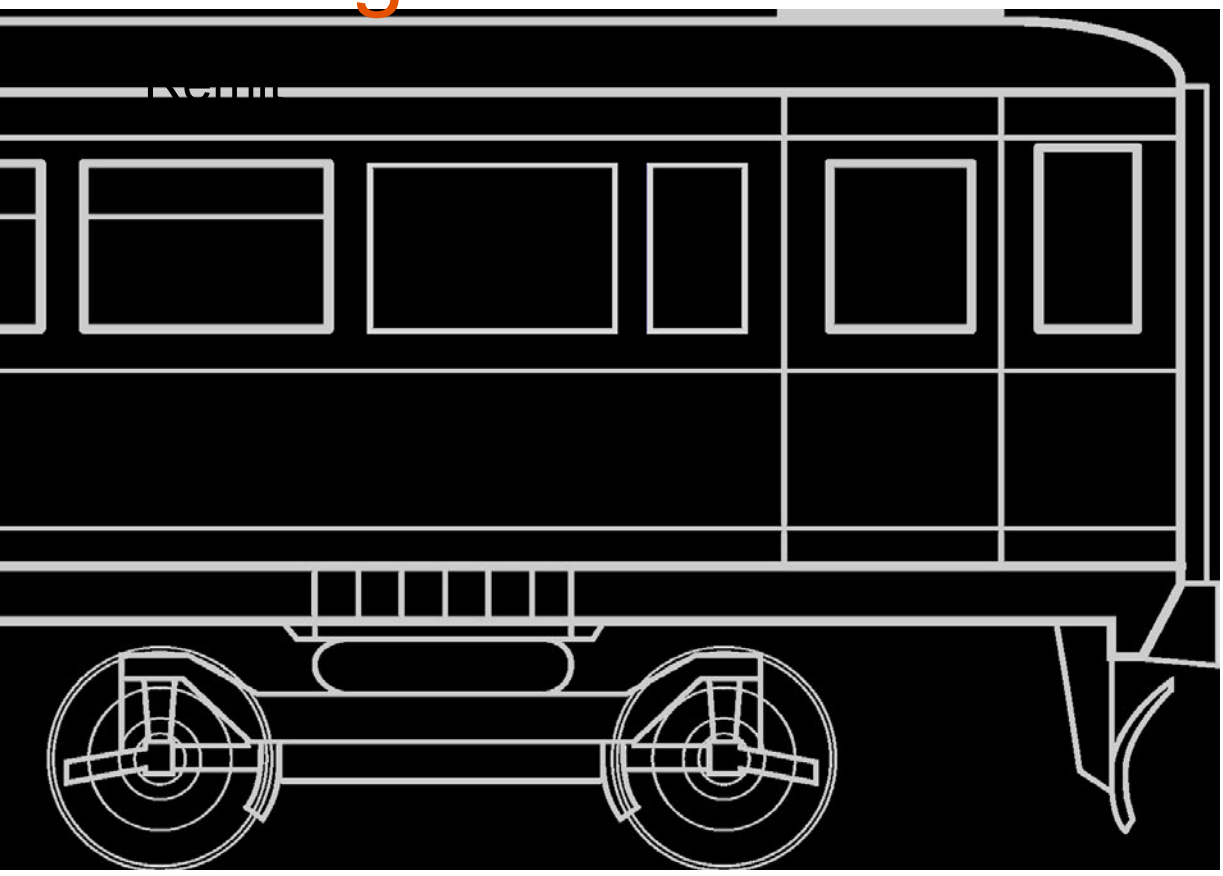
ANNEX A SUMMARY OF APPLICATIONS WITH ACCESS RIGHTS ON ECML

Operator/Application/Type	Status of Application	WCML south	Birmingham	BHM-Derby	Derby-Sheffield	Sheffield	ECML&Leeds	Oxford	Gloucester	Cardiff
Alliance Rail Cardiff - Edinburgh 17	Live		x	x	x	x	x		x	x
Colas 10th SA 22a	Live			x	x	x	x			x
CrossCountry 38th SA 22a	Live		x	x	x	x	x	x	x	x
DBC 72nd SA 22a	Live				x	x	x			
DBC 73rd SA 22a	Live					x	x			
DBC 79th SA 22a	Live			x			x	x		x
DBC 81st SA 22a	Live		x	x	x	x	x	x	x	x
DBC 86th SA 22a	Live					x	x			
DBC 87th SA 22a	Live		x	x	x	x	x		x	x
DBC 88th SA 22a	Live				x	x	x			
DCR 2nd SA 22a	Live	x	x	x	x		x	x		
DRS 17th SA 22A	Live	x	x	x	x	x	x		x	x
EMR 19th SA 22A	Live						x			
EMR 20th SA 22A	Live				x	x	x			
EMR 21st SA 22A	Live				x	x	x			
FLHH 25th SA 22A	Live	x	x	x	x	x	x	x	x	
FLHH 26th SA 22A	Live				x	x	x			
FLHH 27th SA 22A	Live	x	x	x	x	x	x	x	x	x
FLHH 28th SA 22A	Live	x	x	x	x	x	x	x	x	x
FLIM 21st SA 22A	Live		x	x	x	x	x	x		
FLIM 22nd SA 22A	Live		x	x	x	x	x	x		
FLIM 24th SA 22A	Live	x	x	x	x	x	x	x		
FLIM 25th SA 22A	Live	x	x	x		x	x	x		x
FLIM 26th SA 22A	Live	x			x	x	x	x		x
GBRf 25th SA 22a	Live	x	x	x	x	x	x	x		
GBRf 34th SA 22a	Live	x	x	x	x	x	x	x	x	x
GBRF 41st SA 22A	Live						x			
Govia Thames Railway 62nd SA 22A	Live						x			
Govia Thames Railway 63rd SA 22A	Live						x			
Grand Central 24th SA 22A	**Directed by ORR**						x			
Grand Central 28th SA 22A	Live						x			
Hull Trains 27th SA 22A	Live					x	x			
Hull Trains 28th SA 22A	**Directed by ORR**						x			
Hull Trains 29th SA 22A	Live						x			
LIS 2nd SA 22a	Live						x			
LNER 34th SA 22A	Live						x			
LNER 35th SA 22A May '28	Live						x			
LNER 36th SA 22A	Live						x			
LNER 37th SA 22A	**Rights were being sought until Dec 2025 so not included in analysis**						x			
LNER 38th SA 22A	Live						x			
Lumo 11th SA 22A	Live						x			
Lumo 12th SA 22A	Live						x			
Northern 57th SA 22	**Directed by ORR (some of the access rights in this application were withdrawn before direction and added to the Northern 60thSA)**				x	x	x			
Northern 59th SA 22a	Live					x	x			
Northern 60th SA 22a	Live					x	x			
Scotrail 49th SA 22a	**Withdrawn**						x			
Scotrail 50th SA 22a	Live						x			
Scotrail 51st SA 22a	Live						x			
TPT 58th SA 22a	Live					x	x			
TPT 62nd SA 22a	**Rights were being sought until Dec 2025 so not included in analysis**						x			
TPT 63rd SA 22a	Live						x			
TPT 64th SA 22a	Live					x	x			
TPT 65th SA 22a	Live						x			
Varamis 2nd SA 22a	Live	x	x				x			

Event Steering Group

East Coast Main Line December 2021 timetable change



Authorised by:

Simon Leyshon, Industry Programme Director, ECML

Preface

This remit document describes the purpose and rationale of an Event Steering Group (ESG) which is to support and inform decisions made on capacity allocation on East Coast Main Line (ECML) route of Network Rail. This is a live document which will be updated as required.

This ESG remit sets out the mechanisms and details of the ESGs objectives (the *what*). A separate remit will detail *how* this will be achieved for the major ESG timetable analysis workstream.

All enquiries relating to the ESG should in the first instance be directed to the Event Steering Group chair:

Simon Leyshon, Industry Programme Director, ECML

M: [redacted]
E: [redacted]

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Contents

1. Background and Purpose

1.01 Background to ECML Programme

The Government's 2012 High Level Output Specification (HLOS) for CP5 set out a number of objectives regarding the ECML. The broad ambition was to reduce journey times and increase capacity through a combination of the introduction of new rolling stock procured under the Intercity Express Programme and the creation of a £240m East Coast Connectivity Fund (ECCF) for the delivery of enhancements.

During CP5, DfT let four franchises relating to the ECML: Govia Thameslink Railway (GTR), Virgin Trains East Coast (VTEC)[1], Arriva Rail North (ARN, trading as Northern) and TransPennine Express (TPE). These franchises aim to increase the number of services in operation on the ECML during late CP5 and early CP6. In addition, East Coast Trains Ltd. (ECTL) – part of First – have been granted firm rights to run a new Open Access service on the ECML from May 2021.

Hull Trains and Grand Central already run Open Access services on the ECML and have Firm rights until December 2029 and December 2026 respectively.

Freight Operating Companies (FOCs) already have Firm rights until December 2026 for many traffic flows that use the ECML.

Enhancements are required to provide the additional track capacity and power supply needed to accommodate these services.

On the basis of existing franchise plans and the development of the DfT Full Business Case, the outcomes DfT requires from the ECML Enhancements Programme (which brings together IEP, ECCF and ECML Power Supply Upgrades) are as follows:

- LDHS seating capacity into London increased by 38% from approximately today's 2900 to 3950 seats per hour;
- An increase in capacity from 6 to 8 LDHS services between London King's Cross and Doncaster and from 5 to 6 LDHS services between Doncaster and Newcastle per hour;
- Provide sufficient freight capacity for FOC firm rights and Freight Market Study[2] forecast demand; and,
- A reduction in journey times for the fastest LDHS services in each hour to 4 hours between London and Edinburgh and 2 hours between London and Leeds.

Projects that are being delivered by the ECML Programme are listed in Appendix A.02.

[1] LNER succeeded VTEC in July 2018

[2] Network Rail Freight Market Study, 2013

The DfT recognises these outcomes are conditional and trade-offs will need to be made as further work is completed by the industry to develop the timetable for December 2021.

The Full Business Case produced by the DfT has been endorsed by ECML Programme Board and the infrastructure to be delivered by December 2021 now has greater certainty.

1.02 Other investment

In 2015 Network Rail delivered an upgrade of the GN/GE Line (Peterborough – Lincoln – Doncaster) with the purpose of rerouting freight off the ECML thus releasing capacity for additional LDHS on ECML between Peterborough and Doncaster.

The ECML also has a role to support the outputs of the Thameslink Programme completed in 2018. This Government-funded programme delivers additional outer-suburban passenger capacity into central London whilst linking outer-suburban services from Cambridge and Peterborough to new destinations south of the Thames.

The Government also commits funding to the Strategic Freight Network (SFN). The SFN has already delivered W10 and W12 gauge clearance on most stretches of the ECML between London and Edinburgh.

Transport Scotland have committed to the delivery of two new stations on the ECML at Reston and East Linton by the end of CP6. An additional platform at Dunbar will be delivered by December 2019. Network Rail is developing “Growing the Lothian and Borders” which includes enhancing the Portobello/Millerhill area. This is currently being developed to Outline Business Case.

Network Rail is also developing “Scotland East to England Connectivity” which includes enhancing the eastern approaches to Edinburgh Waverley and additional loops/lines. This is currently being developed to Strategic Outline Business Case.

Transport Scotland are the franchise authority for ScotRail and Caledonian Sleeper, the former has a franchise option to extend the Edinburgh Waverley – Dunbar service to Berwick-upon-Tweed.

1.03 Timetable development to date

Timetable development for the ECML to support the December 2021 timetable has largely been in concept form to date.

In 2013 Network Rail produced timetable analysis to support decisions on the development of infrastructure interventions proposed at GRIP2 by the ECCF. This work has examined whether the identified infrastructure interventions can support stakeholder aims to increase the service level, maintain current connectivity and improve journey times.

This was followed in 2014 by a report produced by Network Rail to inform the ORR on the capacity options that will exist on the ECML.

In 2018 Network Rail Capacity Planning produced a May 2021 concept timetable to demonstrate the challenge of accommodating firm access rights already sold for May 2021, and franchise commitments, within infrastructure assumed to be delivered by May 2021. This concept timetable was produced for an Industry Planning Group – inviting DfT, Transport Scotland and Train Operators – convened by System Operator.

In summary, no detailed draft timetable has been produced by the industry for the 2021 timetable change which can enable a smooth transition to validation and publication of a final 2021 timetable that must be delivered under Part D of the Network Code.

1.04 Long Term Planning Process (LTPP)

Network Rail works with the wider industry in identifying likely changes in demand in the various markets for rail over the next 30 years and consequential value-for-money changes to infrastructure capability.

The LTPP Market Studies were published in Final version in late 2013.

- Freight
- Regional Urban
- Long Distance
- London & South East

Network Rail published the following Route Studies:

- Scotland, in July 2016
- ECML, in July 2018

More recently, Network Rail is working with stakeholders to update the industry's strategic planning guidance as Continuous Modular Strategic Planning (CMSP). Network Rail will publish an Annual Statement of updated guidance.

1.05 Purpose of an Events Steering Group

An Event Steering Group (ESG) is defined in Part D of the Network Code as follows:

"In relation to each Event, Network Rail shall set up and chair an Event Steering Group. The Event Steering Group shall be set up in sufficient time prior to the relevant Event so that it can achieve its objectives set out in Condition D7.2.2."

i. *"The objectives of an Event Steering Group shall be to:*

ii. *agree a project plan to achieve a smooth transition for the necessary timetable changes, arising from the Event, through Condition D2 by way of timely industry input into the process ("the Project");*
iii. *oversee and facilitate delivery of the Project;*
iv. *carry out appropriate consultation with Transport Focus, Rail Freight Group, Freight Transport Association and other local transport groups during the course of the Project."*

"Members of the Event Steering Group shall participate in and contribute to the Event Steering Group so that it achieves its objectives"
Consultation with passenger and freight groups will be undertaken through the appropriate Train or Freight Operator representative".

For this ESG the "Event" listed in the Calendar of Events is:

December 2021	New East Coast Main Line timetable	Timetable / Infrastructure change

2. Objectives

Once an ESG has been approved for an event it will be referred to as “the Project”,

2.01 Aim

The Project will produce a detailed draft timetables for the ECML December 2021 timetable change, evaluating the service specifications, service aspirations and conditional journey time outputs from:

- franchised Train Operating Companies
- open access Train Operating Companies
- Freight Operating Companies
- other Train Operators with access requirements (e.g. charter operators)
- Network Rail business functions (e.g. Route Services, Seasonal Delivery)

The Project will collectively make transparent, inclusive and timely decisions on the most effective and resilient allocation of infrastructure and rolling stock, and a balanced delivery of the project / programme outputs from Funders, to meet the needs of passengers and freight end users.

2.02 Objectives

- Develop and agree the Project plan
- Endorsement of remits produced for sub-groups
- Develop and validate conflict-free draft December 2021 timetable options with reference to an agreed Indicative Train Service Specification, highlighting areas where this is not possible
- Provide appropriate timely choices throughout the duration of the draft timetable development
- Gather sufficient evidence to assist with development of timetable options
- Performance assessment of the developed timetable options
- Close out actions as listed in meeting minutes
- Maintain an active log of Risks, Assumptions, Actions and Decisions
- Delivery of project milestones
- Recommend which timetable choice(s) are taken forward from the Project to the timetabling process from D-55
- TPR and SRT are produced ready for formal consultation at D-64 Principal Change date (2022 TPR version 0)
- Achieve a smooth transition from the Project to the timetabling process from D-55

- Ongoing consultation of timetable changes to stakeholders (franchised TOCs only) prior to D-55

2.03 Evidence-based decision making

Decisions will made throughout the validation process about the trade-offs that are fundamental to the nature of the railway:

- Capacity (for differing purposes)
- Connectivity
- Calling patterns
- Journey times
- Performance
- Cost (e.g. operating costs for Train Operators)
- Revenue
- Maintaining the capability of the Network

The Project shall seek to understand the effects of the alternatives proposed, with quantification as far as practical and appropriate.

2.04 Consistency and transparency

The Project shall demonstrate due process in reaching decisions when developing and validating the draft timetables. This includes:

- engaging with stakeholders proportionately to their interest in the outcome
- respecting commercial confidentiality
- making (transparent) decisions based on the best available analysis
- explaining the basis for decisions made

2.05 Alignment with Part D of the Network Code

Decisions made under the auspices of the Project should be understood and explained in terms of the process and decision criteria set out in Part D of the Network Code.

3. Parameters

3.01 Geographic scope

The core geography is the ECML between London Kings Cross and Edinburgh Waverley, plus:

- Finsbury Park to Moorgate
- Alexandra Palace to Langley Junction via Hertford North (Hertford Loop)
- Hitchin to Kings Lynn via Cambridge and Ely
- Peterborough to Doncaster via Lincoln ("GN/GE")
- Doncaster to Leeds via Wakefield Westgate
- Leeds to Colton Junction via Micklefield

The geography is merely a guideline and impacts beyond this will be considered where appropriate.

3.02 Infrastructure

No additional or amended infrastructure beyond what is committed for the delivery by December 2021 is to be assumed by this work unless a formal change control occurs.

Refer to Appendix A.02.

The Project can use the development and validation of the draft timetables to propose future infrastructure interventions, recognising these will require funding and – if public funds are assumed – adherence to DfT and TS investment decision frameworks.

Any proposed future infrastructure interventions identified by the Project shall be used to support the Long Term Planning Process.

3.03 Timetable operating days

The priority operating days for development and validation of the draft timetables are Saturdays excepted ([SX]).

Timetables for Saturday only ([SO]) and Sunday only ([SuO]) will also be developed and validated.

3.04 Methodology

The following methodology shall be applied:

3.04.01 Baseline timetable components

All services correct as of December 2020 Working Timetable (WTT) offer at D-22 as a point of reference, and for the purposes of populating the timetable database (to reduce the amount of manual schedule input). The following shall be also considered:

- End-state Thameslink timetable, e.g. 22 tph through Thameslink "core" between St. Pancras Low Level and Blackfriars[3]
- Franchise commitments proposed for implementation in the December 2019 timetable (or sooner) that have been deferred
- LNER service frequencies, origins and destinations proposed for introduction in December 2021
- ECTL services proposed for December 2021
- other train service aspirations agreed by the ESG Working Group for inclusion in the Indicative Train Service Specification
- sufficient freight capacity to meet Freight Market Study[4] forecast demand and firm rights held by FOCs
- sufficient capacity for test trains and charters

3.04.02 Indicative Train Service Specification (ITSS)

The ESG Working Group can propose and agree deviations from the ITSS, such as service linkages and calling patterns, if deemed beneficial to the development and validation of the draft timetables, and/or:

- journey opportunities for passengers
- movement of freight
- improving timetable performance

3.04.03 Journey times

The Project shall evaluate the journey time requirements and aspirations of all ESG Working Group.

[3] This had previously been 24 tph until Phase 1 of ESG programme commenced

[4] Network Rail, Freight Market Study 2013

3.04.04 Timetable validation approach

Although the December 2020 Working Timetable (WTT) is used for reference and data purposes, the validation of the draft December 2021 timetable will adopt a “blank sheet of paper” approach whilst ensuring fixed timing locations are recognised.

3.04.05 Timetable Planning Rules (TPR)

Version 2 of the 2021 TPR will be used as a starting platform.

As the validation of the draft December 2021 timetable progresses, the Project shall take cognisance of updated TPR as they become published by Network Rail.

Amendments to the TPR can be proposed and agreed by ESG Working Group if deemed to benefit the development of the timetable and/or improve timetable performance. Evidence of modelling shall be provided.

TPR for changes to the Network committed for completion by December 2021 (e.g. Kings Cross remodelling and Werrington Grade Separation) shall be proposed be calculated, proposed and agreed by ESG Working Group.

3.04.06 Sectional Running Times (SRTs)

SRTs correct as of Version 2 of the 2021 TPR will be used. These will be complemented by SRTs for new traction, if not already implemented by another timetable prior to December 2021.

As the validation of the draft December 2021 timetable progresses, the Project shall take cognisance of updated TPR as they become published by Network Rail.

‘HST2+9’ SRTs shall not be used on LNER services because LNER have withdrawn their HST fleet.

ECTL have ordered AT300 EMUs from Hitachi and thus shall assume use of ‘80x-E’ SRTs.

Amendments to existing SRTs can be proposed and agreed by ESG Working Group members if deemed to benefit the development of the timetable and/or improve timetable performance. Evidence of modelling shall be provided.

3.04.07 Engineering Access Statement (EAS)

Version 2 of the 2021 EAS will be used.

Amendments to existing EAS can be proposed and agreed by ESG Working Group members if deemed to benefit the development of the timetable and/or improve timetable performance without compromising Network Rail’s access requirements to maintain the railway.

3.04.08 Rolling stock diagrams

Train Operating Companies are requested to provide indicative rolling stock diagrams to support the development and validation of the draft timetables.

3.04.09 Performance analysis

A workstream will be convened and remit specifically prepared for this exercise.

3.05 East Midlands franchise

The DfT announced Abellio East Midlands Rail as the successful bidder of the next East Midlands franchise in April 2019[5].

The Project shall adopt outputs of Midland Main Line December 2020 ESG as a baseline and TSR2 commitments of EMR where appropriate.

3.06 CrossCountry Trains direct award

The DfT is working on a direct award to CrossCountry Trains.

The Project shall assume that CrossCountry service *frequencies* on, or interacting with, the ECML will remain unchanged.

The Project shall assume that rolling stock used by CrossCountry remains unchanged.

Journey time benefits achieved by the Derby remodelling (completed in 2018) and Ambergate Junction renewal (delivery in 2019) are assumed noting the risk that not all CrossCountry services can be retimed to present at Doncaster earlier owing to paths south of Sheffield.

