

Enhancements Delivery Plan

Scotland

Entry into Service (EIS) Schedule

June 2020

Executive Summary

Network Rail's obligation is to publish Entry into Service (EIS) milestones to allow the industry to plan against these and deliver outputs which provide benefits to passengers and freight customers. This is in accordance with the Rail Enhancements & Capital Investment Strategy (RECIS), which sets out the Scottish Ministers' commitment to investment in the rail network from Control Period 6 onwards. EIS milestones will only be published once a project has received its Final Business Case decision as part of the RECIS. At this point, there is sufficient certainty of outputs that Network Rail can reasonably be held to account for the delivery of these programmes and projects.

Transport Scotland will publish a separate document to provide an overview of "pipeline" schemes which have not yet reached a Final Business Case decision.

EGIP- Initial Phase Key Outputs 3&4

Details

Project OP code: SC003

Output driver: Increasing the capacity and capability of the Scottish network

Operating route: Scotland

Date: March 2019
Sponsor: J Jardine

Output driver

The Scottish Government's 2012 HLOS sets out a requirement to increase the capacity and capability of the Scottish network. EGIP forms a project to deliver on this aspiration, with key outputs including reduction in journey times and increased passenger capacity on the main Edinburgh to Glasgow route, giving benefits to passengers, contributing to the Scottish Government's goals of improving economic connectivity and reducing road congestion.

The increase in capacity will be achieved through electrification and the introduction of longer train formations. The electrification was completed in December 2017, In December 2019, 4 car EMUs were introduced, operating as 8 car formations during peak periods. These replaced the 7 car formation EMUs, which operated during peak periods. End to end journey times have been reduced, with a current fastest end to end journey time of 42 minutes.

Network Rail's obligation

Network Rail's EGIP – Initial Phase Key Output 1 obligation was to deliver all necessary infrastructure to facilitate full 7 x 23m car electric services on the Edinburgh to Glasgow via Falkirk High route in time for the December 2017 timetable change.

Network Rail's obligation is to deliver infrastructure to facilitate 8 x 23m car electric services on the Edinburgh to Glasgow via Falkirk High route in time for the

December 2019 timetable change and redevelop station architecture and buildings by March 2020.

Project

Physical outputs

Glasgow Queen Street High Level Station concourse works

Physical works required to allow extensions to a number of the existing platforms at their concourse ends to provide 8 car standage. Increased concourse space and enhanced passenger facilities to accommodate to forecast growth.

Scope of works

Interfaces and assumptions

Only interfaces and assumptions relating to the outstanding works are listed. Interfacing schemes and their potential impact are:

- Renewal of the track and platforms at the mid platform area (The area between the EGIP Key Output 1 works and the EGIP Key Output 3 works) will be undertaken concurrently with EGIP Key Output 3 works. These works are being delivered by the same Contractor and they are controlled and managed by a single project team.

The critical assumption on internal factors is that the ScotRail EMU rolling stock for the longer trains will be available on time.

EGIP- Initial Phase Key Outputs 3&4

The following critical assumptions on external factors are being made:

- Due to the elongated Transport and Works (Scotland) Order (TAWs) process to authorise the redevelopment of Glasgow Queen Street Station the commencement of site works has been delayed. As such the associated regulated output has been revised. It is assumed that Network Rail will not be instructed to accelerate the programme.
- The scheme by Land Securities to develop above the west cutting of Queen Street Low Level Station is being reprogrammed by Land Securities. It is assumed that this scheme will not impact the programme for the Queen Street Station redevelopment works. It is also assumed that Land Securities will provide Network Rail with access to the areas of Dundas Street, within their control, necessary to deliver the Queen Street Station works.
- The Land Securities scheme to extend the Buchanan Galleries shopping centre over Queen Station High Level station throat will be implemented post EGIP Key Output 4, if it proceeds to implementation.
- It is assumed that the proposed scheme to develop the Car Park site will not proceed to implementation until EGIP Key Output 4 has been delivered, thus removing any potential interface issues from this scheme.
- The Millennium Hotel will deliver the separation and mitigation works required within the Georgian Hotel as a consequence of the project works, without impacting on Network Rail's construction programme.
- It is assumed that the December 2019 timetable associated with an 8 car service will be agreed with the franchisee, given the infrastructure available at Queen Street

