assessment*

With pressure on the England & Wales portfolio of enhancements following the Bowe review and Sir Peter Hendy's re-plan (both reviews only considering England & Wales), Network Rail prioritised agreement of governance arrangements with DfT. However, Network Rail could have been quicker to set up the governance of its Scotland portfolio of enhancements. As cost issues and delays have emerged for Scotland enhancements during 2015 and 2016, Network Rail should have identified the need to be more proactive in agreeing robust governance arrangements for the Scotland portfolio.

## **Project governance (stage gate review)**

### *Overall progress*

Network Rail has now started its peer review process. A Peer Review is a short focused review of a Network Rail project. The reviews are undertaken at key decision points in the GRIP project or programme lifecycle and are undertaken by Network Rail staff who are independent from the project team and business unit responsible for the successful delivery of the project/programme.

The first peer reviews were held in May 2016. Eight reviews are now complete and 35 are scheduled in the next year. Network Rail is planning an assessment of peer review effectiveness in September 2016.

### *Progress in Scotland*

We received version 1 of the peer review schedule in April 2016, covering all reviews planned until April 2017. This schedule set out the dates for 37 peer reviews, but did not include any Scotland projects. The March 2016 enhancements delivery plan included the following regulated milestones during this period:

- December 2016: Edinburgh to Glasgow Improvements Programme (EGIP) Initial Phase Key Output 1, Edinburgh Gateway Station, Infrastructure ready for use
- March 2017: EGIP Initial Phase Key Output 1, Infrastructure ready for use

Network Rail recently added an EGIP programme review (for February 2017) to its schedule.

### *Assessment*

Network Rail has been slow to schedule peer reviews for Scotland projects. Despite being the highest profile rail programme in Scotland and one of the Scottish government's top priorities, EGIP was only recently added to the schedule.

## **Project portfolio monitoring**

### *Overall progress*

Network Rail has developed a live reporting system for its delivery portfolio of enhancements and renewals. This provides a single source of truth that can be used as a live tool in business review meetings to identify issues and report progress. This will help Network Rail make informed decisions about where action is required to keep the portfolio of delivery projects on plan with costs under control.

This reporting system includes a dashboard of key performance indicators, including safety performance, schedule adherence and cost performance, for each Network Rail IP business function. As it is a live system, the data below these indicators can be interrogated live so managers can see the data behind these top level numbers.

The system also currently reports scorecards for 21 high priority projects, again with data that can be interrogated to identify and manage issues materialising for these projects.

Network Rail plans to add functionality to the system to report on critical resources, possession efficiency and risk. Once this is added the new system should be used as a live tool with full functionality in early 2017.

### *Progress in Scotland*

The Network Rail team responsible for delivering the new reporting system recently (August 2016) demonstrated it in Network Rail's Glasgow offices, where the Scotland and North East IP business function were fully bought-in to using the new system. As in the rest of the rail network, it is expected to go live for Scotland in early 2017.

### *Assessment*

Progress in Scotland for implementation of this workstream is at the same rate as the rest of Network Rail's IP functions.

Network Rail's EIP progress report indicates that a standard investment reporting suite was implemented at the end of June 2016. Although this is correct, the full functionality won't be used in a live system until early 2017. We will be reviewing Network Rail's use of the new reporting system in 2017, including on the Scotland route.



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