3.07 Relationship to other ESGs and timetable development

The project shall take cognisance of timetable steering groups for:

- East Midlands Franchise TSR 1 (ESG no.8)
- West Anglia Main Line December 2021 timetable change

[5] https://www.gov.uk/government/news/more-seats-services-and-state-of-the-art-trains-for-passengers-on-new-east-midlands-railway
At the time of writing, Stagecoach East Midlands Trains have a contract to continue until August 2019

4. Resources

A collaborative project team comprised of an Industry Programme Director and Senior Timetable Development Manager from Eastern Region, a Project Manager and Lead Development Manager from the Future Services Integration (FSI) team within Capacity Planning, and full-time timetable practitioners sourced from within Capacity Planning and Access Parties, will be required.

Whenever possible to do so, the team will be co-located, with some requirement to be located alongside the Capacity Planning, particularly as key project milestones approach.

4.01 ESG members

Every Timetable Participant affected by the objectives set out in section 2 is invited to participate. Membership of ECML 2021 ESG will comprise representatives of the following organisations:

- **Network Rail, Eastern Region** – Chair – Simon Leyshon, Industry Programme Director, ECML
- **Network Rail, Eastern Region** – vice-chair and timetable development lead – Ed Dunn, Senior Timetable Development Manager
- **Network Rail –** other participants including Strategy & Planning, Capacity Planning, Eastern Region and Scotland Region
- **Timetable Participants** *(this is not an exhaustive list)* –

LNER	East Coast Trains Ltd.
Hull Trains	Grand Central
Govia Thameslink Railway	Greater Anglia
CrossCountry	East Midlands Rail
TransPennine Express	Northern Trains
ScotRail	Caledonian Sleeper
DB Cargo (UK)	Freightliner Group
GB Railfreight	Direct Rail Services
Colas	Rail Operations Group
West Coast Railway Co.	Avanti West Coast
Nexus	Alliance Rail

- **Franchise authorities and regulation**

Department for Transport	Office of Rail and Road (ORR)
Transport Scotland	Transport for the North

5. Roles and governance

The Project will be assigned a Senior Timetable Development Manager who will build the initial project plan and advise on the timeline.

The Project will govern and oversee the project plan for the event, where required they will commission Sub-Groups and will provide support and guidance to those groups. The Senior Timetable Development Manager of the Project will provide a link between this group to other ESGs that may impact.

Sub-Groups will have their own individual project plan that identify the detailed requirements and provide information required for the project plan and overall objective of a smooth transition of change into timetable operation.

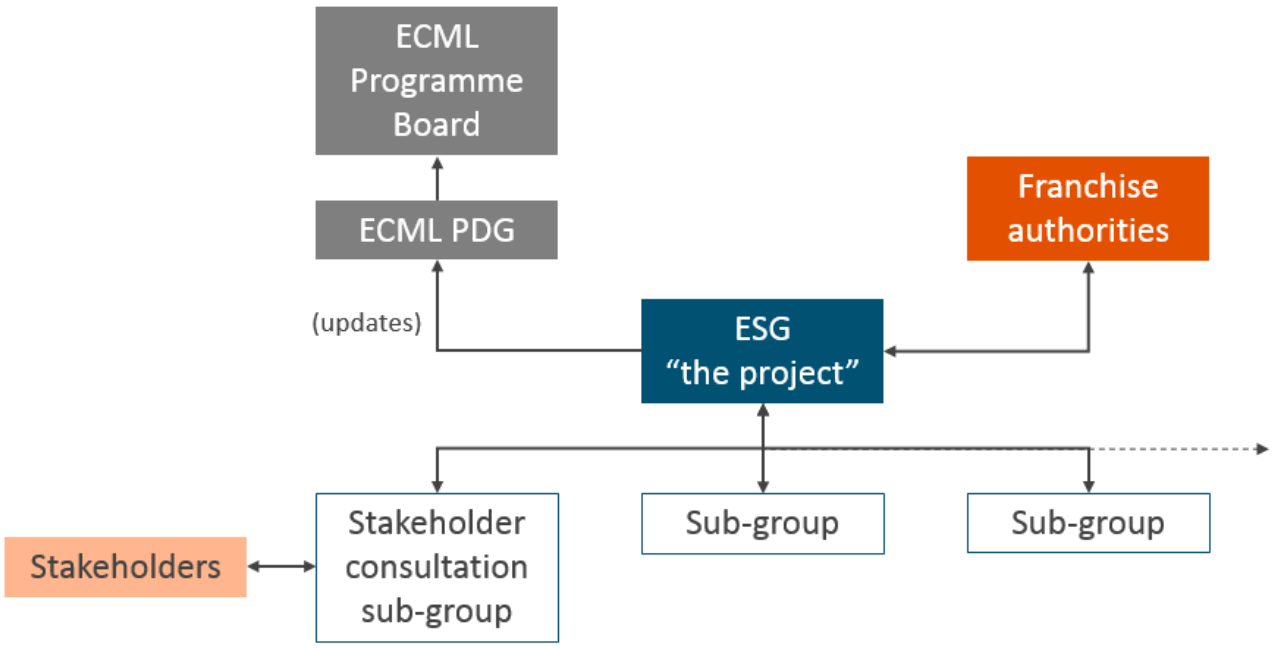
Every Timetable Participant affected by the scope set out in the scope document for each event will be invited with an expectation to participate with consistent attendance from the Head of Service/Train Planning (or a suitable nominated deputy) at the ESG and Subject Matter Experts (SMEs) at the sub-groups. This will allow the right level of conversation to take place whether that is strategic or operational.

5.01 Structure and Governance

The Senior Timetable Development Manager will report to:

- Industry Programme Director, ECML
- Lead Timetable Development Manager, Eastern Region
- Director of Investment and Sponsorship, Eastern Region
- Head of Strategic Planning, Scotland

Updates will be provided to the ECML Programme Delivery Group, ECML Programme Board, and ECML Route Performance Board.



5.02 Roles and responsibilities

Following the above structure the roles and responsibilities for the delivery of this process have been assessed using the standard 'RACI Model'. Under the model, roles and responsibilities are assessed using the 4 following criteria:

- **Responsible (R)** – Individual(s) who perform the activity and are responsible for action. Can be shared.
- **Accountable (A)** – The individual who is ultimately accountable, including yes/no and power of veto. Only one (A) per task.
- **Consulted (C)** – Individual(s) to be consulted prior to the final decision or action. Two-way communication.
- **Informed (I)** – Individual(s) that need to be informed after a decision or action is taken. One-way communication.

Activities	Industry Programme Director	Senior Timetable Development Manager - ER	FSI Project Manager	ESG Participants	Sub-Group Leads	Sub-Group Participants	ECML PDG, Programme Board, Performance Board	Timetable Production Managers (LNE & EM, Scotland)
Understand all timetable, service, rolling stock and infrastructure specifications & assumptions, and sourcing any required information (e.g. scheme drawings, electronic timetable files)	-	A	I	R/C	R	R	-	I
Manage change to any of the remits and/or project scope	A	R	I	C	I	I	-	-
Smooth transition of the event into timetable operation	-	A	R	R	R	R	-	C
Chair ESG	A	-	-	-	-	-	-	-
Identify work packages	I	R	-	R	A	-	-	-
Produce the Event project remit	I	A	R	C	C	I	I	-
ESG Programme Plan	A	R	C	R	R	I	I	-
Sub-Group project remit	I	R	I	C	A	R	I	-
Sub-Group project plan	I	R	I	C	A	R	I	-
Complete advance timetabling work	C	C	A	I	R	R	-	-
Manage risk, assumptions and action logs	C	A	A	R	R	R	I	I
Identify and manage resource to develop the timetable(s)	I	C	A	I	-	-	I	-
Progress reporting of event project plan	C	-	A	C	R	-	I	I
Progress reporting of sub-group project plan	C	-	I	C	A	R	I	I
Facilitate discussion with franchise authorities and ORR to resolve competing commitments	A/R	C	C	I	I	I	I	-

Appendices

A.01 Timing boundaries

Timing Point	Services
Belle Isle Junction	to/from Thameslink core
Camden Road	to/from North London Line via Copenhagen Junction
Canonbury	to/from North London Line via Highbury Vale
Gospel Oak	to/from Gospel Oak – Barking Line via Harringay Junction
Shepreth Branch Junction	to/from Audley End
Coldham Lane Junction	to/from Ipswich via Newmarket
Ely Dock Junction	to/from Ipswich via Soham
Ely North Junction	to/from Norwich
Syston East Junction	to/from the East Midlands via Oakham
Sleaford East Junction	to/from Skegness
Netherfield Junction	to/from Nottingham (Skegness and Newark Castle lines
Market Rasen	to/from Wrawby
Gainsborough Trent Junction	to/from Sheffield via Retford Low Level to/from Wrawby via Brigg
St. Catherine's Junction	to/from Brancliffe East via South Yorkshire Joint Line
Aldwarke Junction	to/from Sheffield and Rotherham Central
Thorne Junction	to/from Wrawby via Scunthorpe
Hall Royd Junction	to/from Manchester and Copy Pit line
Heaton Lodge Junction	to/from Huddersfield and Manchester
Skipton	to/from Hellifield
Metrocentre	to/from Hexham
Haymarket West Junction	to/from Glasgow Queen Street, Aberdeen, Dundee, Inverness (all routes)
Midcalder Junction	to/from Carstairs and Shotts

A.02 Infrastructure

A.02.01 Infrastructure on core route assumed for completion by December 2021:

Project	Programme (if relevant)	Funder(s)	Entry into Service
Edinburgh Waverley platform 5 and 6	ECML Programme	DfT	2018 *(complete)*
Kings Cross remodelling	ECML Programme	DfT	March 2021
Stevenage Turnback	ECML Programme	DfT	May 2020
Peterborough Down Slow	ECML Programme	DfT	March 2019 *(complete)*
Werrington Grade Separation	ECML Programme	DfT	April 2021
Partial completion of ECML Power Supply Upgrade Phase 2 (PSU2) [6]	ECML Programme	DfT	2021
Leeds Capacity (platform 0)	-	DfT	December 2021
Harrogate Turnback (new crossover)	ECML Programme	DfT	December 2020
Re-signalling of Northern City Line between Drayton Park and Moorgate with ETCS Level 2	Digital Railway Programme / CP6 signalling renewals	DfT	31st December 2021 (signals away) Details tbc – assume benefits captured by May 2022 timetable
new Down platform at Dunbar	-	Transport Scotland	December 2019 *(complete)*
New station at Reston	-	Transport Scotland	CP6 (passive provision in December 2021 timetable only)
New station at East Linton	-	Transport Scotland	CP6 (passive provision in December 2021 timetable only)

[6] The package of infrastructure works required as part of PSU to provide the requisite power availability between Bawtry (south of Doncaster) and Hutton Bonneville (north of Northallerton), and between Berwick-upon-Tweed and Edinburgh, will not be completed before December 2021.

This is because overall affordability of PSU2 which has a delayed a Commit to Deliver decision, and the uncertainty surrounding the Distribution Network Operator in Scotland confirming a date to supply the requisite power between Berwick-upon-Tweed and Edinburgh.

A.02.02 Infrastructure on other routes assumed for completion by December 2021:

Project	Funder(s)	Entry into Service
New station at Horden	Durham County Council, DfT New Stations Fund	March 2020
Interventions to support 2 tph between Harrogate and York	North Yorkshire LEP	December 2020
Middlesbrough & Whitehouse re-signalling and re-control	Network Rail CP6 renewals	July 2021
Durham Coast re-signalling and re-control	Network Rail CP6 renewals	October 2020

A.02.03 infrastructure interventions considered by ECML Programme but subsequently shelved since 2016:

- Gordon Hill Turnback
- Huntingdon to Woodwalton 4-tracking (HW4T)
- York North Throat
- Northallerton to Newcastle Loops

A.03 Train Service Specification

Spreadsheet accompanies this document

From: [redacted]

Subject: ECML ESG: documents from meeting 13.02.2024
Date: 14 February 2024 09:56:01
Attachments: ESG Top 5 Risks 13022024.pptx
Progress report ECML ESG meeting 130224.pdf
Comms Working group summary for ESG 13022024.pptx
ESG 240213 Ops Readiness Risks.pptx
ESG Performance update 130222024.pptx
image001.jpg
image002.jpg

[redacted]

Dear ECML ESG,

Please find attached the presentation showed at the meeting on 13th February 2024.

The meeting on 13th February is the final meeting as far as timetable development for December 2024 is concerned. Capacity Planning will lead engagement on December 2024 timetable planning going forwards.
EC Route will, however, reserve the right to call an extraordinary ESG meeting if a situation arises.

The 4-weekly meeting from 12th March 2024 onwards will be primarily focussed on readiness for December 2024. A new invitation to readiness SPoCs will be issued in due course.
On behalf of Simon (the chair) and myself (who started it), thank you to everyone and your engagement over the past 5 years.
Best regards,

Network Rail

Ed Dunn
Principal Project Planner – EC Route Industry Programme
Director team
Mobile: [redacted]
www.networkrail.co.uk
CIRO Associate member

[redacted]

ECML ESG

Comms Working Group

Simon Leyshon – EC Route

Comms WG update

- LNER consultation on their removal of Stirling and Glasgow Central extensions is live. This concludes on 18th March.
- LNER are leading the development of a neutrally-branded microsite that will present the proposed Dec-24 timetable, all caveated as “subject to change”
  - Launch date of microsite – *tbc*
  - microsite will show Public Timetables on selected routes; all TOCs will feature
- Network Rail are starting to devise a Comms strategy for Dec-24 over the coming 10 – 12 months using the Great Western Main Line Dec-19 TT change as an exemplar
  - Comms strategy will consider timing against Local Elections, Mayoral Elections and the General Election
    - General Election is assumed, for now, will happen in Autumn 2024
  - Comms strategy will include railway staff briefings; the assumption is TOCs will lead their own staff briefings

Principles of stakeholder engagement

1. Key Statutory Stakeholder Feedback – complete

- Feedback **ONLY** to be offered to TFN/RNP stakeholder Groups and Transport Scotland
- Presentations to these groups to include details of ECML station-by-station services, calling patterns & frequencies plus future investment in ECML. LNER to lead presentation production with industry input
- Seek a position from RNP Board post-07/12/23 to feed Decision to Proceed on 17th January 2024

2. Wider Stakeholder Feedback

- Proactive presentations embargoed until post-02/02/24. No closure date as it's Industry feedback from Summer 21 consultation
- LNER conducting parallel but separate Glasgow and Stirling decrements consultation for 8 weeks – *paused to December 2023; services proposed to be removed in Dec 2024 TT*
- Industry Feedback Document is set out as "you said-we did" style responding to original consultation, highlights post-Covid finance affecting Rail service levels and how that translates into the specifications that DfT and RNP have requested
- Feedback document to include references to future ECML investment
- Feedback document to be supported by Public TTs that Network Rail will produce and include all known services at time of publication; includes disclaimer that details are *subject to change* (production date tbc)
- Industry Feedback document to be placed on LNER-hosted website with neutral Dec 24 Timetable branding. Open Access to be included in Public TTs with subject to change disclaimer.

ECML ESG Dec24 Operational Readiness
Based on discussions to date, current understanding of top Industry Risks & Issues

13th February 2024

ID	Summary Risk / Issue	Resolution	Next Step Action	Who	When	Action Status
1	The industry is unable to demonstrate Readiness or otherwise at critical decision points (D40, D33 and D14) and intervention opportunities are missed.	An Industry Ops Readiness Programme aggregated from all duty holders' Delivery Plans, Risk Registers and KPIs.	Present consolidated Risk Register to Oversight Steering Group	Philip Hassall	22-Feb	
2	The output of the PMO's Deep Dives of LNER, NTL and TPT's assurance processes indicates a course of action not prepared for and planned.	Clarity on the findings of and recommendations made following the PMO Deep Dives and the impact any subsequent decisions may have.	Circulate details of the PMO's findings, recommendations and likely impact.	Laura Freeman	21-Feb	
3	The risks and issues around the introduction of a new Timetable alongside the impact of changes in York Control, new signalling arrangements and new signallers is not understood.	The risks and issues clearly understood and articulated, each with well-defined and deliverable resolution and/or mitigation plans.	Confirm date of initial workshop to understand risks and issues.	Matt Johnson	21-Feb	
4	The extent of the outstanding validation from the Timetable Development Process, against current conditions, has a detrimental impact on the Timetable Production Process (timing and quality).	Increase capacity and capability within the Timetable Production Process.	Confirm the proposed 20% increase in capacity is secured and additional contingency signed off.	Matt Allen	22-Feb	
5	Operators are unsighted on Network Rail's plans to rewrite Regulation Statements, Contingency Plans and Capacity Studies, meaning they're unable to schedule the necessary resources.	Operator sign off of delivery plans and development principles for the rewriting of Regulation Statements, Contingency Plans and Capacity Studies.	Present first draft of proposed delivery plans and development principles for Operator review and comment.	Matt Johnson	12-Mar	

Programme Risk & Issues Matrix

	Very Low	Low	Med	High	Very High
Major			2	3	1
Significant			5		4
Moderate					
Minor					
Minimal					

Indicative outputs

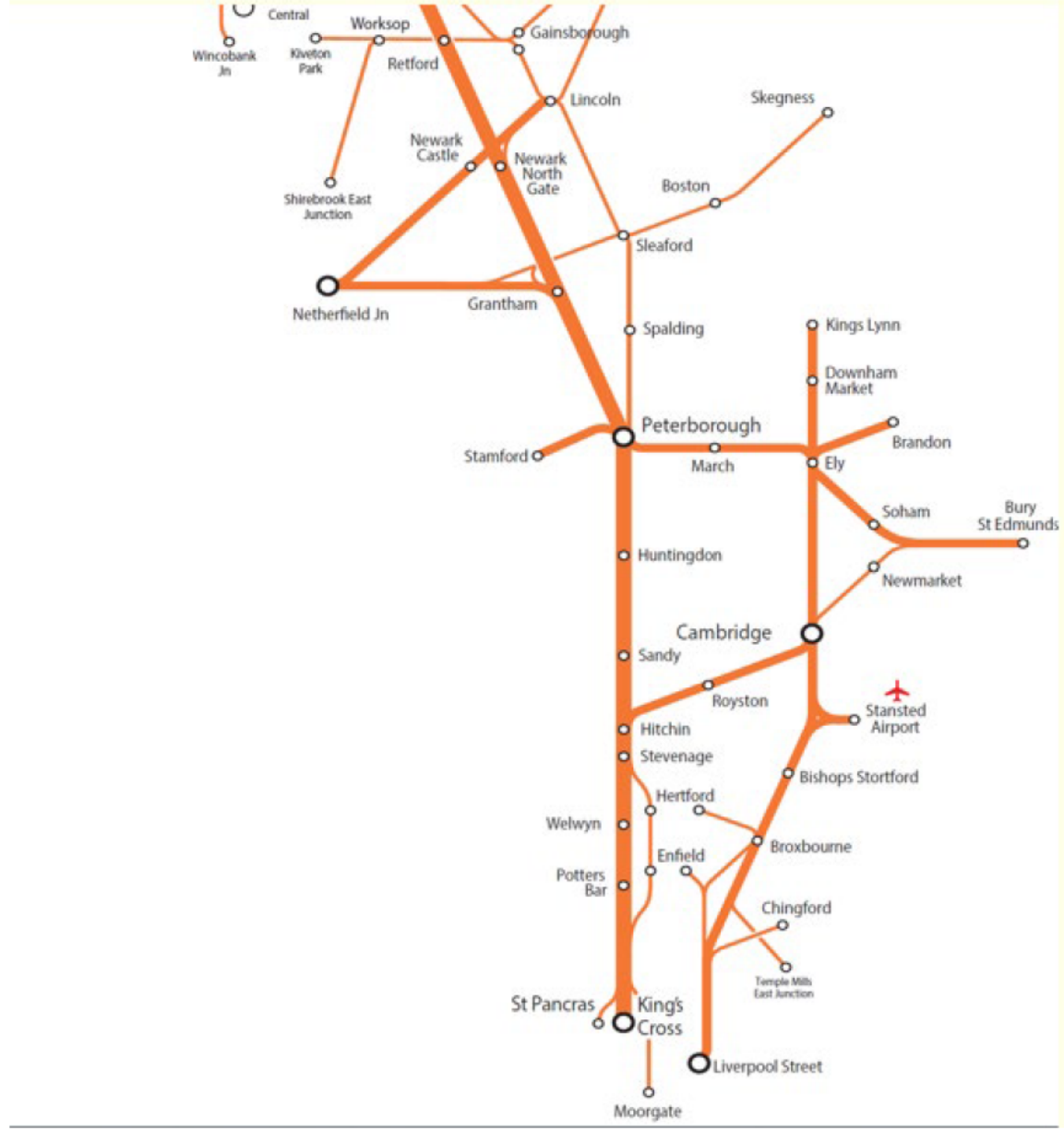
The overall improvement in On Time punctuality across East Coast Route is driven by the high proportion of GTR services that perform better in the model; and that Long Distance High Speed operators see a negative impact of performance on a normal operational day.