Activities and milestones (NR)

Milestone	Description	Date	Status
GRIP 3 completion	Single option selection	May 2014	Complete
GRIP 4 completion	Single option scope defined	September 2014	Complete
GRIP 6 start	Start on site (TAWs work)	August 2017	Complete
EIS- Infrastructure authorised (Station works)	Infrastructure authorised for passenger use	March 2020	Complete

East Kilbride Corridor Enhancement

Details

Project OP code: 1157709

Output driver: Increasing the capacity and capability and decarbonisation of the Scottish network

Operating route: Scotland

Date: September 2019

Sponsor: K Vollbracht

Output driver

The Transport Planning Objective for this project is:

“Under normal operating conditions* enough seats are provided for passengers to sit down within 10 minutes of boarding† in 2023 and across the subsequent 20 years.”

** A typical weekday, with no significant perturbation or other events impacting on passenger demand for services*

† As defined in the ScotRail franchise, across the morning and evening peak two-hours

The Transport Planning Objective should be met through enabling the following project outputs:

- The ultimate output is a four trains-per-hour 8-car zero emissions service during the morning peak (07.00-10.00) between East Kilbride and Glasgow Central to continue to make rail travel an attractive choice for passengers. This will help to contribute towards the Scottish Government aspiration to decarbonise the railway and help to support measures to tackle the climate emergency. This enhancement can only be achieved beyond Muirhouse South Junction into Glasgow Central if timetable alterations are made to other service groups – any alterations to services between Muirhouse South Junction and Glasgow Central

are outside the scope of this project and are being taken forward by an interfacing workstream, forming a dependency to delivery of the full output and benefits of this project.

- This would be replicated between Glasgow Central and East Kilbride in the evening peak (16.00-19.00), with opportunities also explored to increase off-peak frequency if on-going costs funding can be identified
- Without alterations to the Glasgow Central timetable, the output of this project is an additional two services between 07.30 and 09.30 from East Kilbride, with services at 8-car length wherever platform availability at Glasgow Central allows.

Scope of works

The Strategic Business Case (SBC) set out a range of options which provide various incremental ways of delivering the outputs and meeting the Transport Planning Objective to meet future passenger demand. On 29 April 2019, Investment Decision Maker’s approval was granted for development to Outline Business Case including GRIP 4 and Approval in Principle design of options C and E in the SBC. These options cover the following infrastructure enhancement elements, delivery of which can be phased flexibly:

- Platform extensions to accommodate the longest 8-car trains (9 stations, 15 platforms)
- Double tracking of the single-line section between East Kilbride and Busby station including the following sub-options:
 - Partial double tracking between East Kilbride and Hairmyres station only
 - Location of Hairmyres station: both in its current location with a new second platform, and relocated to a new location approximately 600m to the west of the existing station towards Glasgow
 - Enhanced passenger facilities at East Kilbride station including a new station building and improved passenger circulation space

East Kilbride Corridor Enhancement

- Electrification between East Kilbride and Glasgow Central including the Larkfield Curve to reduce diesel emissions
- Further collaboration with local authorities on development of active travel and enhanced P&R options along the rail corridor plus work to ease planning issues
- Further exploration of performance characteristics and infrastructure requirements for battery-powered hybrid trains as an alternative to full electrification of the route to deliver earlier benefits to passengers whilst still decarbonising the railway – requirement for this work to be further remitted by Transport Scotland (with ScotRail support as requested by Transport Scotland)

Interfaces and assumptions

For this stage the following project assumptions are included;