Route	Base			Option			Change		
	Time-to-1%	Time-to-3%	Time-to-15%	Time-to-1%	Time-to-3%	Time-to-15%	Time-to-1%	Time-to-3%	Time-to-15%
Anglia	59.3%	91.5%	99.9%	60.2%	92.0%	99.9%	0.9%	0.6%	-0.1%
East Coast	68.0%	92.6%	99.6%	70.6%	92.7%	99.5%	2.6%	0.1%	-0.2%
East Midlands	71.0%	89.6%	99.7%	72.6%	90.2%	99.7%	1.7%	0.6%	0.0%
North & East	67.0%	90.6%	99.6%	67.5%	90.4%	99.6%	0.5%	-0.1%	0.0%
Scotland	84.0%	96.9%	99.9%	82.2%	96.0%	99.4%	-1.8%	-0.9%	-0.5%

Operator	Base			Option			Change		
	Time-to-1%	Time-to-3%	Time-to-15%	Time-to-1%	Time-to-3%	Time-to-15%	Time-to-1%	Time-to-3%	Time-to-15%
Abellio Greater Anglia	69.8%	91.9%	99.9%	71.6%	92.9%	99.8%	1.8%	1.0%	-0.1%
CrossCountry	71.5%	86.9%	98.5%	70.8%	87.2%	97.3%	-0.7%	0.2%	-1.1%
East Midlands Railway	70.2%	89.8%	99.8%	74.4%	91.7%	99.8%	4.2%	1.9%	0.0%
First Hull Trains	81.8%	96.7%	100.0%	80.3%	95.7%	99.6%	-1.6%	-1.0%	-0.4%
First TransPennine Express	67.4%	86.2%	98.7%	69.2%	87.9%	98.0%	1.8%	1.7%	-0.7%
Govia Thameslink Railway	65.6%	92.8%	99.7%	69.3%	92.7%	99.6%	3.7%	-0.2%	0.0%
Grand Central	76.5%	93.7%	100.0%	80.8%	95.1%	99.9%	4.3%	1.4%	0.0%
London North Eastern Railway	85.2%	95.9%	99.8%	82.5%	94.8%	99.7%	-2.7%	-1.1%	-0.1%
London Overground	42.7%	90.5%	100.0%	42.8%	91.2%	100.0%	0.0%	0.7%	0.0%
Lumo	87.0%	94.9%	99.3%	85.8%	93.2%	99.5%	-1.2%	-1.7%	0.2%
Northern Trains Ltd	68.6%	91.6%	99.7%	68.5%	91.1%	99.8%	-0.1%	-0.5%	0.1%
Scotrail	86.0%	97.2%	100.0%	85.2%	97.2%	100.0%	-0.9%	-0.1%	0.0%
Tyne & Wear Metro	59.3%	89.9%	100.0%	60.2%	90.4%	99.9%	0.9%	0.5%	0.0%

Scope and Methodology

Performance Modelling Geography



Methodology

- The Capacity Planning Timetable Performance & Simulation team (P&ST) will model the quality of the ESG Dec 2024 timetable paths against a level of delay that is based on observed data from the December 2022 timetable and fully calibrated.
- Railsys runs 2 types of model, one with no delay (deterministic), the other with a ‘typical’ days delay (stochastic)
- A PIF, including WAML, was received by P&ST on October 16th, 2023.
- ESG will be compared to the December 2023 baseplan, which will be modelled using the same level of delay to the ESG timetable, to ensure it is a like for like model.
- The modelling will be carried by out in line with RailSys Standards 2023 v1.0.
- TPRs being used are version v4 2024, along with the latest version of the agreed LNE ESG TPR Assumptions.

What’s been included

- The model is based on the SX timetable – therefore a Wednesday has been chosen, as this is the most standard of the weekdays and avoids services that run MSX FSX etc.
- Off peak and evening peak are included in the model (14:00 – 20:00).
- All passenger services and Empty Coaching Stock (ECS) moves are included.
- Freight services that have run more than 24 times in the previous 12 months – this avoids one-off services that skews results.
- Strategic freight paths and QJs are omitted from the modelling.
- RHTT and NMT paths are omitted from the modelling.
- Manchester and Sheffield areas are omitted from the modelling

ECML ESG Top Timetable Development Risks and Issues

13th February 2024

Aim

- To close all Risks arising from the development of the ESG timetable before D-40

ID	Risk Heading	Risk Description ECML ESG unable to deliver objectives owing to	Primary mitigating measure(s)	Change	Route to Green	Milestone	Date
1	Performance analysis and assurance	Analysis results comparing forecast performance to targets	Refinement and checking of model; Emerging results fed into timetable development	≠	Bi-lateral meetings with Train Operators to review findings and secure buy-in. Aim to close risk at D-40.	D-40	08/03
2	Train Service Specification	Misalignment of Annual Business Plan process and Network Code Part D	Weekly catch-up between Network Rail and DfT; Comms WG also seeking confirmation from Government for Dec-24 microsite	▲	DfT write to Network Rail between D-45 and D-40 confirming HM Treasury approval. If no letter, then Network Rail assumes proceed without further specification changes	D-40	08/03
3	Train Service Specification	No final confirmation of specification from Funder to address efficiencies etc. (not necessarily funding)	Apply pressure on Funder to confirm specification	▼	Closed – RNP confirmed late TPE and Northern change not supported by RNP Board	D-40	08/03
4	Timetable Development period up to D-45	ATTUne conflict data; quantity of schedule conflicts ("outstanding validation") not closed out by D-45	1) Final effort by ATT team to close down outstanding validation issues and requests 2) List of outstanding issues provided by ATT team at D-45	▲	Risk transfers as an Issue to Capacity Planning at D-40; Industry collaboration continues into Production time	D-40	08/03

Programme Risk & Issues Matrix

	Very Low	Low	Med	High	Very High
Major		1		2	
Significant				4	
Moderate	3				
Minor					
Minimal					

Department for Transport

Minutes

Subject: **East Coast Main Line Programme Board (extraordinary)**

Time of Meeting: **14:00 – 15:30**

Date of Meeting: **17th January 2024**

Venue: **via Microsoft Teams**

Attendees:

Name	Organisation	Role
Nick Bisson (NB) (Chair)	DfT	Director, Integrated Rail Plan
Stephen Sutcliffe (SS)	DfT	Programme Director
James Taylor (JT)	DfT	Principal Sponsor – East Coast
Arthur Borkwood (AB)	DfT	Deputy Director - Market Lead
Chris Field (CF)	DfT	Head of Train Service Policy
Peter Latham (PL)	DfT	Train Service Policy Manager
Alistair Rusholme (AR)	DfT	Programme Sponsor, East Coast
Adam Timewell (AT)	DfT	Head of Programmes – Northern Trains
Will Saltmarsh	DfT	Senior Commercial Manager
Simon Leyshon (SL)	Network Rail	Industry Programme Director, East Coast Route
Chris Curtis (CC)	Network Rail	Director, Industry PMO & Network Performance
John Thurgood (JTh)	Network Rail	Advanced Timetable Manager
Laura Freeman (LF)	Network Rail	Timetable Change Assurance Manager, Industry PMO
Luke Durston (LD)	Network Rail	Principal Programme Sponsor
Luke Espin (LE)	Network Rail	Senior Sponsor, Eastern Region
Nicola Butterworth (NBu)	Network Rail	Senior Programme Development Manager, Eastern Region
Matthew Spense (MS)	Network Rail	Director, Strategy & Investment (Scotland)
Matthew Johnson (MJ)	Network Rail	Programme Manager
Ian Kapur (IK)	GB Railfreight	Head of Capacity Planning
Paul Headon (PH)	Northern	Head of Service Planning
Mark Glenister (MG)	Northern	Senior Service Development Manager
Chris Jackson (CJ)	TPE	Managing Director
George Thomas (GT)	TPE	Business Development Director
Phil Hutchinson (PHut)	GTR	Head of Strategic Planning
Keith Jipps (KJ)	GTR	Infrastructure Director
David Horne (DH)	LNER	Managing Director
Joanna Davey (JD)	CrossCountry	Industry Projects & Planning Director
Martijn Gilbert (MGil)	First Group	Managing Director, Open Access Operations
Duncan Cale (DC)	EMR	Infrastructure Interface Lead
Richard Harper (RH)	Steer	Associate Director
Damian Briody (DB)	Transport Scotland	Head of Rail Projects and Technical Services
Shona Partridge (SP)	Transport Scotland	Rail Services Planning Manager
Sean English (SE)	Grand Central	Chief Operating Officer

Apologies:

Chris Nutton (CN)	TransPennine Express	Major Projects Director
Paul Rutter (PR)	Network Rail	Route Managing Director
Fiona White (FW)	DfT	Markets Director

1	**Welcome** NB welcomed Programme Board members to the meeting, reminding everyone that this was an extraordinary Board focusing on the consideration of the go/no go recommendation for the ESG timetable change.
2	**Introductions and apologies** Apologies were noted from Paul Rutter, Fiona White, and Chris Nutton. There were no Introductions.
3	**Paper** **ECML ESG timetable decision** The slides circulated on 10th January provided the structure of the presentation, with SL introducing the item with a run through of the Executive Summary slide highlighting that the recommendation is that we proceed with the ESG timetable. Timetable development progress JTh provided an update on progress to-date on the development of the timetable, noting that a) the number of ATTUne conflicts in the areas quoted have all improved since the slide pack was produced, and b) once the National Rail Contract annual business planning process concludes, NR expects there to be fewer passenger paths in the timetable than there is currently. In response to a question from DH, JTh provided assurance on the process for addressing the ATTUne conflicts identified to-date. IK added that from a freight perspective when working through these conflicts there is a further layer of validation involving consideration of resource plans and customer needs e.g. terminal slots. Transport Scotland expressed two separate concerns with respect to power modelling. The first being the modelling for the full corridor and any likely impacts on performance in the route as a whole, and the second being the section within Scotland and particularly the robustness of the timetable in an N-1 scenario. MJ confirmed that power modelling has been undertaken between Reston and Waverley in N-0 and N-1, adding that no material concerns were identified in the outputs. Top Risks and Issues With regards to the funding risk, CF confirmed that we have yet to receive HM Treasury (HMT) approval, but the detailed conversations to-date have been positive, and HMT are aware of the need for a decision by D-45. SL confirmed that the ESG timetable includes services that may not run from December 2024 for example there are regional services included that stakeholders are very keen to see but are subject to a funding decision. On the performance risk Transport Scotland flagged their HLOS requirement to deliver 92.5% PPM, which is a CP7 entry rate. DH raised the prospect of industrial action continuing or potentially escalating, and the need to consider this risk as part of our ongoing industry readiness. This was echoed by PH. Performance SL flagged that the technical note and findings from the completed performance modelling will be issued on 26th January. The early view is that the outputs will align with the current On Time moving annual average of 66%. SL added that once we have the findings from the completed modelling NR will be working with operators on the necessary mitigations to ensure we get to a more stable plan by D-26. In response to DB flagging Scotland's freight growth target, SL confirmed that the ESG timetable reflects what freight operators wish to run based on the availability of paths. IK added that in his view the Scottish growth target doesn't seem to have been taken into account with wider enhancement decisions to-date.

	Infrastructure dependencies SL confirmed that all of the significant enhancement work is in place. DH added that a dependency should be added relating to minimising temporary speed restrictions on the route. PH highlighted that Hartlepool platform 3 would not stop services being introduced, rather the enhancement is focused on enabling extra calls. RH flagged the criticality of progressing the long-term planning of this timetable so as not to impact the engineering access planning process, adding that this will be picked up as part of the industry readiness workstream. Recommendation The recommendation to the ECML Programme Board is to proceed with deploying the ECML ESG timetable in December 2024. IK reiterated the concerns from a freight perspective, particularly the risk of not resolving conflicts that could potentially impact on passenger and freight slots with firm access rights. The representatives of LNER, CrossCountry, TPE, GTR and East Coast Route (SL on behalf of PR) all provided their support for proceeding as per the recommendation. RH, as chair of the oversight steering group for operational readiness, and AB representing FW, also confirmed their support of the recommendation. IK, representing FOCs, added that they do not support the decision to proceed as per the recommendation. Transport Scotland, First Group, EMR, Grand Central and Northern did not offer a formal view on the recommendation. Following on from PHut's comments NB highlighted that if we were not to proceed with the recommendation and instead rolled over the June 24 timetable structure, the current level of operational performance would be put at risk due to the additional services that GTR would require. CC flagged that we are very close to the point where a roll back to June 24 in the timetable development process has more risk associated with it than proceeding as per the recommendation. PH added that this point would be at or soon after the D-40 deadline. RH also added that the balance of risk will quickly shift in favour of proceeding with the recommendation, as opposed to reverting to June 2024. In response to a question from MS, NB clarified that Board's decision on the recommendation will dictate what advice is put to Ministers. **Decision** NB concluded the discussion acknowledging there was further work to do on both performance, and freight, but on balance of risk confirmed Board's endorsement of proceeding with the recommendation (noting IK's position as stated above). This endorsement is subject to the outputs of the completed performance modelling not containing any red flags. It was agreed that SL would take ownership of making this call, and to reconvene this meeting urgently if required.

Date of next meeting: 14th February 2024
Submission deadline for papers: **Midday, Wednesday 7th February 2024**
Time of next meeting: **13:30 – 15:00**
Location of next meeting: MS Teams

[redacted]

Industry Timetable
Assurance PMO

Conrad Bailey
Director General, Rail Strategy & Services
Department for Transport

By email

2 April 2024

Dear Conrad,

I am writing in follow up to my letter of 1 March 2024 regarding the East Coast Main Line (ECML) timetable recast for December 2024. There has been considerable progress in the intervening four weeks, with operators submitting their timetable proposals (bids) on 8 March (D-40) as planned. The PMO Steering Group held on 28 March reviewed the latest position.

Risks in progressing with December 2024

The risks I set out in the previous letter are broadly unchanged, with some of them now beginning to materialise, these being:

i) the impacts of timetable conflicts between services as bid at D-40
ii) the risk to traincrew resourcing through material changes to the timetable between 'bid' at D-40 and the 'offer' at D-26 (14 June), subsequent formal timetable disputes, and the impact of further industrial action.

i) The impacts of timetable conflicts between services as bid at D-40

Following my previous letter, the Network Rail Capacity Planning team have conducted three weeks of 'sprints' to work through the known conflicts between passenger and freight services to identify potential resolutions. The first part of the sprint focused on passenger v freight conflicts that were known prior to the D-40 bids, where the freight had been 'non-accommodatable', i.e. a viable path had not been found in the ESG timetable. This work was successful in resolving the majority of conflicts through proposed flexes to the timings of the affected passenger services, some of which would usually be considered high risk due to the nature of the flex. Excellent collaboration was displayed by all operators, and this significantly aided the speed of the task.

The second part of the sprint activity focused on resolving new conflicts that have become apparent predominantly from the D-40 bids of freight operators seeking to roll their existing June 24 plans into the ESG structure as is their right to do under Part D of the Network Code. A much higher number of potentially non-accommodatable freight paths were identified in this part of the sprint. The identification of the

[redacted]

consequential impacts to passenger services has begun and proposed decisions, including the rejection of certain passenger services, have been set out by Capacity Planning. However, this process is not complete and cannot be completed in the short term because of the volume of clashes to be worked through and the complexity of potential solutions as the consequences ripple across the network. These clashes would have to be worked throughout the remaining 11 weeks of the timetable development period, with the necessary flexes and rejections tested with operators throughout.

Separately, some operators have bid for services at D-40 which have not been approved for implementation in this timetable change by the Department. This has caused additional conflicts that require resolution and may lead to further flexes or rejections of services that are planned to run to accommodate the non-approved services.

Whilst planning resources have been devoted to the sprint process, they have not been focused on the more conventional aspects of timetable development, for example resolving the wider timetable structural issues set out in Appendix 2 of my previous letter. These risks remain, and with limited time remaining in the formal development process until the offer at D-26, it is very likely that some will not be resolved, leading to further performance risks.

It is now clear that the end result of this process is expected to be as identified in my previous letter: the most serious conflicts will not be resolved to the relevant operators' satisfaction within the existing service specification and industry processes. This will lead to a large number of formal appeals by operators regarding decisions made by Network Rail in resolving the conflicts. The determination of the appeals, either by the relevant Access Disputes Committee or the Office of Rail and Road (ORR) will drive late alterations to the timetable, much later than the contractual D-26 date, and well into the period that operators would be planning resource diagrams and staff rosters.

ii) *the risk to traincrew resourcing through material changes to the timetable between 'bid' at D-40 and the 'offer' at D-26, subsequent formal timetable disputes, and the impact of further industrial action.*

My previous letter stated that many passenger operators indicated that unless they received an offer back at D-26 that is very similar to their bid at D-40, they would have difficulties finalising resource diagrams for the timetable implementation, and potentially a need for additional resources. Separately, whilst operators had made assumptions regarding the potential impact of further industrial action on traincrew training, the full implications could not be assessed until further action was announced.

The output of the sprint work is clearly demonstrating that some operators will receive offers at D-26 that differ materially from their bids at D-40. One operator (EMR) has stated that on the basis of the work completed to date only, they would need an additional 5 drivers compared to what was expected. It is reasonable to assume that this will not be an isolated example, and that some operators will require additional resource to operate the timetable over and above their current assumptions. As stated in my previous letter, and prior to the sprint activity commencing, LNER expected to

reduce services in the opening 6-8 weeks of the timetable as traincrew resource is forecast to be below the level required to operate the full timetable specification.

Meanwhile, ASLEF has announced six days of rolling industrial action across all DfT funded operators from Thursday 4 April, and the RMT has announced strike action at CrossCountry on Saturday 13 April. The effect of this new action on traincrew training has yet to be ascertained by each operator, but this will have a further impact on preparations and ultimately availability for the new timetable.

It is clear that the continued situation with respect to the conflicts identified in the timetables bid at D-40, and the essential need for timely completion of operator resource plans, remains a very significant risk to the successful delivery of the December 2024 timetable.

Alternative plan for December 2024

My previous letter highlighted the potential options for a deferral of the December 2024 timetable. This would use a 'rollover' of the June 2024 timetable as a base and enable operators to include work packages for changes to the train service to deliver some of the most critical improvements where these can be accommodated. As discussed at meetings with DfT representatives in the past two weeks, the industry has been working on this alternative. In summary, the output would be that all changes proposed (and previously bid) by operators that do not affect the ECML can be progressed. In addition, a limited number of changes by operators that do affect the ECML can also be progressed, including the reintroduction of the majority of Transpennine Express services that were removed in December 2023 and the provision of some additional weekday peak services by GTR Great Northern between Peterborough, Baldock and Kings Cross. Full details of the proposed service changes for this 'Rollover +' alternative is provided as an appendix to this letter.

The PMO Steering Group on 28 March discussed the potential risks of this alternative. For non-ECML operators, the risks are the same as with the original December 2024 timetable. For ECML operators, no material risks were identified in terms of service performance, but there is a critical need to commence work on this with immediate effect; further delay will eat into the 14 week timetable development period, a quarter of has been taken up with the sprint work. Within the planning process there is a risk to the recovery plan for Informed Traveler (T-12) as agreed with the ORR. However, at this stage it is believed this risk can be mitigated. Clearly, there is a risk regarding stakeholder concerns around the further deferral of the benefits of the proposed recast, and when they might be delivered.

Options to extend the timetable planning timescales, and delay finalisation of the timetable have been considered. These are contractually challenging, as it requires all operators to accept the principle of the delay. For example:

- Accelerating the formal dispute process would require the extent of all disputes to be exposed, which is unlikely prior to the 'offer' of the timetable by Capacity Planning to operators at D-26.

[redacted]

- Delaying introduction of the new timetable to the early months of 2025 is not possible for ECML operators alone, requires an accurate forecast of the additional time required, and will be affected by current agreements between some operators and the Trades Unions regarding timing changes to rosters.

- Sacrificing T-12 informed traveler timescales may provide further time to resolve the permanent timetable, however this would significantly reduce the amount of time operators have to finalise traincrew diagrams and rosters, and also reduce the forward booking window for passengers for a considerable length of time until it could be subsequently recovered.

Conclusions and next steps

On the basis of the above, the PMO Steering Group agreed that proceeding with the December 2024 timetable as bid will lead to a high risk of poor performance both at implementation and beyond, and that the alternative 'Rollover +' plan would be progressed instead.

I must stress that whilst a clear majority of the PMO Steering Group agreed, there was not full consensus. Representatives from LNER felt that the anticipated benefits of the new timetable outweighed the risks to its implementation. Representatives from GTR, Northern, Arriva Group and Scotland's Railway stated that the risks to their individual operations were likely to be manageable, but when considering the overall risks at industry level they supported immediately switching to the 'Rollover +' position. All other operators stated that the risks to themselves and the industry of proceeding with December 2024 were too great and that immediately switching to the 'Rollover +' position would be preferred.

Accordingly, the industry is now working on the basis that the December 2024 timetable will be 'Rollover +', with the scope as laid out in the Appendix. In the event that the Department wishes to revert to implementation of the December 2024 timetable that was bid by operators at D-40 on 8 March, then this must be confirmed to all operators and Network Rail no later than 8 April in order that the appropriate arrangements can be put in place. However, I must reiterate that should this be the case, the risks to delivery, operability and ultimately service performance of proceeding with the December 2024 timetable as bid at D-40 continue to be significant.

Delivering the expected benefits of the ECML ESG timetable specification

The PMO Steering Group discussed the potential for alternative routes and timescales for delivery of the ECML service specification. Whilst noting that many compromises had already been made to get to the ESG timetable proposition, there was broad agreement that delivery of the specification remains desirable. However, it must be done in a manner that can be implemented without significant risk to freight or passenger operators and delivers satisfactory levels of performance. The Network Rail System Operator will write to you next week to set out its thoughts on how and when to proceed, which will include how to manage the current position on access rights, including using Part J of the Network Code where appropriate.

[redacted]

[redacted]

As ever, I am happy to work with you and your team to help explain in more detail the risks and issues raised, and how they can be resolved.

Yours sincerely

[redacted]

Chris Curtis
Director, Industry PMO and Network Performance

Copied to:

Bill Reeve	Transport Scotland
David Hoggarth	Transport for the North
Howard Smith	TfL (Elizabeth Line)
James Price	Transport for Wales
John Larkinson	Office of Rail and Road
Jake Kelly	Chair, Network Performance Board
Rupert Walker	Group Director (Acting), System Operator

[redacted]

Appendix

ECML & WAML Operators service proposals under 'Rollover +'

Operator	*Timetable scope and passenger benefit*
ARL	Rollback to the June 24 NWT with some additional evening services from Liverpool Street to alleviate existing overcrowding on specific services.
CrossCountry	Rollback to the June 24 NWT. A relatively simple scope. Would need to work out what to do with a small number of journey time improvement paths for Dec 24 and the May 25 Hydra paths which have only worked on only in the ECML ESG timetable (the Hydra paths would be required for May 25).
EMR	Rollback to the June 24 NWT, but include the additional services proposed between Newark Castle and Crewe, plus journey time improvements on the MML as bid at D-40.
Grand Central	Rollback to the June 24 NWT.
GA	Rollback to the June 24 NWT. Some minor changes to TPRs would also need to rollback. New stations originally planned for opening in Dec 24 are now not expected until May 25, which reduces the will make the rollback easier.
GTR	Rollback to the June 24 NWT for ECML services only. Continue with the proposed changes bid at D-40 for Southern, including: • additional peak services on the Sydenham corridor to relieve existing overcrowding • additional peak services between Eastbourne / Bognor Regis and London Bridge to relieve existing overcrowding • additional off peak services between East Grinstead and London Victoria to offer a consistent service all day.
Hull Trains	Rollback to the June 24 NWT, with some minor amendments.
LNER	Rollback to the June 24 NWT, with some minor amendments to deliver changes in Scotland as per recent consultation.
Lumo	Rollback to the June 24 NWT.
Northern	Rollback to the June 24 NWT for ECML services only. Continue with the proposed changes bid at D-40 in the North West, to allow for the changes to the use of Class 323 units, and the remapping of some Leeds to Huddersfield by TPE.
Scotrail	Rollback to the June 24 NWT for all services east of Edinburgh with some minor amendments. Rework to Edinburgh platforming the main areas of focus.
TPE	Rollback to the June 24 NWT, plus reintroduction of services that were temporarily withdrawn in the Dec 23 timetable, restoring 4 fast tph on the Manchester – Leeds core transpennine route. The June 24 structure will support the reintroduction, as it is largely unchanged from Dec 23.
All Freight operators	Rollback to the June 24 NWT, continue with non-ECML changes bid at D-40.

East Coast Main Line Task Force

Strategic planning for timetable changes

Meeting No.1 : 11/06/2024

ECML Task Force – Agenda

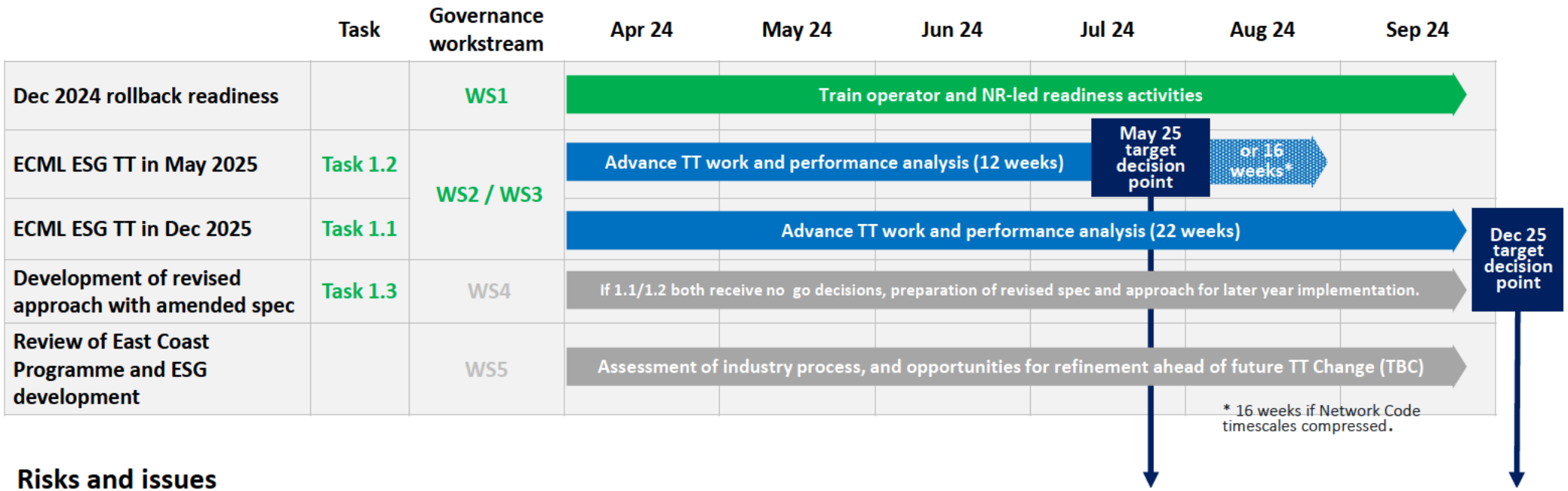
Time	Timing	Item	Lead	Board Action
1	0900-0905	Introductions and apologies	Rob Brighouse	
2	0905-0935	Role and purpose of the Task Force, milestones and ways of working	Rob Brighouse	Endorse
Items for discussion				
3	0935-0940	Task Force work programme	Chris Rowley	Endorse
4	0940-0945	Network Code compliance with D-45	Chris Rowley	To Note
5	0945-1000	Performance analysis plan	Chris Rowley	To Note
6	1000-1015	Emerging options and solutions: a. Leeds-Doncaster b. Huntingdon-Peterborough c. Newcastle-Edinburgh	Chris Rowley	To Note
7	1015-1020	Development of a decision framework	Richard Harper	To Note
Administration				
8	1020-1025	Forward agenda and action tracker	Rob Brighouse	To note and review outstanding actions
9	1025-1030	AOB	Rob Brighouse	

[redacted]

Item 2: Role and purpose of the Task Force and ways of working

Purpose	An independently led executive-level cross-industry meeting that provides strategic direction for the work programme that is developing solutions to the problems of the ECML timetable, driving consensus on the outcome(s) and delivering recommendations for industry funders and specifiers.
Responsibilities	• Make recommendations to specifiers and funders as to decisions, actions and compromises required to achieve optimum benefits realisation for ECML investment • Provide direction to the timetable steering group and workstream leaders on (i) options and (ii) issues requiring decision • To secure consensus across industry participants where there are conflicting incentives • Endorse programme objectives and the criteria against which proposed solutions will be measured
Authority	• Sits within existing governance structures, including those for funding and investment, and provides advice to relevant Boards • Make decisions and provide direction within the authority* of all specifiers and funders delegated to this forum (* Levels of authority to achieve trade-offs to be defined at the first meeting of the Task Force) • Identify decision points and governance required to support implementation of recommendations • Ensure any risks to compliance with the Network Code are recognised and appropriately addressed

Item 2: High Level Plan and milestones



Risks and issues

1. Tasks 1.1/1.2 – confirmed operator resources; escalation and swift direction.
2. Task 1.2: A number of operators do not yet support a May 25 implementation timeline
3. Task 1.2: May require deviations from Network Code.
3. Senior level consensus building and support for momentum and final decisions.
4. Outstanding decisions to progress Task 1.3 and review process.

[redacted]

Item 3: Task Force work programme

Lead	Chris Rowley
Purpose	To set out the programme of work planned to September 2024, in order to support analysis and evaluation of options and solutions in support of Options 1.1, 1.2 and 1.3. The aim of the programme of work is to assess and inform the viability of continuing with the implementation of the ESG timetable with the current specification for either May 2025 or the December 2025 New Working Timetable.
Board action	Endorse

[redacted]

Item 3: High Level Delivery Plan for the programme of works for further advance ECML Timetable Work

The timetabling work focuses on the timetable structure over key line of routes or locations and includes a review of potential for growth of Freight strategic capacity. The plan developed aligns to review/decision dates in July, August and September set out in this presentation.

The high-level plan to achieve the first review/decision date in July is outlined below:

			May						June				July			
		Project Week	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Status
Ref		w/c Monday	29/04/2024	06/05/2024	13/05/2024	20/05/2024	27/05/2024	03/06/2024	10/06/2024	17/06/2024	24/06/2024	01/07/2024	08/07/2024	15/07/2024	
	Data Work alignment of schedules in systems between NR and Operators	Plan													COMPLETE
		Actual													
A	Review of timetable structure and validation actvities for Huntingdon to Peterborough	Plan													BEHIND PLAN
		Actual													
B	Review of timetable structure and validation actvities for Stoke Jn - Loversall Carr Jn	Plan													AHEAD OF PLAN
		Actual													
C	Review of timetable structure and validation actvities for Loversall Carr Jn - Temple Hirst Jn	Plan													
		Actual													
D	Review of timetable structure and validation actvities for Northallerton - King Edward Bridge	Plan													
		Actual													
E	Review of timetable structure and validation actvities for Newcastle - Reston/ Edinburgh	Plan													COMPLETE
		Actual													
F & O	Review of timetable structure and validation actvities for Doncaster - Leeds	Plan													ON TRACK
		Actual													
HIJKL	Interaction between handovers to/from ECML and Ely and Anglia areas	Plan													COMPLETE
		Actual													
P	Review of options for Freight Strategic Capacity	Plan													ON TRACK
		Actual													

KEY	
	Delivery of the further advance timetable work on track
	Behind delivery plan for further advance timetable work, actions being taken to recovery
	Major threat to delivery of the advance timetable work

[redacted]

Item 3: Progress to Date

High level detailed progress:

- 942 identified issues within the line of route areas under review
- Line of route sections are categorised between complex conflicts which will require trade-offs and minor validation issues that could be solved during a D40 to D26 new working timetable development period

The table below outlines the progress to date in resolving the identified issues:

Progress Breakdown per Work Package	Total Issues	Resolved	Progress	Priority 1	Priority 2	Priority 3	NR Fixable	QJ Path/LD	IM/RHTT	Operator on Self	Work in Progress
LN101 Huntingdon - Peterborough	87	67	77.0%		6	3	3		1		7
LN101 Stoke Jn - Loversall Carr Jn	56	23	41.1%	7	1		7	5	10	3	
LN101/LN600 Loversall Carr Jn - Colton Jn	170	30	17.6%	37	38	17	1	14	14	19	
LN600 Northallerton - King Edward Bridge	28	23	82.1%		2				1	1	1
LN600/SC147 Newcastle - Reston/ Edinburgh	67	33	49.3%	2	15	7		7	3		
LN631/632 Teesside	28	11	39.3%		6	8		1			2
LN836/898/854 Armley Jn - Neville Hill East	134	13	9.7%	63	1	10	16	2	19	9	
LN836 Leeds Station	31	14	45.2%	2	1		7	2		5	
LN836 Doncaster - Leeds	73	40	54.8%	5	2	1		6	8	11	
EA1560 Peterborough East - Ely North Jn	35	21	60.0%	5				6	3		
EA1540/EA1530 Ely Dock Jn - Haughley Jn	71	12	16.9%	15	8	1		4	2	29	
EA1161 Ely North Jn - Shepreth Branch Jn	27	16	59.3%		4	5			2		
EA1162 Ely - Kings Lynn	2	1	50.0%						1		
EA1580 Ely North Jn - Trowse Jn	2	1	50.0%		1						
EA1160/1170 Hackney Downs - Broxbourne	131	25	19.1%	2				8	8	88	
EA1320/1150/1010 Canonbury West - Stratford											
Strategic Freight Capacity											
TOTALS	**942**	**330**		**138**	**85**	**52**	**34**	**55**	**72**	**165**	**10**

[redacted]

Item 4: Network Code compliance with D-45

Lead	Chris Rowley
Purpose	Part D of the Network Code requires Network Rail to publish at D45 (Fri 5th July 24) a May 25 Prior Working Timetable to enable Operators to prepare D40 PDNS bids for the start of the May 25 timetable development period. The go / no go decision for including the ECML ESG timetable within the scope of the May 25 New Working Timetable development period is later than the publication of the Prior Working Timetable. The Heads of Train Planning group is looking at options around the publication of the prior working timetable these are: • Publish at D45 a PWT without the ECML ESG advance TT work • Publish late at D42 a PWT, influenced by outputs of the advance TT work • Operators and Network Rail at D45 agree the data to be used to create the projects within the systems for bids to be prepared for D40. Network Rail undertakes the comparison on bids and outputs of the ECML ESG advance TT work aligned to the decision point for May 25 • If a go decision for the ECML timetable, Operators do not bid and Network Rail implements the outputs of the ECML further advance Timetable work. Next Steps: • Heads of Planning working group to meet and refine the options to a single recommendation
Board action	To Note

Item 5: Performance analysis plan

Lead	Chris Rowley
Purpose	Describe the background and history of performance work with regards to ECML specification changes, including the most recent Railsys outputs from Network Rail. Recognising the limited time available, present a summary of the further work that will be undertaken for the May 25 decision point in late July and work that can be undertaken if the decision is made to wait for December 2025 implementation. Work that can be undertaken for the May 25 decision point is less wide in scope than that that would be completed for a Dec 25 decision point. Tools employed will also be different.
Board action	To Note

[redacted]

System Operator

NetworkRail

May 2025 and Dec 2025 Advance ECML Timetable: Performance Analysis Plan

Richard Raine

Head of Capacity Planning Timetable Performance & Simulation Team

11th June 2024

System Operator

ECML ESG Performance Modelling - Background

- A very large volume of analysis and modelling has been conducted across the ECML geography since 2020. This includes:
  - 2020: Time Signal at Red analysis that stated to the ESG to restrict Welwyn viaduct to 18tph in the Down.
  - 2021: Small modelling studies using Trenolab
  - 2022: ECML-wide simulation model using Trenissimo by Rail Aspects utilising a PRA produced sample timetable.
  - 2023/24: ECML ESG Railsys Performance Modelling exercise conducted by Capacity Planning to ESG remit.

- Capacity Planning undertook the modelling work as scoped by the ESG. It is crucial to understand there was a **different level of maturity regarding timetable development between the December 2023 (Base) and December 2024 (Option) timetables as assessed**. The Base was a D26 standard whilst the Option was at an earlier stage of development with still many decisions unmade and therefore not factored into the modelling.

System Operator

ECML ESG Performance Modelling - Results

Operator	Time-to-1%						
	Base		Option ESG TT			Change	
	Remitted Perturbations	Sensitivity IV	Modelled Trains	Remitted Perturbations	Sensitivity IV	Remitted Perturbations	Sensitivity IV
Abellio Greater Anglia	69.8%	66.6%	212	71.6%	68.1%	1.8%	1.5%
CrossCountry	71.5%	67.0%	46	70.8%	63.3%	-0.7%	-3.7%
East Midlands Railway	70.2%	66.7%	86	74.4%	69.8%	4.2%	3.1%
Hull Trains	81.8%	80.5%	9	80.3%	72.4%	-1.5%	-8.2%
TPE	67.4%	63.2%	128	69.2%	62.8%	1.8%	-0.3%
GTR	65.6%	64.2%	280	69.3%	64.6%	3.7%	0.4%
Grand Central	76.5%	76.0%	21	80.8%	77.4%	4.3%	1.4%
LNER	85.2%	84.0%	116	82.5%	78.6%	-2.7%	-5.4%
Lumo	87.0%	83.9%	8	85.8%	81.8%	-1.2%	-2.1%
Northern Trains	68.6%	65.5%	644	68.5%	63.3%	-0.1%	-2.2%

Operator	Time-to-3%						
	Base		Option ESG TT			Change	
	Remitted Perturbations	Sensitivity IV	Modelled Trains	Remitted Perturbations	Sensitivity IV	Remitted Perturbations	Sensitivity IV
Abellio Greater Anglia	91.9%	89.1%	212	92.9%	89.4%	1.0%	0.3%
CrossCountry	86.9%	84.7%	46	87.2%	83.8%	0.3%	-0.9%
East Midlands Railway	89.8%	85.8%	86	91.7%	86.6%	1.9%	0.8%
Hull Trains	96.7%	96.0%	9	95.7%	93.4%	-1.0%	-2.6%
TPE	86.2%	81.3%	128	87.9%	81.2%	1.7%	-0.1%
GTR	92.8%	92.6%	280	92.7%	91.3%	-0.1%	-1.2%
Grand Central	93.7%	93.2%	21	95.1%	94.0%	1.4%	0.9%
LNER	95.9%	95.4%	116	94.8%	93.2%	-1.1%	-2.1%
Lumo	94.9%	94.2%	8	93.2%	91.5%	-1.7%	-2.7%
Northern Trains	91.6%	90.8%	644	91.1%	89.2%	-0.5%	-1.5%

- "Remitted perturbations' was the December 2022 lateness (as this was the most recently concluded December timetable when the work commenced).
- The December 2024 timetable includes additional services, particularly on the Transpennine route and the line north of Sheffield, therefore the modelled test 'Sensitivity IV' allows for additional input delay on these routes. **This provides the most likely scenario given recent levels of performance on the network combined with the proposed service levels**.
- When further lateness was overlaid during sensitivity tests at Marsden and Wincobank, plus additional model entry points; the performance of trains worsens in the Option.
- The ESG modelling exercise did not cover the Greater Manchester area or the additional extensions to Bradford Forster Square.
- There were missing freight paths in the model because of decisions that were not yet made on how to resolve outstanding conflicts. It can be assumed performance would worsen when these services are in a viable Plan.

System Operator

ECML – Steps being taken to explore Implementation

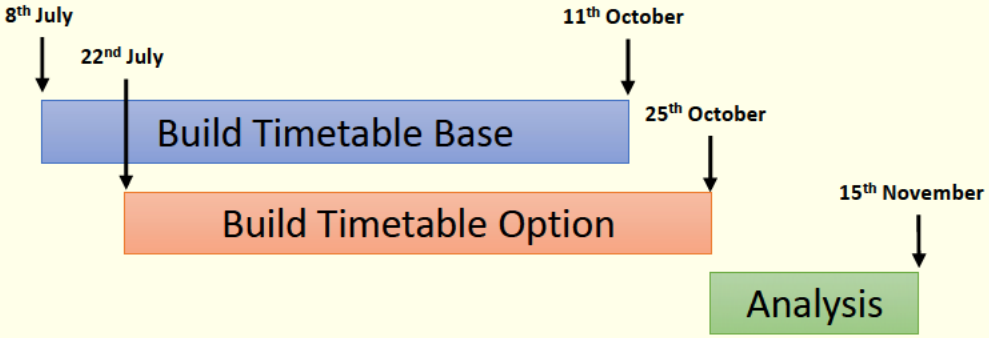
- Between May – July 2024 Network Rail will undertake work using the ESG Development Timetable and the critical information that was gathered between D-40 bids and D-37. Cross industry work will complete the analysis of conflicts and trade-offs, we will seek to work through and where possible resolve existing conflicts, and where not possible present trade-offs.
- **To support the decision regarding a May 2025 introduction**, further targeted performance analysis of cross boundary services outside of the ECML core route will be undertaken. The modelled geographical area did not cover all the lines that Northern, Transpennine and other TOCs operate in full, for example the Manchester area.

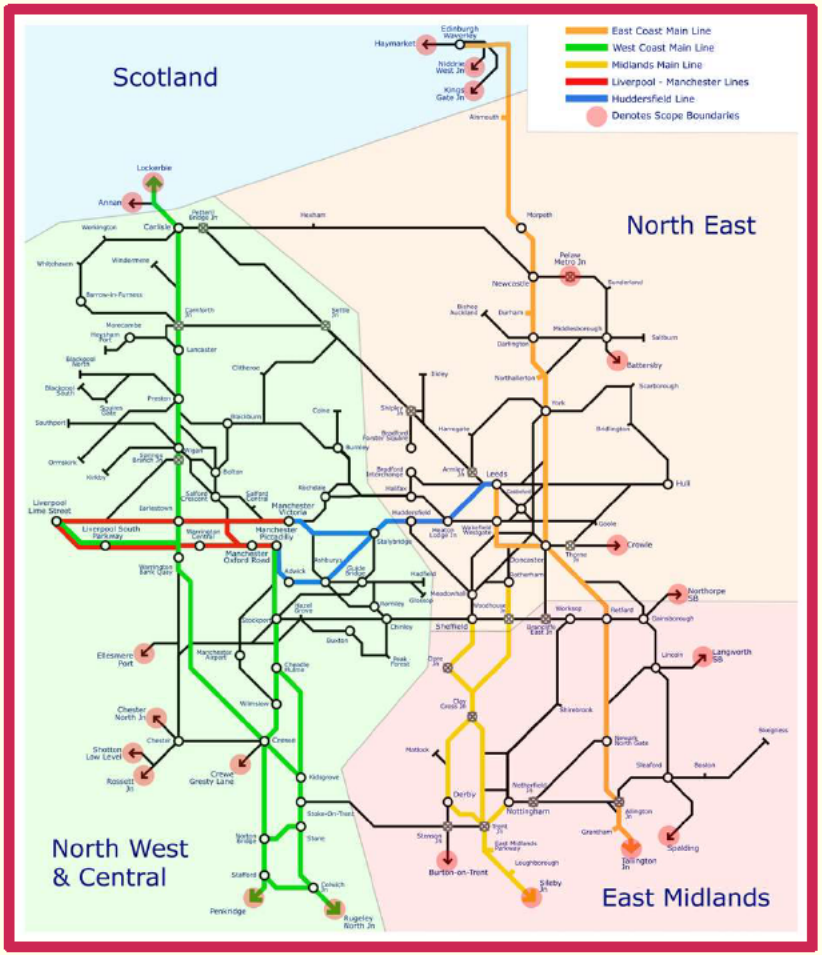
- Targeted performance deep dive will centre **around the Greater Manchester area and Bradford Forster Square** to further understand the performance implications of proposed service changes for May 2025 using previously successful methods.
- Targeted quality and performance checks on areas of the sprint geography when completed (i.e. when Production Team have completed Doncaster <> Leeds). This will include all trains (inc. freight) in the geography handed over.
- Data will largely be drawn from advance timetable files and operational data (i.e. signal berth data). Insights will be delivered iteratively to the timetabling team and reports submitted to the Senior Task Force.

System Operator

ECML – Steps being taken to explore Implementation

- **To support any future decision regarding a Dec 2025 introduction**, a full wider modelling exercise can be undertaken, that delivers results in advance of D55.
- This will build on the completed Railsys modelling work that was delivered for the ESG.
- The model parameters will be kept the same as per the original exercise (i.e. Wednesday only, 14:00 – 20:00 etc), but due to concerns raised by SO and Regions regarding off-ECML Route performance, the model geography will be adapted through to Manchester and Liverpool, north to Carlisle, and south on the WCML to Stafford, plus routes in the Midlands connecting Sheffield, Buxton, Nottingham (as per image).