- Glasgow Central: it is assumed that timetable changes, and any associated infrastructure changes, at Glasgow Central to facilitate the future East Kilbride service provision will be progressed by Transport Scotland (with ScotRail support) and are outside the scope of this project
- Traction power: it is assumed that if a new feeder station is required, this will be delivered through an interfacing power supply upgrade workstream and is outside of the scope of this project
- Rolling stock: rolling stock type to be operated on this route is not known – platform lengths and gauging to be specified to accommodate longest/ largest gauge passenger rolling stock which fits with the wider Network Rail obligation for Control Period 6 (CP6)
- Stabling/depot provision: it is assumed that any change or increase to stabling or depot capacity required to accommodate rolling stock operating on the East Kilbride route will be delivered through an interfacing workstream and is outside of the scope of this project
- Car parking and active travel enhancements: it is assumed that enhancements to station car parking and provision of active travel routes and facilities will be the responsibility of the relevant Local Authority. Network Rail scope will extend to interface with Local Authorities to facilitate integrated design and delivery.

- Hairmyres station relocation: it is assumed that land purchase and road layout changes to accommodate a relocated Hairmyres station and Park and Ride facility will be the responsibility of South Lanarkshire Council, with the support of Transport Scotland. Network Rail scope will extend to design and delivery of the new station infrastructure and interface with South Lanarkshire Council to integrate the station with the Park and Ride facility and access points.
- Network Rail will identify interdependencies with wider CP6 (Operate, Maintain & Renew) plans to drive efficiencies and take advantage of possessions and closures.
- Network Rail will work closely with Local Authorities to understand planning processes to help accelerate project delivery including structures removals and explore opportunities for third party funding to enhance the outputs of the project.

Activities and milestones (NR)

Milestone	Description	Date	Status
Outline Business Case	Submission of Outline Business Case (informed by GRIP 4 development)	Revised	Subject to change control

Edinburgh Waverley Western Approaches

Details

Project OP code: 160078

Output driver: Increasing performance resilience through the Haymarket Corridor

Operating route: Scotland

Date: December 2019

Sponsor: D Rarity

Output driver

The Transport Planning Objectives for this project is:

TPO1: Improve Haymarket corridor performance within 2 years following EWWA entry into service, measured as a minimum of a 25% reduction in delay minutes compared to the 2019 timetable year*

TPO2: Upon running 28 trains per hour through the Haymarket corridor during peak hours, improve Haymarket corridor performance by a minimum of a 15% reduction in delay minutes compared to the 2019 timetable year*

** when 24 passenger services per hour ran via Haymarket during peak hours*

The Transport Planning Objective should be met through enabling the following project outputs:

- Creation of capacity at key junctions through the corridor (Newbridge Junction, Haymarket Central Junction and Haymarket East Junction) by diverting 4 services per hour via the Almond Chord to run via the Fife lines instead of the E&G lines. The balancing of service quantum on the north and south lines will spread capacity use, spacing services further apart and therefore create a performance buffer and greater resilience.

- There are aspirations to introduce additional services through the corridor (up to 28) and the project creates the capacity for these services. The project also enables performance resilience to be increased from what the current infrastructure can support when these services are introduced.
- For the full benefits to be realised in relation to TPO2, the project is dependent on Scotland East to England Connectivity (SEtEC) delivering additional capacity at Waverley West End and removing certain known constraints in relation to the north end platforms at the West End.

Scope of works

The Strategic Business Case (SBC) set out a range of options which provide various incremental ways of delivering the outputs and meeting the Transport Planning Objective to meet future passenger demand. On 16th of September 2019, Investment Decision Maker's approval was granted for development to Outline Business Case including GRIP 3 and early GRIP4 works for Options D-F which are variants of the Almond Chord (D – no grade separated junctions; E – Almond Junction grade separation; F – grade separation of Almond and Winchburgh Junctions). These options cover the following infrastructure enhancement elements, delivery of which can be phased flexibly:

- Reconfiguration of Winchburgh Jn with the scale/scope of the configuration varying by option.
- Construction of the Almond Chord between the Dalmeny Lines and the Fife lines.
- Construction of Almond Jn with the scale/scope of the configuration varying by option.
- Signalling and track enhancements on the Dalmeny Lines to increase line speeds and network capacity.

Edinburgh Waverley Western Approaches

- Electrification of the Fife Lines between Haymarket West Jn and Almond Jn, electrification of the Almond Chord and electrification of the Dalmeny Lines between Winchburgh Jn and Craigbrae Jn.