Item 6: Initial information on emerging tradeoffs

Lead	Chris Rowley
Purpose	The purpose of this section is to set out a summary of the findings from further timetable analysis undertaken by the programme. At this stage only the sections of route covered so far in the Programme of work are highlighted. Outlined in the following slides is the outcome from the analysis or a high level summary of a *future* trade off that the Task Force will be asked for guidance on to enable the continuation of the development of the ECML ESG timetable. The following lines of route are covered: • Leeds-Doncaster • Huntingdon-Peterborough • Newcastle-Edinburgh In all cases conclusions so far have not been overlaid yet with further checks on station workings – most notably at Leeds. Also the overlay of identification of any strategic freight paths for growth has not been made at this stage. A summary of the issue of the impact on the consequential changes to EMR services and their resource base is also included.
Board action	To Note

Initial information on emerging tradeoffs: Items out scope

During discussion with the Heads of Timetable Planning information on further work packages for future timetable (beyond Dec 25) have been identified. The Task Force is asked to note that these change work packages are not included in the scope of the Programme:

- Services to/from Cleethorpes for LNER, since further work on deliverability will be required
- Provision for station calls at Haxby Station, which will not be available for service during the currency of the 2025 timetable periods

[redacted]

Initial information on emerging tradeoffs: a. Leeds-Doncaster (1)

Inclusion of the additional 1Nxx Leeds – Sheffield / Sheffield – Leeds fast Northern service via Wakefield Westgate services:

- 29 of 32 SX services and 31 of 32 SO service can be accommodated, based on bids for services received at D40. Work continues to resolve the remaining conflicts:
  - 1N02TR conflicts with path of 4L98HD [MSX](GBRf) at Swinton.
  - 1N11TR conflicts with path of 4L11HB [SX](GBRf) between Masborough Jn and Swinton.
  - 1N31TR conflicts with path of 6E17PD [SX](GBRf) between Swinton and Moorthorpe.
  - 1N23TR conflicts with path of 6E17JW [SO](GBRf)

- The path of the 1Nxx Sheffield to Leeds occupies white space that could link a freight path from the Hope Valley through Sheffield towards Wincobank Junction. The 1Nxx Northern services were bid at D40 for December 24 and no Freight trains have been bid that would conflict with these services

- Validation of Leeds and Sheffield station workings continue to be worked on and these activities are planned to take place throughout the 12-week programme of works. Final conclusions cannot be made until this work is complete

- An update on the opportunity for strategic capacity for Freight will be provided at the next meeting of Task Force group

[redacted]

Initial information on emerging tradeoffs: a. Leeds-Doncaster (2)

Progress to date reviewing the structure of the ECML ESG Timetable between Doncaster and Leeds:

- The review has found that in the hours that a class 4 or class 6 freight slots are required, this can be accommodated within the structure of the proposed ESG timetable. It is currently expected that all freight and passenger trains bid at the D40 for Dec 24 can be accommodated.
    - This plan is reliant upon the planning of Up direction freight to stand at Crofton West Jn to wait for a path south of Hare Park

- A fast-tracked review of the Timetable Planning Rules looking at headways and junction margins in the Hare Park Jn area, which have not been reviewed following the introduction of new LNER, Northern and Freight rolling stock changes, is anticipated this will further help the structure of the timetable

[redacted]

Initial information on emerging tradeoffs: b. Huntingdon-Peterborough

Progress to date reviewing the structure of the ECML ESG Timetable between Huntingdon and Peterborough has identified:

Down Direction

- To create provision for Class 4 1600t freight trains the GTR 9Jxx Horsham – Peterborough service every alterative hour are to run Fast Line from Huntingdon and run earlier to Peterborough. Running fast line from Huntingdon is only possible in the hours there is no xx:15, xx:17 or xx:18 High-Speed Long Distance passenger train departures from London Kings Cross.
- Limited provision during the day (09:00 – 20:00) in alterative hours for Class 6 freight services between Huntingdon and Peterborough due to the headway of 8.5 minutes from Holme Junction to Fletton Junction, but in the hours a Class 6 freight is required to run, there will be the requirement flex GTR off their standard pattern on the Hertford Loop.
- It is currently expected that all freight and passenger trains bid at the D40 for December 24 can be accommodated, with the exception of 4E39 (SX) 12:45 Tilbury – Wakefield Europort GBRf service.
    - To include 4E39 the path of 1E00 (SX) 14:05 Willesden PRDC – Low Fell RMT DB Cargo service needs to be removed or significantly retimed. It is believed Royal Mail traffic is being reduced on the ECML and there isn't demand for 1E00 (4E39 has firm rights and 1E00 does not have any rights)

Up Direction

- It is currently expected that all freight and passenger trains bid at D40 for December 24 can be accommodated
- Wider investigation required to ensure that the timetable solutions found south of Peterborough work with the required crossing moves between Peterborough Yards. Initial reviews in this area have identified all services could be accommodated, but work continues to understanding any ripple effect and the moving of issues to a different locations

[redacted]

Initial information on emerging tradeoffs: c. Newcastle-Edinburgh

Whilst the quantum of services between Edinburgh and Newcastle has not changed the flighting of trains in the ESG timetable structure has eroded suitable slots for some freight flows. Progress to date reviewing the structure of the ECML ESG Timetable between Newcastle and Edinburgh:

- It is currently expected that all freight and passenger trains bid at the D40 for Dec 24 could be accommodated but with compromises.

Down Direction

- When provision in an hour is required for a Class 4 1600t freight train, the CrossCountry 1Sxx xx:40 dep from Newcastle in the affected hour will need to be retimed by 8 minutes, extending journey time, amending Edinburgh turnarounds and with possible retiming beyond Edinburgh.
- When provision in an hour is required for a Class 6 freight train, dependent upon weight (assumptions reviewed were 1800 or 2200 t) the retiming of both CrossCountry1Sxx xx:03 and the LNER xx:11-14 dep from Newcastle in the effected hour will need to retimed by 4 minutes for each and the CrossCountry1Sxx xx:40 dep from Newcastle will need to be retimed by 7.5 minutes

Up Direction

- When provision in an hour is required for a Class 4 1600t freight train, freight trains are likely to be looped at Grantshouse, Crag Mill and Heaton. This will restrict the length of Freight trains in the ESG timetable in the Up direction to the length of trains that run in the current timetable on the ECML.
- Limited provision during the day in for Class 6 freight services

[redacted]

Initial information on emerging tradeoffs: d. EMR

Issue regarding the impact of the ESG timetable structure on driver resource for EMR on Norwich-Liverpool services:

- The ESG has made two sets of significant change to EMR services in the East Midlands:
  - Turnround times at Norwich reduced to 40 minutes minimum (TPR minimum for EMR is 18 minutes)
  - Departures from Nottingham to Norwich and Lincoln swap paths, to provide valid paths across Newark Flat Crossing for the Lincoln service. The Lincoln train is earlier and the Norwich train later to meet its path from Grantham
- Each of these changes in isolation do not impact on train crew provision but the combination of these changes impact EMR train crew recourse, which would require additional recruitment
- Work is in progress to review alternative timetabling solutions to mitigation this issue

[redacted]

Item 7: Development of a decision framework

Lead	Richard Harper
Purpose	To outline work underway to develop a decision framework, to support the evaluation and decisions around options and solutions, in support of Options 1.1, 1.2 and 1.3 as set out in Network Rail's 19th April 2024 letter.
Board action	To Note

[redacted]

Item 7: Development of a decision framework

- A multicriteria decision framework is required to support Task Force trade-off recommendations.
- A proposed approach is being developed : it will be presented to the next meeting on 1st July.
- We are building on previous ECML and Manchester work.

ESG vs Guiding Mind

- Capacity & connectivity – DfT Operators
- Capacity & connectivity – Non-franchised operators
- Passenger & stakeholder aspirations
- Performance & resilience
- Financial & economic value
- Affordability & resource utilisation

Manchester Recovery Task Force

- Performance
- Passenger impacts
- Affordability
- Deliverability

Table 3: Phase 1 summary assessment

Assessment criteria	Description of Phase 1 findings
i. Capacity & connectivity – DfT Operators	– GM provides faster headline journey times between KGX-EDB and KGX-LDS, but with less intervals compared – GM can support 2.5tph between Kings Cross and Leeds; concerns over pattern are acknowledged and remain – GM contains more direct services and better coordinated connectivity along the whole ECML and contains o Bradford FS services – ESG provides more AM peak seats into London for both LDHS and GTR – Neither timetable meets all firm rights. For GM this is due to the design principles it aims to meet to present capacity allocation
ii. Capacity & connectivity - Non-franchised operators	– ESG respects non-franchised operator access rights; GM respects Quantum rights and origin destination pair stopping points due to the creation of an Integrated Standard Pattern Timetable – GM regularises almost all non-franchised operator paths and intervals into the same standard pattern as fra – ESG meets current freight demand; GM designed to provide freight capacity to meet some growth, this rema
iii. Passenger & stakeholder aspirations	– Neither ESG or GM address all stakeholder aspirations for retaining services, but attempt to provide the best capacity, resource availability and stakeholder requirements. – This report highlights where trade-offs have been made for wider discussion.
iv. Performance & resilience	– ESG shows modest improvement in Average Minute Lateness over Dec-19; modelled on-time performance is – GM not yet mature enough for performance modelling. But the timetable structure is based upon several pr performance outcomes and so it's expected to perform at a better level than ESG on this measure. A recent statement
v. Financial & economic value	– GM delivers modelled revenue (using COVID-Med demand recovery profile) that is the equivalent of the ESG – GM provides more opportunity to accommodate growth through incremental enhancements over time; ESG the outset
vi. Affordability & resource utilisation	– GM operates similar vehicle unit miles in Phase 1b which increases the costs compared to Phase 1a, but whi – In GM Phase 1b franchised services can be delivered within the Azuma resource base (there is a choice in res IC225 sets in respect of the Azuma repair programme); ESG can also operate within the Azuma resource bas supplement the Azuma fleet during the repair programme.

	Dec 19	Option A	Option B	Option C	Hybrid Option
Castlefield Corridor service level	• 14tph all day • 15tph peak	• 12tph all day • 13tph peak	• 11tph all day • 13tph peak	• 11tph all day • 13tph peak	• 12tph all day • 13tph peak
Performance					
Passenger impacts					
Affordability					
Deliverability					
MRTF Recommendation					
Performance model results	• Off peak AML 3.0 • All day AML 3.1	• Off peak AML 2.5	• Off peak AML 2.3 • All day AML 2.3	• Off peak AML 2.1 • All day AML 2.4	• Likely in between Option A and Option B results
Key passenger disbenefits		• No Wigan to south side • North Wales to Victoria	• No Wigan to south side • No Sheffield to Airport • 1tph Ordsall Chord	• No Wigan to south side • No Sheffield to Airport • No Liverpool to Airport • North Wales via Northwich	• No Sheffield to Airport • 1tph Ordsall Chord
Factors influencing recommendation		• Insufficient performance benefit to meet objectives and poorest affordability • Unacceptable to North Wales stakeholders • Cannot be amended to add an all-day Southport/Wigan service • Not proposed	• Strong performance result • Southport/Wigan concerns not addressed • Not proposed	• Strong performance result • Liverpool and North Wales to Airport concern • Southport/Wigan concerns not addressed • Not proposed in 2022 • Option to consider some elements as future changes	• Strong performance result • Southport/Wigan concerns addressed • Proposed for implementation in 2022

[redacted]

Lord Hendy, Minister of State, Department for Transport

Andrew Haines, CEO, Network Rail

By email

17th October 2024

Dear Lord Hendy and Andrew,

East Coast Task Force progress

I am writing to provide an update on the work and recommendations of the East Coast Task Force. The Task Force formed in June 2024 with the following agreed remit:

"An independently led executive-level cross-industry meeting that provides strategic direction for the work programme that is developing solutions to the problems of the ECML timetable, driving consensus on the outcome(s) and delivering recommendations for industry funders and specifiers."

I would like to take this opportunity to thank all those who have contributed to the group since its formation.

In July 2024, the Task Force recommended that the new timetable for the ECML should not be implemented in May 2025, and that further work was required before recommendations could be made regarding implementation in December 2025. Further work has now been completed, and the Task Force has now considered the outcomes, issues and risks raised. Most specifically, the Task Force recognises the overall system outcome is best served by providing the increased capacity, improving financial sustainability and delivering significant environmental, economic and customer benefits, including faster and more frequent services. The new timetable may lead to a lower level of train reliability as set out below.

Considerations, issues and risks

The Task Force recognises that the new timetable is significant in realising the benefits of around £4 billion investment over the last decade in infrastructure and trains, improving services to passengers and freight users through increased capacity. Nevertheless, delays in implementing the timetable have frustrated the delivery of these benefits but show the complexity the industry has faced, alongside the complexity of making the optimum use of available capacity whilst recognising the performance impacts of a well used network.

Timetable development has now reached a level of maturity that gives confidence the timetable can be implemented. This confidence did not exist in spring 2024, when the Task Force was formed, and was the main reason for deferral of the timetable. Since then, a large volume of planning work has been completed collaboratively between Network Rail and train operator teams, mitigating performance risks previously identified in Manchester, and demonstrating how existing freight traffic can be accommodated.

Nevertheless, risks to performance and, in some areas, to the capacity for freight growth remain.

When the ORR granted access rights for the additional services in 2016, it was recognised there was likely to be a worsenment in performance, particularly for long distance operators. The modelling that has been completed recently provides more detailed evidence of the performance impacts. Best estimates (in an uncertain environment) suggest a 5-8% decrease in the On Time measure for Long Distance Operators on the East Coast Main Line, with a lower 1.5-3.5% range of decrease for Regional operators. GTR, Greater Anglia and EMR are expected to see broadly neutral performance impacts from the timetable change.

The Task Force recognises that this forecast outcome is challenging at a time of poor industry operational performance alongside the new Government's determination to see improvement, but this remains a trade-off that would need to be accepted in order to deliver the benefits of the investment.

In relation to freight, the Task Force has received evidence showing how existing contractual rights and current freight flows that hold contingent rights in line with the East Coast Access Policy could be accommodated. This is not without increased performance risk, particularly at Peterborough, which is subject to ongoing mitigations to train planning rules and the signalling system following a recent re-control of the signalling. Opportunities for future freight growth have been identified, but this will remain a challenge across the ECML and the ability to accommodate growth will depend greatly on the specific new flows that are sought to be fulfilled. Network Rail is developing a plan for the future of the East Coast Access Policy to provide greater certainty benefiting both freight and passenger operators, by offering firm contractual rights for many more services than has been possible since 2016.

Recommendation and next steps

When it met on 10th October 2024, the East Coast Task Force reviewed the considerations, issues and risks, and recommends proceeding with implementation of the new timetable for the East Coast Main Line in December 2025 on the basis that the timetable is deliverable and meets the objectives that were set.

A clear majority of the Task Force supported this recommendation, including Network Rail and all DfT-specified passenger operators, represented on the Task Force by LNER, Cross Country (Arriva) and GTR. Arriva and First Group, who both also have open access operations on the East Coast Main Line, indicated qualified support.

Unfortunately, we were unable to achieve full consensus.

Freight companies have real concerns with the proposed timetable and expressed a view that it gives little consideration for freight traffic and its customers. These views are appended.

Network Rail does not agree with all of their points, noting that opportunities exist for freight growth, alongside which, opportunities for increased tonnages and opportunities for electric freight will need to be subject to specific analysis once freight operators confirm their requirements.

Similarly, the Transport Scotland representative has expressed significant concerns. These are also appended.

Network Rail notes that the resilience of the power supply in Scotland and the impact on performance remain the subject of further discussion between Transport Scotland and Network Rail.

[redacted]

Transport for the North has been an active member of the Task Force. It was acknowledged from the start that TfN's formal position would be a matter for the elected Members to take a view on once the Task Force had arrived at its recommendation: this reflects both TfN's statutory role on strategic transport issues in the North and its contractual role, through the Rail North Agreement, in relation to the delivery of the Northern and TPE contracts. Whilst noting the benefits arising from the timetable change – such as the additional Leeds – Sheffield, and additional Durham Coast services – the TfN representative has highlighted concerns previously expressed by elected Members in relation to the adverse impact on overall performance, particularly for services in the North, as well as the consequential impact of the timetable change for service levels at intermediate stations in the North East. They have also highlighted the importance to elected Members of commitments made previously in relation to service levels on the Newcastle-Manchester axis, and in relation to additional infrastructure north of York.

The Task Force recognises that acceptance of its recommendation remains subject to approval by specifiers and funders, and implementation remains subject to the successful progress of normal industry processes including assurance by the Industry PMO.

The industry needs certainty to plan its resources. In the event that the Department and other decision takers do not wish to adopt the recommendation of the Task Force to proceed with the December 2025 timetable change, alternative instructions should be issued to operators to revert to planning on the basis of existing timetables prior to D-55 on 22nd November 2024. This will ensure there is adequate time for the industry to identify any consequential impacts on wider benefits expected to be delivered in December 2025, and develop mitigations. This will be particularly important in respect of the new station at Cambridge South.

In the event that the Department and other decision takers wish to proceed with the proposed timetable change, then the industry will continue to develop its plans to minimise the likely performance impact, mitigate any other risks and undertake the normal timetable readiness assurance process (noting that passenger operators have not highlighted any material traincrew or rolling stock readiness concerns).

As Chair of the Task Force, I would, from a personal perspective, be concerned that any decision not to deliver the December 2025 service uplift could cause reputational damage, particularly with Treasury, for the wider industry given the extent of the investment made to deliver these service enhancements. Most importantly, it would result in non-delivery of significant customer benefits. As ever, I am happy to work with you to explain this recommendation, and the risks and issues raised in the Task Force meeting.

Yours sincerely

[redacted]

Rob Brighouse, Independent Chair of the East Coast Task Force

Copied to : Alex Hynes, Director General, Rail Services Group, Department for Transport
Bill Reeve, Transport Scotland
David Hoggarth, Transport for the North
Task Force representatives

[redacted]

Appendix 1: Views expressed by the freight sector

Not all currently running freight services are yet accommodated and there will be no room for short-notice traffic. Furthermore, there is real difficulty in running the required tonnages to serve all our flows, with heavier bulk services almost impossible to accommodate. There is little ability to link up the identified freight capacity with the necessary end-to-end timings and it doesn't consider what our freight customers need. There is an emerging view that there is not enough overhead power supply to cater for the levels of passenger and freight traffic envisaged and there is no visibility on how any increased new timetable may affect the ECML maintenance regime nor its impact. The whole timetable risks current rail freight traffic being lost to road, increasing congestion and carbon emissions.

On a wider scale, opportunities for freight growth are almost non-existent, working directly against the Government's new freight growth target and de-carbonisation commitments.

This timetable is risking undermining private sector confidence in rail freight growth and effectively eliminating opportunities for customers or operators to invest on East Coast services, locations and equipment.

[redacted]

Appendix 2: Views expressed by Transport Scotland and ScotRail

Having regard to the rail policies of Scottish Ministers which include a high performing railway and promotion of rail freight growth, and noting that the resilience of the power supply in Scotland has not yet been modelled following the cancellation of the power supply strengthening work between Newcastle and Edinburgh, it remains the considered view of Transport Scotland and Scotland's Railway at this time that the performance and capacity disbenefits and risks of the proposed timetable outweigh the potential benefits to Scotland.

ScotRail has moved from a neutral position to one of objection due to concerns that more late running cross border services will adversely impact the Scottish Train Performance Measure.

East Coast Main Line Task Force

Meeting date	10th October 2024, 15:30 – 17:00
Venue	Teleconference
Chair	Rob Brighouse

Meeting notes

Attendees

Name	Organisation
Rob Brighouse	Independent Chair
Sam Caughey	DfT
Martin Tugwell	TfN
Chris Curtis	Industry PMO
Jake Kelly	Network Rail
Paul McKeown	Network Rail
Chris Rowley	Network Rail
Hannah Linford	Network Rail
Matthew Allen	Network Rail
Lindsay Nalton	Network Rail
Nick Coles	Network Rail
Paul Rutter	Network Rail

Name	Organisation
Richard Raine	Network Rail
Simon Leyshon	Network Rail
Ian Langton	GBRF (representing freight operators)
David Horne	LNER (representing DOR TOCs)
Nathan Thompson	CrossCountry
John Whitehurst	GTR
Will Rogers	EMR (representing Transport UK TOCs)
Martin Jones	ORR
Richard Harper	Steer
Tom Davidson	Steer
Bill Reeve	Transport Scotland
Catherine Hall	Network Rail Scotland

Agenda

Item	Timing	Item	Lead	Board Action
1	1530-1535	Introductions and apologies	Rob Brighouse	
2	1535-1540	Minutes of previous meeting	Rob Brighouse	
Items for discussion				
3	1540-1605	Progress update: a. Addressing identified performance risks in Manchester b. Assessment of issues and options at Peterborough c. Summary of freight work package, including future freight growth d. Assessment of issues and options at Leeds e. Performance modelling update and programme	System Operator	Note
4	1605-1615	Industry readiness status	Simon Leyshon	Note
5	1615-1620	ECML Access Rights policy	System Operator	Note
6	1620-1645	Summary and recommendation	Rob Brighouse	Endorse
Administration				
7	1645-1650	Future meeting dates	Rob Brighouse	Endorse
8	1650-1655	Action tracker	Richard Harper	To note and review outstanding actions
9	1655-1700	AOB	Rob Brighouse	

Introductions and Minutes

1. Rob Brighouse welcomed everyone to the meeting and noted where apologies had been made, alternative representatives were attending on their behalf.

2. Richard Harper stated that the previous minutes had been circulated with the slide pack and Rob Brighouse asked whether there were any objections to these minutes. No issues were raised and so the minutes were adopted as a true and accurate record of the 5th September meeting.

Meeting Context

3. Rob Brighouse set out at the start of the meeting that there are four possible scenarios, one of which could be the outcome of today's discussion, relating to the decision of whether to implement the ESG timetable in December 2025:

    1) All agree with the recommendation to System Operator to progress with delivery in December 2025.
    2) The majority of participants recommend delivery in December 2025, but a minority of participants do not agree with the proposal.
    3) Significant issues remain, and the decision is made to defer the decision to the November meeting with the meeting understanding what would change in 4 weeks' time.
    4) There is no consensus on the proposed way forward and advise DfT not to proceed.

Programme

4. Matt Allen gave an overview of the programme, as illustrated in the slide pack. The programme of work was completed in line with the planned timescales, covering the key themes as covered by the agenda.

Item 3a: Addressing identified performance risks in Manchester

5. Matt Allen provided an update as shown in the slide pack. Following on from the last meeting a single option was taken forward, and the analysis work has been completed. There remains more work to be done through to D-40, but no fundamental issues remain.

Item 3b: Assessment of issues and options at Peterborough

6. Matt Allen provided an update as shown in the slide pack. Network Rail have assessed the impact of implementing optimal train planning rules at Peterborough, noting there would be a capacity vs performance trade-off when considering such a change. It is recommended that in some cases the current train planning rules are retained, noting that a number of trains in the ESG plan will require clarification in the application of the current rules (due to not being compliant with the rules as currently stated).

7. Martin Tugwell noted his thanks to Jake Kelly for engaging directly on the issues following the previous Task Force meeting. In response to a question, Jake confirmed that the Peterborough solution was one Network Rail was content to work with.

8. Ian Langton asked how the trains would be accommodated given that they are not compliant with the rules as currently stated. Matt Allen replied that the application of margins would be ruled out for trains using Spital ladder. It was noted a later section of the meeting has an initial assessment of the performance risks at Peterborough.

9. Ian Langton also asked whether this issue meant there would be no scope for growth at this location. Chris Rowley and Jake Kelly responded that Network Rail will work with GBRf to find capacity for growth, but it is evident that at Peterborough and on other sections of the ECML there is very limited scope for growth at certain times of day.

Item 3c: Summary of freight work package, including future freight growth

10. Matt Allen provided an update on freight paths for existing traffic. The number of conflicting paths has been significantly reduced, but some issues remain. System Operator have undertaken a number of graph sweeps at various locations on the East Coast, to provide confidence that most remaining conflicts can be removed

through 'business as usual' activities during the timetable development period. As the slides set out, it cannot be certain that there will be no disputes during that part of the process.

11. Rob Brighouse clarified that the number of freight paths quoted was for all freight operators, and asked whether GBRf had visibility of all the issues relating to freight. Ian Langton confirmed that he was representing all freight operators.

12. Matt Allen said that as the timeline for freight services is quite dynamic, System Operator have assessed 166 further changes that have been made to freight services, beyond bids made at D-40 for December 2024. This has been undertaken to provide assurance that these paths can be implemented in the ESG structure for December 2025, with 80% of the paths being successfully incorporated. The 80% success rate is comparable to an 82% rate that is typically found at this stage of a timetable development process – for what is known as Rolling Spot bids (RSB) from Freight.

13. Ian Langton noted that this progress update implies that 20% of freight changes won't fit in this new timetable. This lack of capacity for growth means there is a risk to any further changes beyond December 2025, and potentially no capacity for future growth.

14. Matt Allen responded by saying that some of the outstanding issues would be resolved through the normal development process, and that 47 of the original 63 strategic freight paths had been secured through timetable development. He confirmed that assurances can't be given that everything will work, and there is still a risk that the end of the development period is reached and there are some timetable disputes against individual decisions that have been made. However, the scale of this is significantly reduced against the issues seen when the decision to defer from December 2024 was made.

15. Chris Rowley said that the further resolution of issues will need to be undertaken on a train-by-train basis, which was part of the plan between now and D-40. A number of QJ paths have been assessed, indicating that there are a number of existing paths that provide some opportunity for growth; however, Network Rail are being open about the issues that the ESG timetable creates in terms of reducing scope for growth in the future, particularly on busy two-track sections. The focus up to now has been on ensuring that existing freight traffic as bid in Dec 2024 can operate.

16. Jake Kelly noted that all freight services that hold firm rights have been pathed as part of the plan.

17. Chris Rowley noted that the access rights policy on the ECML means that a number of freight services are currently operating on contingent rights. The implementation of ESG provides an opportunity to give firm rights to some or all of these services, providing clarity for all industry participants.

18. Rob Brighouse noted that for long term capacity issues on the East Coast Main Line, there was an opportunity for Network Rail and freight operators to review what infrastructure requirements could help resolve those issues. That does mean there is a longer timeframe for delivery, but it does provide a focus for further work.

19. Martin Tugwell noted that the promise of future improvements has been an issue for TfN members through the development of this timetable, and other changes made in the North.

20. Martin Tugwell said there is a lot of work planned on the West Coast Main Line north of Preston in the current control period, which makes the availability of alternative routes even more important and questioned whether any assessment been made of how this will be dealt with in the new timetable structure?

21. Matt Allen responded that having to thin services on the East Coast to accommodate the diversions from the West Coast is a common way of working during such possessions. The extra services delivered by the ESG timetable slightly increases the complexity, but that process is already managed through the T-12 timetable bidding process. The decision to implement ESG provides more stability for the future in terms of how such possessions are planned.

22. David Horne noted that the point about WCML diversions means that more capacity on the ECML will be needed, as passengers migrate across the two routes. David thanked the team for their work on resolving the freight issues. He also considered that, in response to Martin's point, there is a need to explain the situation in more accessible terms – for example, there may be limited capacity for freight on the East Coast route, but over

the last 15 years the Joint Line has been upgraded and Werrington dive-under has been built, as have various other improvements that have helped grow capacity and support reliable freight performance. It is useful to base the analysis on the numbers (as shown in the slide) but need to explain the situation in a way that people will understand.

23. Chris Rowley agreed with David, saying that existing freight as bid in Dec 24 is protected and there is a small amount of growth already identified, which varies by day and time of day. There will be engagement going forward with FOCs to understand the value of QJ paths that have been identified and how they could be protected more effectively than at present.

24. Catherine Hall noted that in Scotland there is an 8.7% freight growth target, which has been developed as a 'bottom-up' process with customers. Two specific QJ paths have been identified and are required to deliver the 8.7% target, so it is welcomed that these paths have been protected through the planning process.

25. Chris Rowley said this was a good example of there being paths that are available in the timetable. Having the paths specifically identified as part of a plan for growth has allowed the capacity to be protected.

26. Matt Allen noted that System Operator has also been undertaking analysis on the potential for electric paths between Tyne Dock and Drax power station. Sectional running times need to be calculated, and work is on-going to assess how these paths could be delivered in future. An update will be provided at the November Task Force meeting including an initial assessment of trade offs.

> New action: Report on the outcome of the project to examine the possibility for ECML Tyne to Drax electric hauled paths with the ESG timetable structure (System Operator).

27. Ian Langton asked whether there would be any issues with the infrastructure and/or electric supply in order to operate the Tyne Dock to Drax trains, as well as additional passenger trains on the ECML. Simon Leyshon responded that power modelling was underway, which will give an indication of whether freight trains can be electrically operated. This is due to report at the end of November.

Item 3d: Assessment of issues and options at Leeds

28. On the issue of LNER turnrounds at Leeds station, Network Rail have undertaken more work on understanding the options for 21 minute or 81 minute turnrounds for LNER services. A similar exercise is being undertaken at Newcastle to ensure that platform workings are deliverable with any amendments to specification of passenger trains (for example potential changes to frequency on the Durham Coast).

29. David Horne said that LNER are nervous about the 21 minute turnrounds and view the issue as a work in progress. The average lateness of Leeds services is almost 6 minutes, which would mean that the actual time to undertake a turnround would be 15 minutes on average.

30. Sam Caughey suggested that more investment in staffing may allow the turnrounds to become more reliable, if the net effect of that change is beneficial. David Horne agreed, noting that on other railways a large number of cleaners are employed in order to turn trains round quickly. However, it is not just cleaning, but reservations, catering, prams and luggage to deal with as well. The ECML has a large number of level crossings and many other issues than can delay trains en route, and that makes it quite different to other high speed lines (either in the UK or abroad).

31. Martin Tugwell asked how London Kings Cross is expected to deal with the timetable change from a passenger perspective, noting some of the issues currently affecting London Euston. David Horne responded that the timetable is built around a set of train planning rules which are designed to ensure resilience, so it is hoped that any performance risks can be minimised. However, if there is a struggle to turn trains around in Leeds, that would then knock on to Newcastle or Edinburgh trains. This is an issue that is being worked through in terms of the rolling stock and wider impacts of the plan for Leeds.

32. Martin Tugwell asked whether LNER were confident that the timetable should go ahead, noting this issue at Leeds. David Horne responded that LNER and other operators were content for the timetable to go ahead with the planned turnround of 81 minutes – the reduction to 21 minutes is being assessed as a way of further

improving resilience. Work is ongoing on this assessment and it is not fundamental to the decision about whether to go ahead with the timetable change.

33. Chris Rowley said that Network Rail agreed that this issue should not stop the timetable progressing, but that operators using Leeds have differing views and Network Rail's analysis is showing issues with 81 min turnrounds. Network Rail are supportive of the principle of weighing up all the evidence in relation to the choice of 21 or 81 minute turnrounds. It was agreed that a working group would be useful.

    New action: Arrange a working group to review evidence relating to the 21 / 81 minute turnrounds at Leeds station (Network Rail, LNER).

[redacted]

Item 3e: Performance modelling update and programme

34. Richard Raine gave an update on performance modelling work, explaining the information as shown in the slide pack. It was noted that the slides show both the last round of Railsys modelling results and also an initial overlay to these results, based on the extra work undertaken so far for the Task Force including at Peterborough and Leeds. Results by Operator and Route from the final round of modelling work will be available in December, followed by insight and analysis on a train-by-train, location-by-location basis through early 2025 – allowing Network Rail to refine, improve and update their collective understanding of the timetable as it moves forward.

35. Martin Tugwell asked:

    - Whether the same breakdown of performance impacts was also available for freight operators.
    - Whether it was possible to understand whether the Right Time impact would be in line with the PPM impact as originally forecasted as part of the track access process – nothing that they are separate measures.
    - Whether a the 7 to 8% impact on Right Time for long distance services is what we would normally accept as an industry, and who decides whether that is an acceptable impact or not.

36. Ian Langton noted that he was also going to ask the same question as Martin about freight operators, and asked why the industry would propose a timetable change that leads to an 8% reduction in performance statistics.

37. Chris Rowley noted that the modelling results may provide a level of consistency with the ORR statement on performance in 2016; for LNER, a 7-8% reduction in On Time is roughly consistent with a 2% reduction in PPM, but Time to 10 (as was the PPM measure then) is not a specific measure currently used or one which we have specifically assessed against. The further model runs to be presented in December will give an updated and fully simulated assessment that includes more recent changes to the timetable as a result of the work reported to the Task Force.

38. Jake Kelly said it was important that this is presented transparently. It was always the view of ORR when these paths were sold that there was going to be a decrement in performance of the order that is being presented now. That was some years ago, and priorities may or may not have changed in the meantime – it is for the Secretary of State and other decision makers to decide whether this remains the right course of action.

39. Chris Rowley and Jake Kelly said that Network Rail and train operators would all be working hard to minimise performance impacts.

40. Bill Reeve made a number of points in relation to the timetable change and traction power supplies between Edinburgh and Newcastle:

    - The trade-offs have been well articulated through the information provided, but Transport Scotland are concerned that power supply modelling has not been completed – meaning that there is a risk that performance for the north end of the East Coast Main Line will deteriorate further when power supply limitations become apparent.
    - Against Transport Scotland's strategic criteria of performance, freight growth and reducing emissions, the timetable is likely to have an adverse impact on performance. It is positive that two key freight paths have been protected, but the overall timetable does not provide sufficient growth for strategic freight growth. Again, the power supply may help with that. It is noted that the planned mitigation would be trains running on diesel rather than electric, which is against Transport Scotland's decarbonisation policy.

41. Jake Kelly responded by saying that decisions were taken about power supply several years ago, outside of this forum. Network Rail consider that this timetable will work with the power supply that is available and is comfortable progressing with the timetable change on that basis.

42. David Horne said he would review the information as previously provided by the infrastructure programme in order to discuss with Bill offline.

43. Rob Brighouse said that at this stage the concern will be recorded, because it is a parallel issue that will not be ignored. It is not possible to address it in the time available for this meeting, but it has been logged.

[redacted]

Industry readiness status

44. Simon Leyshon gave an update on industry readiness as shown in the slide pack, with an independent consultant being appointed to gather information from industry duty holders. The majority of operators who chose to respond supported the introduction of the timetable and those who did engage considered themselves on target for delivery in December 2025.

45. Ian Langton explained that GBRf did not see that they could engage on a readiness and operational review when the timetable has not yet been finalised. He expressed a view that there is insufficient information available on a number of issues including the power supply issue that Bill raised, and the potential for increased maintenance to support the increased utilisation of the infrastructure. He also expressed a view that the infrastructure is not robust for its current use, so if more trains are to be run then maintenance will needs to be increased.

46. Bill Reeve said that in the absence of that power supply modelling, the Task Force should assume that that ScotRail's neutral position (which is a holding position) will turn to opposition.

47. Simon Leyshon noted that the second slide highlights the outstanding concerns by operators, some of which has been captured from the discussions at this meeting. One of the next steps (that's part of the proposed recommendation of the Task Force) is to report into the November meeting with a proposal for the readiness, planning and governance process in advance of delivery in December 2025.

48. Martin Tugwell noted the list of risks and issues raised by train operators and asked for clarification about the issue with delivery of TRU works. Simon Leyshon responded that this related to access requirements and ensuring that industry planning resources are ready to cope with the requirements of delivering the December 2025 timetable alongside the 2026 access requirements.

49. Nathan Thompson added that December 2025 ‘go live’ would immediately be followed in January by a long blockade as part of TRU, meaning there will be the situation of introducing the timetable and immediately following it with a very different timetable.

50. Jake Kelly noted that one of the challenges with several investment programmes that it makes it difficult to deconflict these requirements, but that's not to say the industry should not press ahead with making the best of the value of the investment that the government are making.

ECML Access Rights policy

51. Chris Rowley gave an update on access rights situation generally. Details were set out on the slide. Chris noted that all of the owning groups are represented on this meeting, and the industry has spent the last six months discussing the difficulty of accommodating all trains within the plan. If a ‘go’ decision is able to be made by the Task Force, Network Rail would hope to be able to process rights that are within the ECML ESG TT with some priority.

52. In addition, a number of other access applications have been made in May 2024. If the ESG timetable is going to be implemented, Network Rail need to be able to process and understand the track access rights that relate to the practical delivery of this timetable. There are other track access bids on the table that directly impact the East Coast Main Line timetable for December 2025 that are not in this timetable plan; if Capacity Planning is required to consider and determine those at exactly the same time as we are considering and determining rights to take this timetable forward, that will make it difficult to make a decisive decision to move forward with the contents of the ESG timetable.

53. It is suggested that Network Rail come back to the November Task Force to set out how it would move forward with the East Coast access policy.

Summary and recommendation

54. **Rob Brighouse** reminded the meeting that the whole process of decision making involves a series of compromises or trade-offs. As set out at the start of the meeting, there are four outcome scenarios that we need to consider through the discussion.

55. In considering this position, the Task Force needs to consider if we have the right information to make a decision, and whether there is anything missing. Are there any 'red flags' that would say make us say no to the timetable change, and how do we deal with any remaining concerns?

56. **Richard Harper** provided an explanation of the summary information as shown in the slide pack. When considering the programme as a whole, it is noted that the timetable outputs are part of a business case originally generated in support of a significant amount of investment. The objectives of delivering improved journey times and capacity on the Anglo-Scottish flow are relevant post-Covid, with significant growth in passenger journeys on the London to Edinburgh flow in particular.

57. The decision to defer December 2024 delivery was based on the level of maturity and number of timetable planning conflicts at that time. Since then, the planning and performance analysis has progressed to a level at which the issues can be clearly understood, with progress being made against each of the assessment criteria. Risks and issues relevant to each element are summarised in the slides.

58. There are two remaining areas of concern relating to freight capacity and network performance. These are not considered by Network Rail to be 'red flags' in relation to the deliverability of the ESG timetable, depending on the appetite of funders for a performance decrement. However, choosing not to implement December 2025 brings in different risks and some further unknowns in relation to what this would mean for the timetable and industry going forward.

59. A recommendation to proceed with implementation of a new timetable for the East Coast Main Line in December 2025 would recognise these two outstanding challenges, and progress with six further actions to mitigate the impacts – as set out in the slide pack.

60. **Jake Kelly** provided a summary of Network Rail's position, which is that Network Rail supports the recommendation of the secretariat to proceed, and does so for several reasons:

    - It is imperative that we demonstrate to the outside world and our funders that we are able to use the investment that has been so hard fought in our railway. We know that we have an imperative now in relation to a whole series of additional train services, including services in the North and calls at Cambridge South.
    - Access rights have been sold and it is a Network Rail obligation to seek to produce a timetable that that reflects those. For the first time a deliverable timetable has been achieved and it is an enormous credit to all the teams across the industry who have worked on delivering this.

61. In recommending the timetable, it is recognised that there are trade-offs which is inevitable for a timetable change of this complexity. Given these trade-offs, it would be a credible position for decision-makers to reject improvements in journey time and capacity if it means accepting worse performance. However, it is eight years since the access rights for this timetable were granted and a positive decision is needed to support £4 billion worth of government investment – it is important to recognise that.

62. Finally, there is more work to do, and Network Rail will continue to work hard to deliver the programme and minimise any risks. Jake considered that the industry is at a point where it is right to make a recommendation to proceed.

63. **Sam Caughey** said, echoing Jake's point, that it is important to be able to advise Treasury that the industry is delivering on the planned benefits of investment. If the industry were not to proceed, the impact may go beyond the East Coast in terms of industry reputation and future investment.

64. In addition, when considering the future subsidy requirements of the industry, if we are not going to realise the £60m increased revenue that we can secure from this timetable, we need to be asking how else we would generate that revenue or make a saving, because the Treasury are unlikely to fill that funding gap. However, we have a new government expecting better performance from our railway, and it is recognised that those two things are in conflict.

65. Since the decision to defer December 2024, progress has been made which should give everybody confidence that the issues that were that were pertinent in the spring have largely been resolved. The timetable benefits are

[redacted]

in line with the objectives that were set for it and set by the original investments. There has been a huge amount of work by people across the industry to achieve this.

66. In making a recommendation today it the performance risks need to be recognised. We have a determination of access rights from eight years ago that recognised that performance would be worse. However, the original objectives of the programme have been achieved. It will ultimately be for the Minister to decide how to resolve those two conflicting positions.

67. **Martin Tugwell** noted that whilst he has represented TfN as a member of this working group, the way that TfN will develop a view on the proposition is through briefing of TfN members and then feeding that view to the Secretary of State. There is a briefing of technical officers on 16th October, followed by a briefing of politicians on 21st October, which will be a private meeting. At this stage it is difficult to know what TfN's view will be.

68. It is recognised that there is clearly more work to do, but the issues noted are not seen as red flags.

69. The freight position is challenging, and it is clear that there are locations on the network where future freight growth is a challenge. Resolution of this issue depends whether the future freight growth that does materialise aligns with those parts of the network where capacity is constrained, which is always difficult to predict. The issues relating to power supply may impact passenger trains north of Newcastle in addition to freight, but, as noted above, there is an undertaking to do further work on this.

70. In relation to those areas, when it began the Task Force was expecting some major trade-offs between capacity and performance or between passenger and freight. However, in many cases, due to the work of the System Operator, those major trade-offs have not been required.

71. It is recognised that there are significant benefits in this timetable, including Leeds to Sheffield and the Durham Coast uplift. However, there are areas where local connectivity is lost, and that has been an issue right from the very first consultation back in 2021.

72. It was noted that the main decrement in performance figures relates to long distance services.

73. A key issue for the future is the delivery of the 7th path per hour to Newcastle, resulting in two trains an hour between Newcastle and Manchester. This was discussed with Huw Merriman last autumn, with agreement that there would be further development of infrastructure interventions. Pausing of infrastructure schemes such as York North will be taken into account by the Committee, and asking politicians in the North to accept deferred investment and associated service uplifts will be a difficult sell.

74. Noting that some of these issues are outside the remit of the East Coast Task Force, these are the factors that are likely to be considered by the Rail North Committee when it comes to taking a view.

75. **John Whitehurst** said that delivery of the ESG timetable was important for the delivery of a full train service at the new Cambridge South station.

76. **Catherine Hall** suggested that the next steps incorporate the recommendations of the East Coast Mainline programme board (which was held the previous day). The issues relating to traction power supply support the need to improve capacity and also 'on the day' performance.

77. **David Horne, John Whitehurst** and **Will Rogers** expressed support for the timetable going ahead.

78. **Rob Brighouse** said that following the meeting, he will write to confirm the scenario that is being taken forward, copying in the Rail Minister to ensure there is transparency for all. The feedback from the meeting suggests this is Scenario 2, in which there is some disagreement but that we should proceed with the timetable change.

79. **Martin Tugwell** asked about the timing of that letter, noting that the Rail North Committee briefing is on 21st October. Rob Brighouse said he intended to provide a draft letter to Task Force members by Monday 14th October, with the letter sent by 16th October.

> New action: Circulate the proposed draft letter to Task Force members by 14th October (Rob Brighouse).