Interfaces and assumptions

For this stage the following project assumptions are included;

- The performance benefits at this stage have been calculated using evidence from the 2011 Paisley Corridor Improvements (PCI) project, current performance data, Capability and Capacity Analysis and the Capacity Utilisation analysis. These are classed as assumed until RailSys/TRAIL modelling is undertaken at OBC stage.
- To enable an even split of services between platforms 1&2 and 3&4 at Haymarket when 28 trains are introduced per hour, it is assumed that the SEtEC project will address Waverley West End capacity/constraints.

- The anticipated additional services tested to derive the performance benefit for TPO2 have been assumed using the 2043 ITSS from the Scotland Route Study combined with information from TS/HS2.
- TAWS is required for the selected EWWA options via the Almond Chord.

Activities and milestones (NR)

Milestone	Description	Date	Status
Outline Business Case	Submission of Outline Business Case (informed by GRIP 3/early GRIP4 development)	Revised	Subject to change control

Kintore Station

Details
Project OP code: 150006
Output driver: New station
Operating route: Scotland
Date: December 2019 Sponsor: G Stewart

Output driver

This project follows on from the Aberdeen-Inverness Phase 1 Rail Improvements project and Scottish Government's 2012 HLOS aspiration to increase the capacity and capability on the route. The principal driver for the Aberdeen-Inverness Phase 1 project was the Scottish Government's Strategic Transport Projects Review (STPR). This project is specified in the STPR (Project 19) with the stated aim of reducing journey times and increasing service frequency on the route. Specifically, in relation to the new station at Kintore, the STPR set out the following:

- The Aberdeen-Inverness project should include infrastructure to facilitate a new station at Kintore;

The Aberdeen-Inverness Phase 1 project was commissioned in August 2019 creating the capacity for the new station at Kintore. Aberdeenshire Council and the North East Transport Partnership (NESTRANS), arranged funding for the new station and Transport Scotland have remitted Network Rail to deliver it.

Transport Scotland's Required Outputs

Transport Scotland have remitted Network Rail to deliver a new station at Kintore by May 2020.

All passenger services on the Aberdeen-Inverness route will call at Kintore and platforms should have the capacity for platforming High Speed Trains in 2 locomotive, 5 coach formation.

Scope of works

The extent of the scope to be delivered by May 2020 is as follows;

- Two platforms to accommodate HST vehicles in 5+2 formation.

- Platform to platform access via a footbridge with lifts and steps providing step free means of access to the platforms for customers
- Minimum of one waiting shelter on each platform.
- Provision of LED lighting columns
- Seating on each platform, quantity to be agreed.
- CCTV coverage of the station to be linked to the ScotRail Customer Services Centre. CCTV to include one Help Point on each platform
- Provision of station signage and a Customer Information System on each platform
- Driver stop marker boards as required
- 156 ordinary car parking bays
- 12 accessible parking bays
- Electric vehicle charging provision to be agreed with Transport Scotland.
- Cycle parking
- Turning circle and taxi layby/drop-off point

Interfaces and assumptions

For this stage the following project assumptions are included;

- Rolling stock to be used on the route will be High Speed Train in a 2+5 and 2+4 formation, Class 170 and 158 diesel multiple units.
- The Aberdeen-Inverness Phase 1 project providing infrastructure capacity for the new station.
- No requirement to introduce longer trains / lengthen platforms other than specified
- It is assumed Network Change and Station Change will be agreed where required for the project.
- It is assumed necessary land transfer will be under to Network Rail in time for the station opening in May 2020.
- No further land or consents requirements emerge beyond those already acquired by Aberdeenshire Council for the project.

Activities and milestones (NR)

Milestone	Description	Date	Status
EIS- Infrastructure authorised	Infrastructure authorised for passenger and freight use	Revised	Subject to change control

Growing the Lothians and Borders

Details

Project OP code: 140625, 148994, 154396

Output driver: Increasing the capacity and capability and decarbonisation of the Scottish network

Operating route: Scotland

Date: March 2020

Sponsor: Mhairi Mackenzie

Output driver

This project was formally known as Edinburgh Suburban Enhancement Programme (ESEP). It aspires to deliver enhanced capacity to the Lothians and Borders. The following Transport Planning Objectives were identified at Strategic Business Case Stage:

- TPO1 Increase Power Supply Resilience in the greater Edinburgh area
- TPO2 Improving service reliability into and around Edinburgh Waverley
- TPO3 Accommodating the forecast growth in passenger demand for commuting into Edinburgh up to 2043*
- TPO4 Accommodating the forecast growth in passenger demand for cross-border services serving Edinburgh up to 2043*
- TPO5 Accommodating the forecast growth in freight demand to/from Scottish terminals up to 2043*
- TPO6 Accommodating funder aspirations for additional/more frequent passenger services by meeting 2043 Indicative Train Service Specification * (as identified in the Scottish Route Study)
- TPO7 Robust engineering haulage provision to/from Millerhill Local Distribution Centre
- TPO8 Reducing the carbon footprint of the railway.

Enabling (with other interventions on the East Coast Mainline)

Scope of works

The Strategic Business Case (SBC) set out a range of options for development to deliver the outputs and meet the Transport Planning Objectives. On 18 June 2018,

Investment Decision Maker's approval was granted for development of some of the packages of work to Outline Business Case including GRIP 4 and Approval in Principle. These options cover the following infrastructure enhancement elements:

- Delivery of a new feeder station in the Currie area
- Enhancement to the infrastructure between and including Portobello Junction and Newcraighall to support delivery to the specified train service. This includes the following options being developed at SBC for consideration
 - Doubling Portobello Junction
 - Delivery of an additional platform at Brunstane
 - Infill electrification on the Sub 1 line between Portobello and Niddrie South Junctions.
 - Doubling Niddrie South Junction
 - Alterations to the Leith branch to support Portobello Junction modifications
- Installation of additional crossovers to support optimal train paths across the enhanced infrastructure
- Enhancement to the infrastructure through Millerhill to support delivery of the specified train service, and to provide a diesel or bi-mode diversionary route during works to Portobello Junction. This includes the following options also being developed following the SBC:
 - Signalled route through Millerhill to enable the movement of passenger and Empty Coaching Stock services.
 - Installation of crossovers to support optimal train paths across the enhanced infrastructure.

Interfaces and assumptions

For this stage the following project assumptions are included;

- Mining Remediation: it is assumed that there will be mining remediation works required, and risk associated with this which may have a cost and timing impact on the programme
- Land: it is assumed that the necessary land will be secured to deliver the proposed enhancements. Network Rail is responsible for the identification and acquisition of any required land

Growing the Lothians and Borders

- Traction power: it is assumed that there are no additional traction power system enhancements required beyond the installation of Currie new feeder station and those works planned by the East Coast Power Supply Upgrade Programme
- Network Rail will identify interdependencies with wider CP6 (Operate, Maintain & Renew) plans to drive efficiencies and take advantage of possessions and closures.

The following interfacing projects are identified:

- Portobello Feeder Station: East Coast Power Supply Upgrade Programme works to be delivered at Portobello Feeder station.
- Edinburgh Signalling Centre Control System Renewal: this signalling renewal will be delivered prior to the Growing Lothian and Borders works commencing.
- Portobello Junction signalling interlocking and line side renewals works: this renewals scope will be delivered ahead of or concurrently to the Growing Lothian and Borders works at Portobello Junction.

- Scotland East to England Connectivity: this programme is considering the long-term aspirations for the East Coast Mainline and assumes that the Growing Lothian and Borders scope (as it is understood today) is delivered.

Activities and milestones (NR)

Milestone	Description	Date	Status
Outline Business Case	Submission of Outline Business Case (informed by GRIP 3 development)	Revised	Subject to change control

Additional CP6 Projects

Network Rail is progressing Ministerial commitments such as: new stations at East Linton; Reston and Dalcross and once an entry into service date is agreed they will be included within this document.