80. **Bill Reeve** acknowledged the difficulty of the judgment and thanked those who have worked on the timetable to get it to this position. However, there is a risk that the performance impact is not fully understood, and if this were an investment in Scotland it would not be progressing on that basis. Previous concerns regarding performance have not been addressed and on that basis Transport Scotland is not able to support.

81. **Ian Langton** summarised the position of freight operators, which is that they cannot proceed or cannot support this recommendation on the basis of the concerns raised today.

82. **Bill Reeve** noted the position of freight operators and Transport Scotland, and noted that TfN's position is not yet agreed. It may be more helpful to say that the following parties were in favour and the following parties were against, as there may not be a clear majority.

Item 6: Forward Agenda, Action Tracker and Forward Programme

83. The updated action tracker is shown overleaf.

84. The next East Coast Task Force meeting will be held on 7th November.

[redacted]

East Coast Main Line Task Force

Ref	Action	Due	Owner	Status
9	A response to the concerns raised by John Smith regarding Spital and New England ladders – this will come from the already programmed analysis SO is undertaking.	10/10/24	System Operator	Addressed by item 3b in today's pack.
10	Discuss the context around the current performance issues at Peterborough with Martin Tugwell and other Board members, prior to the meeting on 10th October.	10/10/24	System Operator	Summarised in items 3b and 3e in today's pack.
11	Share updated performance analysis on Peterborough and Leeds as soon as it is available with Martin Tugwell and other Board members.	10/10/24	System Operator	Completed – see item 3e in today's pack.
12	Develop a proposed approach to phased implementation ahead of the 10th October meeting.	10/10/24	Richard Harper / TOCs / NR	Meetings held with Northern and LNER; further work proposed for 7th November.
13	Speak to Martin Tugwell to ensure that we are landing the correct inputs to the meeting on 10th October.	10/10/24	Richard Harper	All participants have been provided with an opportunity to comment on draft versions of today's pack.
14	Report on the outcome of the project to examine the possibility for ECML Tyne to Drax electric hauled paths with the ESG timetable structure.	07/11/24	System Operator	New action.
15	Arrange a working group to review evidence relating to the 21 / 81 minute turnrounds at Leeds station.	07/11/24	Network Rail, LNER	New action.
16	Circulate the proposed draft letter to Task Force members by 14th October.	14/10/24	Rob Brighouse	New action.

East Coast Main Line Task Force

Strategic planning for timetable changes

Meeting No.7 : 27/01/2025

ECML Task Force 27th January – Agenda

Time	Timing	Item	Lead	Board Action
1	1530	Introductions and apologies	Rob Brighouse	
2	1530-1535	Minutes of previous meeting	Rob Brighouse	
Items for discussion				
3	1535-1545	SoS approval and subsequent actions (feedback, freight letter response)	Simon Leyshon	Note
4	1545-1605	Performance modelling results	Richard Raine	Note
5	1605-1620	Prior Working Timetable update	System Operator	Note
6	1620-1635	Readiness workstream progress	Simon Leyshon	Note
7	1635-1640	Congested infrastructure update	Simon Leyshon	Note
8	1640-1645	Update on TfN conditions and industry response	Simon Leyshon	Note
Administration				
9	1645-1650	Future meeting dates	Richard Harper	Endorse
10	1650-1655	Action tracker	Richard Harper	To note and review outstanding actions
11	1655-1700	AOB	Rob Brighouse	

Item 3: Update on feedback with rail industry stakeholders

Lead	Simon Leyshon
Purpose	Provide an update on the Feedback with rail industry stakeholders about the ECML December 2025 TT
Summary	The stakeholder engagement launched on Wednesday 18th December 2024. There is a microsite open until **Friday 28th February 2025** showcasing the proposed timetable changes to the public: https://ecmltimetable.info. The purpose is the microsite is to close out the process of public consultation, which happened in Summer 2021. Eastern Region facilitated a Parliamentary drop-in at Westminster on 8th January 2025. 40 MPs attend the event including Martin Vickers (Member of Parliament for Brigg & Immingham and Chairman of the APPG on Rail). The general breakdown of attendance was as follows: • 22.5% Anglia MPs. • 20% East Coast MPs. • 17.5% North & East MPs. This reflects some N&E MPs attending the Northern's "Rail in the North" drop-in in late November. • 15% East Midlands MPs. This reflects East Midlands holding their own drop-in relating to the MMLe Christmas work in early December. • 7.5% Scottish MPs, invited due to the impact of the ESG timetable on their constituencies. Generally a positive response to the opportunity for MP's to ask questions etc.
Board action	Note

[redacted]

Item 3: Update on engagement with rail industry stakeholders

Lead	Simon Leyshon
Purpose	Provide an update on the engagement with rail industry stakeholders about the ECML December 2025 TT
Summary	This microsite includes an email address for readers to submit comments or ask questions. Field Consulting track the inbox and will coordinate cross-industry responses to correspondence received about matters that affect more than one TOC. A survey taken on 22nd January 2025 showed 28 responses received; 5 were responded to: • Response by category ○ **General public:** 23 ○ **MPs or MSPs:** 2 (John Lamont; Ian Lavery) ○ **Media:** 1 (BBC Local Radio, North East) ○ **Local or Combined Authority:** 1 (York & North Yorkshire) ○ **Rail industry:** 1 • Emerging themes ○ Connectivity for East Lothian and Scottish Borders (5), Durham (4), Northallerton (2), Retford (2) and Peterborough (2) ○ Trains to/from London King's Cross also mentioned for most of the areas above ○ Morning peak train from Alnmouth to Newcastle (1); response sent by CrossCountry and Network Rail ○ Errors with the microsite context (3); these are now corrected
Board action	Note

Item 3: Update on Ministers response to Freight industry letter

<table>
<tr><td>Lead</td><td>Simon Leyshon</td></tr>
<tr><td>Purpose</td><td>On 20th December, Lord Peter Hendy wrote back to Freightliner, DBS and GBRf. There are two actions requested of the Task Force and Network Rail, with this item forming an update on those actions.</td></tr>
<tr><td>Summary</td><td>
<table>
<tr><th></th><th>Action</th><th>Status</th><th>Resp.</th></tr>
<tr><td>1.</td><td>DfT Operators to review their service specifications particularly at the fringes of the day.</td><td>Review underway.</td><td>DfT/TOC’s</td></tr>
<tr><td>2</td><td>NR propose a soft and phased launch between Dec 25 and May 26.</td><td>Reductions agreed by XC & further reviews underway.</td><td>TOC’s/NR</td></tr>
</table>
</td></tr>
<tr><td>Board action</td><td>Note</td></tr>
</table>

[redacted]

System Operator

NetworkRail

ECML Dec 2025 Option Timetable: Timetable Performance Modelling Executive Summary

Timetable Performance & Simulation Team
Capacity Planning, System Operator

Monday, January 27th, 2025

Together, we're delivering a simpler, better, greener railway.

Simpler.
Better.
Greener.

History

- A large volume of analysis and modelling has been conducted across the ECML geography since 2020, which include:
  - 2020: Time Signal at Red analysis that stated to the ESG to restrict the Welwyn viaduct to 18 tph in the Down.
  - 2021: targeted modelling studies using Trenolab software.
  - 2022: ECML-wide simulation model using Trenissimo by Rail Aspects utilising a PRA produced sample timetable
  - 2023/24: ECML ESG Railsys Performance Modelling exercise conducted by Capacity Planning.

- Capacity Planning undertook the 2023/24 Performance Modelling work as scoped by the ESG. As with all modelling exercises it is crucial to understand there is a different level of maturity regarding timetable development between the December 2023 (Base) and the December 2024/2025 Option timetables as assessed. The Base was a D26 standard whilst the Options are at an earlier stage of development.

- The 2023/24 Modelling did not cover the Greater Manchester area or the additional extensions to Bradford Forster Square. There were also missing freight paths in the model because of decisions that were not yet made on how to resolve outstanding conflicts. It was assumed at the time that performance would worsen when these services were added to the Plan and Network Rail set out overlays to results presented at the October 10th 2024 Task Force in the meantime to ensure these risks were communicated clearly.

- To address concerns raised in the PMO deferral letter (April 2024) for a December 2024 introduction, the modelling scope for a December 2025 introduction was adapted and commenced on September 30th, 2024, to coincide with the completion of the timetable sprint work.

2024/25 Modelling

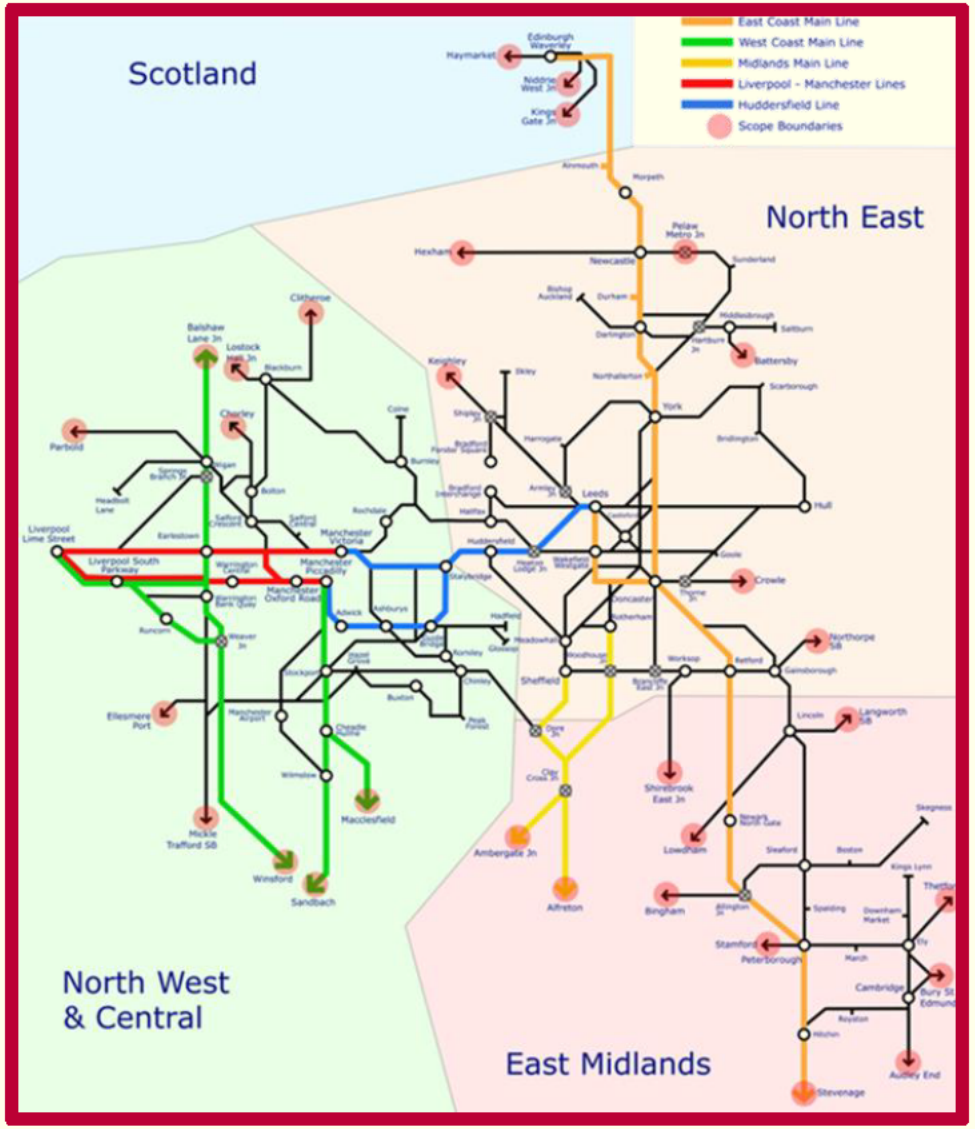
- The model parameters were kept the same as the original ESG remit to ensure some correlation can be made between the previous and current modelling runs (i.e. a Wednesday between 14:00 and 20:00), but due to concerns raised by in the PMO letter of April 2024, the model geography was adapted to ensure areas of concern were addressed.

- The main change was an extension of the geography westwards from the 2023/24 model entry points of Hebden Bridge and Marsden, to now include all of Manchester, Liverpool and parts of the West Coast Mainline.

- The revised geographical scope is shown.

- RailSys is modelling what performance will be like on a good day – effectively what the timetable can achieve when there is lateness in the system, calibrated against the Base, but the system does not require significant regulation to operate. **Emphasis should therefore be placed on delta change between the Base and the Option**.

- There is a point in every modelling study where a snapshot of the timetable needs to be taken, in order to start delivering simulation and onwards analysis. It is key to note that the development of the timetable continued after the final cut was provided and therefore what is ultimately offered will always be different to what has been modelled. Capacity Planning will be undertaking a sweep through our internally developed PIF Analyser which allows us to understand differences in timetable states.



High Level Results – Operator Modelled Punctuality delta changes

Executive Summary

In the previous round of modelling, Long-Distance High-Speed (LDHS) operators saw a worsening of performance on a good day. The ranges of impact set out at the October 2024 Task Force were 7-8% T-1 (Time-to-1%) for LDHS operators and 3-4.5% for T-3 (Time-to-3%) LDHS. These ranges on top of the base results were in recognition of at the time missing freight paths that were still to be resolved and concern around elements of the operation at Peterborough and Leeds including LNER extensions to Bradford that were not in the original ESG plan and models. The new results which include additional freight paths and these extensions confirm it was sensible to provide these overlays. The results are inside or close to the previously reported ranges with in general LDHS operators performing slightly worse than the range at T-1 and most within or slightly better at T-3. As expected TransPennine Trains projections improve following work to re-plan the TransPennine suggested by the PMO and requested by the Task Force.

Operator	Time to 1%			Time to 3%			Time to 10%		
	Base	Option	Delta	Base	Option	Delta	Base	Option	Delta
Abellio Greater Anglia	79.8%	80.3%	0.5%	94.5%	93.3%	-1.2%	99.3%	99.5%	0.2%
CrossCountry	58.4%	58.8%	0.4%	81.8%	81.2%	-0.6%	96.6%	96.3%	-0.3%
East Midlands Railway	56.6%	57.4%	0.8%	85.3%	85.5%	0.2%	98.2%	98.2%	0.0%
First Hull Trains	74.5%	63.7%	-10.8%	93.9%	90.4%	-3.5%	99.7%	97.8%	-1.9%
Govia Thameslink Railway	60.6%	56.6%	-4.0%	83.0%	79.9%	-3.1%	96.7%	96.6%	-0.1%
Grand Central	76.0%	67.1%	-8.9%	94.5%	92.1%	-2.4%	99.5%	97.7%	-1.8%
London North Eastern Railway	77.1%	68.4%	-8.7%	92.9%	89.7%	-3.2%	98.5%	97.6%	-0.9%
Lumo	84.5%	79.7%	-4.8%	95.1%	89.6%	-5.5%	98.5%	99.9%	1.4%
Northern Trains Ltd	65.0%	64.9%	-0.1%	90.9%	90.2%	-0.7%	99.1%	99.3%	0.2%
ScotRail	75.6%	73.9%	-1.7%	92.6%	92.6%	0.0%	99.5%	99.3%	-0.2%
TransPennine Trains	53.3%	56.1%	2.8%	81.0%	82.0%	1.0%	97.3%	97.2%	-0.1%

Figures refer to passenger operators running as Train Class 1, 2 and 9, based on punctuality at Origin, Termination and Arrivals, within [redacted]00-2000
Figures relate to only those trains that are active in the model within the model scope, and do not refer to whole Operator figures.
Project Abraham (EMR) was not in the East Coast ESG base and is not in these modelling results.

Operator Summary

As has been the case since the new timetable was conceived and access rights awarded, implementation will see a notable deterioration in punctuality for customers, for example, **LDHS operators degrade by between 8.7 and 10.8 On Time percentage points (pp).** Lumo is the exception dropping by -4.8pp. T-3 degradation for LDHS (-2.4 to -5.5 pp) is broadly within the forecasted overlay presented at October 2024's Task Force.

This model run includes LNERs preferred 81 min layovers at Leeds. The reinstating of TransPennine Trains paths as per Dec 24 (which are different paths to the previous modelling) sees them improve T-1 by +2.8pp overall and by +1pp at T-3.

A comparative model run was conducted with Leeds turnarounds being planned as 21 minutes. This 21 minute Option showed a slightly improved performance overall.

High Level Results – Network Rail Route Modelled Punctuality delta changes

Executive Summary

In the previous round of modelling, Long-Distance High-Speed (LDHS) operators saw a worsening of performance on a good day. The ranges of impact set out at the October 2024 Task Force were 7-8% T-1 (Time-to-1%) for LDHS operators and 3-4.5% for T-3 (Time-to-3%) LDHS. These ranges on top of the base results were in recognition of at the time missing freight paths that were still to be resolved and concern around elements of the operation at Peterborough and Leeds including LNER extensions to Bradford that were not in the original ESG plan and models. The new results which include additional freight paths and these extensions confirm it was sensible to provide these overlays. The results are inside or close to the previously reported ranges with in general LDHS operators performing slightly worse than the range at T-1 and most within or slightly better at T-3. As expected TransPennine Trains projections improve following work to re-plan the TransPennine suggested by the PMO and requested by the Task Force.

Route	Time to 1%			Time to 3%			Time to 10%		
	Base	Option	Delta	Base	Option	Delta	Base	Option	Delta
Anglia	73.6%	69.0%	-4.6%	91.1%	87.0%	-4.1%	98.8%	98.4%	-0.4%
East Coast	64.9%	62.9%	-2.0%	87.5%	85.8%	-1.7%	97.5%	97.4%	-0.1%
East Midlands	59.8%	56.9%	-2.9%	85.6%	85.1%	-0.5%	98.9%	98.4%	-0.5%
North & East	62.2%	61.2%	-1.0%	90.5%	88.9%	-1.6%	98.8%	98.9%	0.1%
North West	63.8%	65.5%	1.7%	88.1%	88.9%	0.8%	98.6%	98.8%	0.2%
Scotland	73.7%	71.4%	-2.3%	91.5%	91.0%	-0.5%	99.2%	98.9%	-0.3%

Figures refer to passenger operators running as Train Class 1, 2 and 9, based on punctuality at Origin, Termination and Arrivals, within the ESG agreed time scope of 1400-2000
Figures relate to only those trains that are active in the model within the model scope, and do not refer to whole Operator figures.
Project Abraham (EMR) was not in the East Coast ESG base and is not in these modelling results.

[redacted]

East Coast Route Executive Summary

In the current round of modelling, **East Coast Route T-1 performance degrades by -2pp, and -1.7pp at T-3.** The main driver for this degradation within East Coast Route is **a drop in LNER performance within the confines of East Coast Route by -2.9 T-3 pp along with fellow Long-Distance High-Speed operators** (*details in Appendix A*).

There are generally positive stories in the south of the Route with EMR (-0.1 T-3pp) and GTR (-0.3 T-3 pp) broadly neutral.

Whilst TransPennine Trains show an overall positive picture at an Operator level (+1pp at T-3), this is driven by positive changes across the North West. These changes are the transfer to electric traction which improves acceleration and deceleration; coupled with changes in the stopping pattern across the Dewsbury Corridor compared to the Base which for longer distance services improves the reliability and lateness transferring into East Coast Route. Within East Coast Route, TransPennine Trains lose -2.8 T-3 pp compared to the Base (see Appendix A).

Item 5: Approach and Progress to establishing the PWT at D45

Lead	Chris Rowley/ Matt Allen
Purpose	Progress to establishing the Prior Working Timetable at D45
Summary	Work has progressed to plan for the development of the Prior Working Timetable (PWT) for 31st January25 (D45). The primary objectives include aligning the East Coast Main Line (ECML) advance timetable with the May 2025 freight schedules, particularly focusing on the "stitch" work package, which involves integrating freight paths into the national timetable. Key tasks to support the PWT delivery: • Creation of a live production environment database by December 2024. • Ongoing validation of the timetable, especially for routes off the core ECML. • Aligning freight schedules between the May 2025 and December 2025 paths. Operators are asked to submit only electronic changes to the PWT by the D40 PDNS. This will minimize unnecessary data rechecking and validation work during the 14-week validation period. There is a risk that some Passenger and Freight Operators may submit bids outside of this request, which could lead to additional validation work, delays, and potential issues affecting the final timetable quality at D26.
Board action	Update

Item 5: ECML Freight plan alignment – ‘stitching’ process

Lead	Chris Rowley / Matt Allen
Purpose	Freight ‘stitch’ work package (D51 to D45)
Summary	In any significant line of route recast there is always a large task in aligning cross boundary paths in the line of route plan with the latest movements in the wider National WTT and associated Rolling Spot Bids (RSB). Since summer 2024, 2 new National timetables have been established and thousands of RSBs (passenger and freight) accommodated. The freight "stitching" process is addressing 1,754 discrepancies between cross-border freight paths in the May 2025 timetable and the Dec 2025 live Production database for the Dec 25 PWT. These paths, which enter or exit the ECML area, differ across the two timetables and need to be re-aligned and made compliant. Key Progress so far: • 1,503 discrepant paths have been reviewed, revealing 71 paths remain non-compliant • Of the 71 paths which are non-compliant, 25 are "Runners" and 29 have access rights. A majority of remaining issues to resolve are *off* the ECML geography and involve interactions with the EMR Project Abraham plan or XC Hydra away from the ECML. • The non-compliant paths are undergoing further troubleshooting in a Level 2 triage process, to identify unresolved issues that will need further work between D40 to D26 during the timetable development period The stitching process highlights that, despite previous work, the national freight and passenger timetable has evolved. Until this work is completed there is always a risk that some freight and passenger services may not be accommodated in the timetable at D26. Capacity Planning will continue to monitor the situation throughout the D40 to D26 period. As noted above, many of the risks are not ECML related, in particular some relate to XC Hydra plans in the Midlands and others to EMRs Project Abraham specification. Both operators are working with NR to look at fixes. In summary, the freight stitching process is uncovering challenges in reconciling the national and ECML freight schedules, with ongoing work to address path compliance issues and potential conflicts before Network Rail makes the final timetable offer.
Board action	Update

Item 5: Difference's between ESG Advanced Work and ATNC's

Lead	Chris Rowley/ Matt Allen
Purpose	Differences between ESG Advance Work and ATNC's
Summary	At D55 Operators submitted Advance Notification of Timetable Change (ANTCs), a review of these submissions identified differences between the scope of the advance timetabling work being undertaken between April and October 2024 and what Operators might formally bid in their D40 PDNS submissions at the start of the 14 week development period. The following work packages, included in Operators ANTC submissions at D55 impacting the ECML are also expected to be bid at D40, these additional services directly impact the ECML and have not been included in performance analysis, it is currently not clear if these services will be included in the Dec 25 timetable: Hull Trains – 1 x Hull – London Kings Cross on all day Grand Central - 2 x Bradford Interchange – London Kings Cross, 2 x London Kings Cross – Bradford Interchange, 2 x York – London Kings Cross, 1 x London Kings Cross – York and 1 x London Kings Cross – Wakefield Kirkgate The below work package, which indirectly impacts the ECML is expected in addition to the ESG specification: EMR – Project Abraham – Recast of Crewe / Matlock – Newark Castle / Lincoln Central / Grimsby Town / Cleethorpes service group, generating one additional tph between Newark Castle and Lincolnshire in each direction. The work package has not be included in the latest round of performance modelling, and work continues with EMR to understand the impact on performance. A decision on whether to include Project Abraham must be made by D45.
Board action	To note

[redacted]

Item 5: General ECML Risks

Lead	Chris Rowley/ Matt Allen
Purpose	Update on General Risk associated with the Development of the Dec 25 ECML Timetable
Summary	The following are among general risks being monitored with PMO Steering Group and Capacity Planning's via the usual assurance processes:

Risk	Mitigations
Following go live of the new timetable there is limited available capacity for Short Term Planning alterations to the timetable, which increase train services over the ECML	• More frequent thinning of the WTT service levels in response to diversions of services due to engineering access diversions on/near the ECML. • Prior to Operator bidding TW16 Informed Traveller amendments new timetable capacity studies to be undertaken for the disruptive possession access
The early creation of the Dec 25 database there will be an increased volume of Freight roll-over bids which will need to be incorporated in the Dec 25 timetable, either through PDNS or through incorporating the individual bids.	• Collaborate with Freight Operators throughout the 'stitch' work-package to understand requirements for the Dec 25 timetable • Freight Operators asked to include any rollover bids in a change only D40 PDNS bid.
At D44 928th Feb 25) an Operator (s) dispute the Dec 25 final TPRs in connection with the suboptimal TPRs in the Peterborough area used to develop the Dec 25 New Working Timetable	
Changes to the specification following wider stakeholder consultation of the timetable which closes 28th Feb 25 which leads to re-work of previously agreed conflict fixes and additional validation work during development period increasing risk to delivery and quality at D26.	• Resistance to late scope changes, and no scope changes after D40
Detail station working validation at Edinburgh has identify issues with turnarounds that require further work from Operators looking at their rolling stock resource plans or additional shuts of ECS out the station.	• Raise issues with Operators as they identified

Board action	Update

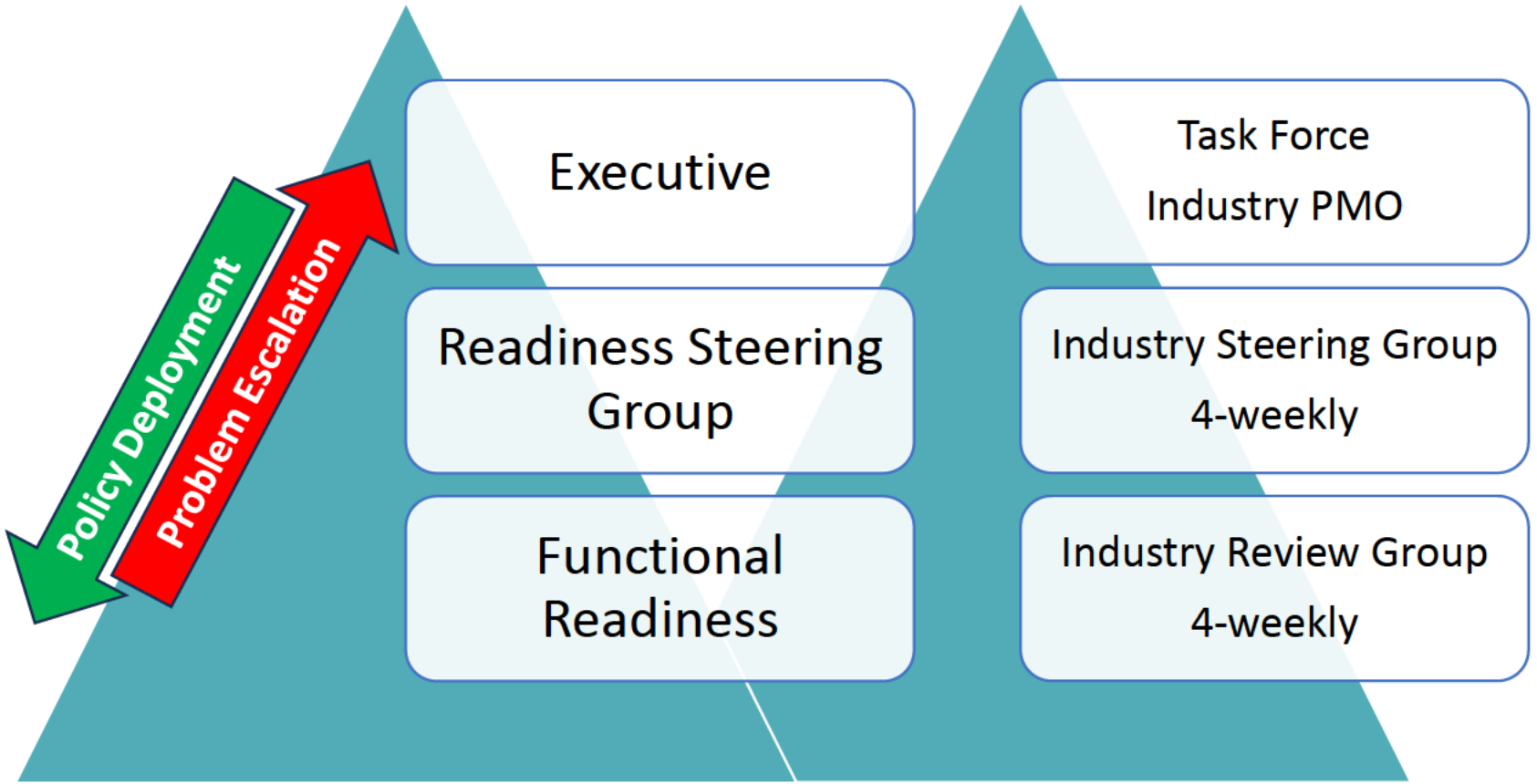
Item 6: Industry Readiness

The purpose of this presentation is to inform the Steering Group of the tactical process being following to assure operational readiness of the ESG ECML Timetable for its introduction at the December 2025 Timetable Change Date.

It covers: -

1) Governance arrangements;
2) Readiness Risk Profile;
3) Decisive Conditions; and
4) Emerging Risks & Issues.

Item 6: Industry Readiness – Governance Arrangements



[redacted]

Industry Review Group

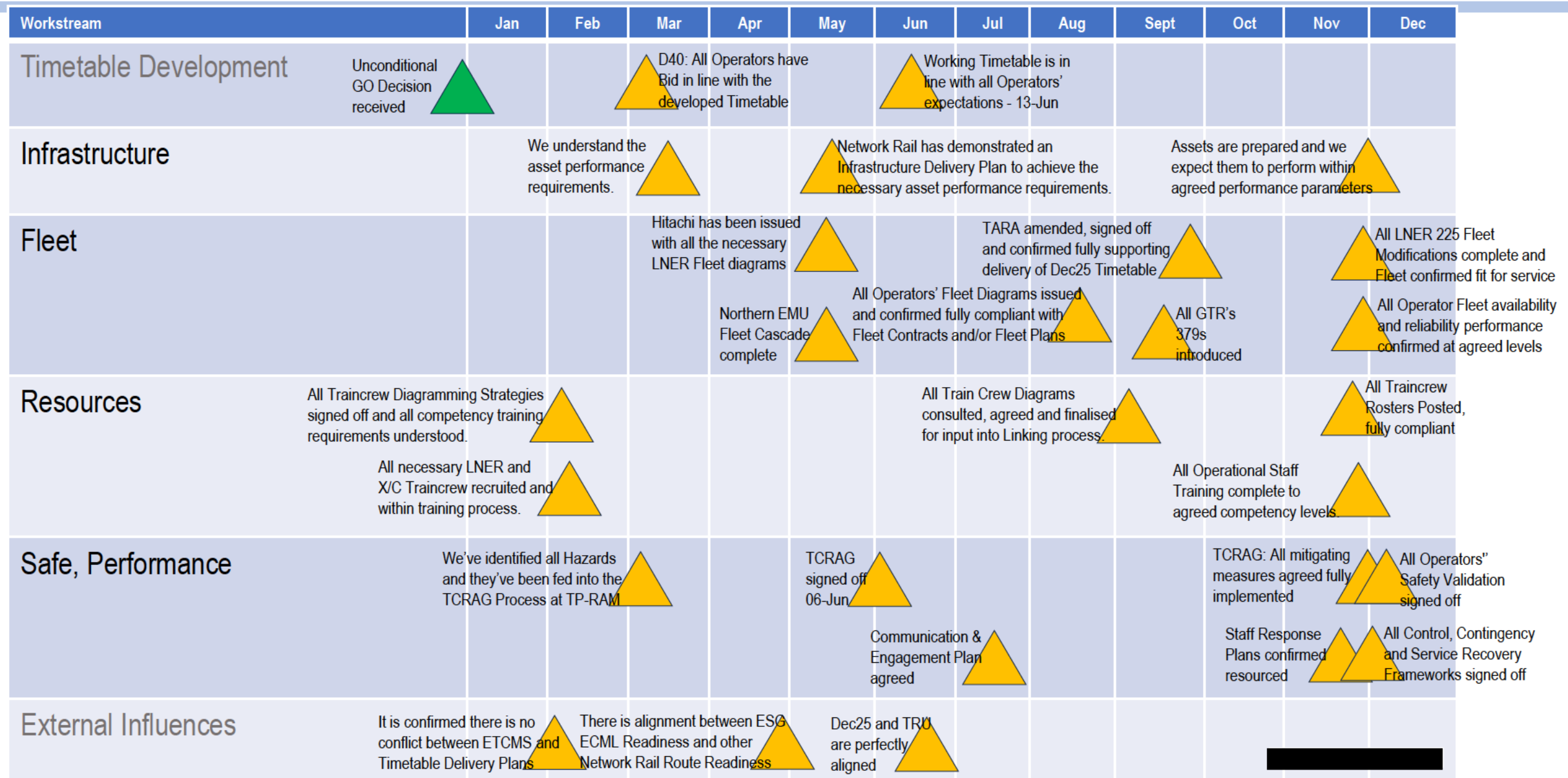
Duty Holder	Readiness Lead	Status*
LNER	Paul Rawson	●
GTR	TBC	●
Hull Trains	Gemma Scott	●
Lumo	David Fox	●
Grand Central	Matthew Taylor	●
CrossCountry	Nathan Thompson	●
EMR	James Chapman	●
Northern	Charlotte Harris	●
Transpennine	Robbie Gilbody	●
Scotrail	Neil Sutton	●
Freight	Route Freight Managers	▲
NR East Coast	Ed Dunn	●
NR NW&C	Clare Waller	●
NR Anglia	TBC	X
NR North East	TBC	X
NR East Midlands	TBC	X
NR Scotland	TBC	X

Status Key
- ● Governance arrangements established
- ▲ Governance arrangements being established
- X Unable to comment on governance arrangements

Item 6: Industry Readiness – Risk Profile

Risk Area	Mitigating Measure
Robustness of Timetable	Advanced Timetable Process Lockdown (i.e. no significant late changes) Phased Introduction and/or Short-term Decrements
Availability & Reliability of Infrastructure	Infrastructure Preparedness Plans Infrastructure Enhancement Plans Infrastructure Improvement Plans
Availability & Reliability of Fleet	Fleet Preparedness Plans Fleet Improvement Plans
Availability & Reliability of Resources	Recruitment & Training Plans Deployment Strategies (Diagramming)
Safe, punctual performance	TCRAG Regulation Policies / Statements & Contingency Plans Steady State and 'Be Better' Plans Comms & Engagement Plan
External Influences	ESG / TRU Plan Alignment ESG / ECDP Plan Alignment East Coast / Other Network Rail Route Readiness Plans Alignment

Item 6: Industry Readiness – High Level Delivery Plan built around Decisive Conditions



Item 7: Congested infrastructure update

Lead	Chris Rowley/ Matt Allen
Purpose	Update on Congested Infrastructure Declaration
Summary	In July 2024, Network Rail issued an Early Warning Indicator (EWI) highlighting likely congested infrastructure along the Kings Cross to Edinburgh route due to capacity limitations identified during two phases of ECML advanced work. Further assessments suggest that these capacity issues will meet the criteria for a formal Congested Infrastructure declaration under A&M Regulations for the December 2025 New Working Timetable. As part of this process, aligned with Eastern Region, System Operator will formally declare Congested Infrastructure after communicating with both internal and external stakeholders, with the Eastern Region's support confirmed. The declaration will focus on three specific lines of route: • Between Huntingdon North Junction and New England North Junction (Peterborough) • Between Northallerton Longlands Junction and Newcastle King Edward Bridge South via the ECML • Between Doncaster Marshgate Junction and Leeds Copley Hill West Junction Network Rail is moving forward with a formal declaration of Congested Infrastructure for key sections of the ECML. It is expected that this will be complete by the end of February 2025.
Board action	Update

Item 8: Update on RNC Conditions and DfT response policy

Lead	Simon Leyshon
Purpose	Provide an update on the RNC Conditions (05/11/24) & DfT response (17/12/24)
Summary	

	Condition	Notes & Actions from LPH response	Resp.
1	Performance modelling – no additional deterioration in performance	Latest Performance results and mitigations presented on 27th Jan	Taskforce
2	Taskforce holds industry to account in delivering smooth transition to the timetable & timescales	Industry Readiness programme underway and reporting progress into Task Force in parallel to Industry PMO.	Taskforce
3	Commitment from the Government that all operators on the ECML will work collaboratively to improve customer experience.	Operators to provide staffing, facilities and information especially during disruption	DfT
4	Commitment from government to proactively consider proposals to improve connectivity	Operators to consider business cases to improve connectivity e.g. Northumberland	DfT
5	Govt reaffirmation on restoring 2 tph Man - Newcastle	Await Spending Review outputs in Spring 2025	DfT
6	Infrastructure enhancements	Await Spending Review outputs in Spring 2025	DfT/NR
7	Taskforce being given remit to work with TfN and DfT to see what's required for freight growth	Flexibility of Passenger Operators and NR for Freight Operators to take advantage of any opportunities in the TT *(subject to normal Network Code processes)*	Taskforce
8	Early discussions needed to unlock TRU benefits by investing in ECML	Start Planning how ECML & TRU to work together for the 2030's	NR/TFN

Board action	Note

Item 9: Future meeting dates

<table>
<tr><td>Lead</td><td>Richard Harper</td></tr>
<tr><td>Purpose</td><td>Future Task Force meetings and purpose</td></tr>
<tr><td>Summary</td><td>At the November meeting, the governance approach for December 2025 readiness was shared with the Task Force and endorsed.

It is proposed to add a further responsibility to the Terms of Reference to reflect this shown in blue:

<table><tr><td>Responsibilities:</td><td>• Make recommendations to specifiers and funders as to decisions, actions and compromises required to achieve optimum benefits realisation for ECML investment
• Provide direction to the timetable and readiness steering groups and workstream leaders on (i) options, (ii) issues requiring decision and (iii) implementation risks
• To secure consensus across industry participants where there are conflicting incentives
• Endorse programme objectives and the criteria against which proposed solutions will be measured</td></tr></table>
To enable this additional responsibility to be discharged, alongside the independent assurance provided by the Industry PMO, it is recommended that the Task Force meet every 8 weeks during 2025 to oversee preparedness, review and where necessary make recommendations to support the successful delivery of the timetable.</td></tr>
<tr><td>Board action</td><td>Endorse the proposed amendment to the Terms of Reference and forward meeting frequency.</td></tr>
</table>

[redacted]

Item 10: Action tracker

Action tracker

Ref	Action	Due	Owner	Status
17	Discuss the proposed approach to the introduction of the Northern Leeds to Sheffield service, in order to provide an accurate summary to Rail North Committee.	14/11/24	Martin Tugwell, Chris Rowley, Richard Harper	Completed.
18	If additional written clarification of Network Rail's position required beyond what is provided in the minutes, to be agreed and provided.	14/11/24	Martin Tugwell, Chris Rowley, Richard Harper	Completed.
19	Provide a suggested location for another reception event.	14/11/24	Martin Tugwell	Closed.
20	Share the outputs of the power supply modelling previously undertaken to Lumo/Hull Trains and GBRF.	21/11/24	Simon Leyshon	Completed.
21	Develop a proposal for future Task Force meetings through 2025.	21/11/24	Richard Harper	Item 9.
22	Arrange a Task Force meeting date in mid-January.	21/11/24	Richard Harper	Completed.

[redacted]

Item 11: Any other business

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Appendix A

High Level Results - Operator within NR Route: Time-to-3 Modelled Punctuality

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[redacted]

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High Level Results - Operator within NR Route: Time-to-3 Modelled Punctuality

LNER in East Coast Route

- LDHS services are interacting with more services in the Option than the Base. As forecast and presented at the October 10th 2024 Task Force the inclusion of additional trains on top of the previous modelling, has caused further degradation.
- Kings Cross services extended to Bradford have had recovery removed from dwells at Stevenage, leading to a performance degradation into Peterborough in the Option. Recovery is also lost by reducing dwells from Grantham for these services, which was a source of recovery for Base services. As a result of these factors, Option performance degrades along the route. Robust dwells at Leeds in the Option allow for recovery on departure and performance is then stronger into Bradford.

Northern within East Coast Route

- Ashington <> Newcastle services perform very poorly on the East Coast Route due to being planned on a minimum margin at Benton East Jn having to wait for the return service to cross the single lead at Benton North Jn into the passing loop. Any delay to the Ashington service will result in the Newcastle service being held here and losing its path on the ECML. These services are also be held for late running Up LDHS.
- Improvements in the Option can be linked to York <-> Leeds (via Harrogate), and York <-> Blackpool North services, where the Harrogate Line for York <-> Leeds services benefit from performance allowance at Knaresborough and an increased margin at Hammerton between the services running in the other direction.

	Anglia					East Coast					East Midlands				
	Base		Option		T-3% Delta	Base		Option		T-3% Delta	Base		Option		T-3% Delta
	T-3%	Trains in scope	T-3%	Trains in scope		T-3%	Trains in scope	T-3%	Trains in scope		T-3%	Trains in scope	T-3%	Trains in scope	
Abellio Greater Anglia	94.4%	69	93.2%	70	-1.2%	98.8%	6	99.3%	6	0.5%					
CrossCountry	90.7%	15	86.6%	15	-4.1%	87.7%	32	86.4%	38	-1.3%	76.5%	13	77.4%	13	0.9%
East Midlands Railway	76.6%	10	84.3%	10	7.7%	90.6%	37	90.5%	37	-0.1%	84.6%	66	84.0%	68	-0.6%
First Hull Trains						92.7%	5	91.8%	6	-0.9%					
Govia Thameslink Railway	88.6%	73	80.6%	73	-8.0%	79.8%	90	79.5%	96	-0.3%					
Grand Central						94.9%	10	90.6%	10	-4.3%					
London North Eastern Railway						92.1%	75	89.2%	92	-2.9%	97.9%	4	96.3%	5	-1.6%
Lumo						95.2%	4	96.6%	5	1.4%					
Northern Trains Ltd						93.3%	188	89.9%	232	-3.4%	96.4%	24	96.1%	24	-0.3%
ScotRail															
TransPennine Trains						84.7%	60	81.9%	70	-2.8%					

	North & East					North West					Scotland				
	Base		Option		T-3% Delta	Base		Option		T-3% Delta	Base		Option		T-3% Delta
	T-3%	Trains in scope	T-3%	Trains in scope		T-3%	Trains in scope	T-3%	Trains in scope		T-3%	Trains in scope	T-3%	Trains in scope	
Abellio Greater Anglia															
CrossCountry	82.1%	18	78.1%	22	-4.0%	66.1%	23	69.9%	24	3.8%	94.5%	10	88.4%	10	-6.1%
East Midlands Railway	85.4%	55	84.1%	55	-1.3%	85.6%	15	89.2%	14	3.6%					
First Hull Trains	94.6%	6	89.6%	6	-5.0%										
Govia Thameslink Railway															
Grand Central	94.3%	10	92.9%	9	-1.4%										
London North Eastern Railway	95.2%	27	91.6%	25	-3.6%						94.5%	20	89.5%	22	-5.0%
Lumo											94.8%	5	74.1%	5	-20.7%
Northern Trains Ltd	91.7%	539	89.9%	597	-1.8%	89.9%	463	90.5%	464	0.6%					
ScotRail											92.6%	231	92.6%	242	0.0%
TransPennine Trains	79.6%	86	80.7%	98	1.1%	81.7%	81	84.5%	96	2.8%	76.6%	13	74.3%	12	-2.3%

Figures refer to passenger operators running as Train Class 1, 2 and 9, based on punctuality at Origin, Termination and Arrivals, within the ESG agreed time scope of 1400-2000

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Appendix B

Next Steps – building in performance throughout timetable production

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[redacted]

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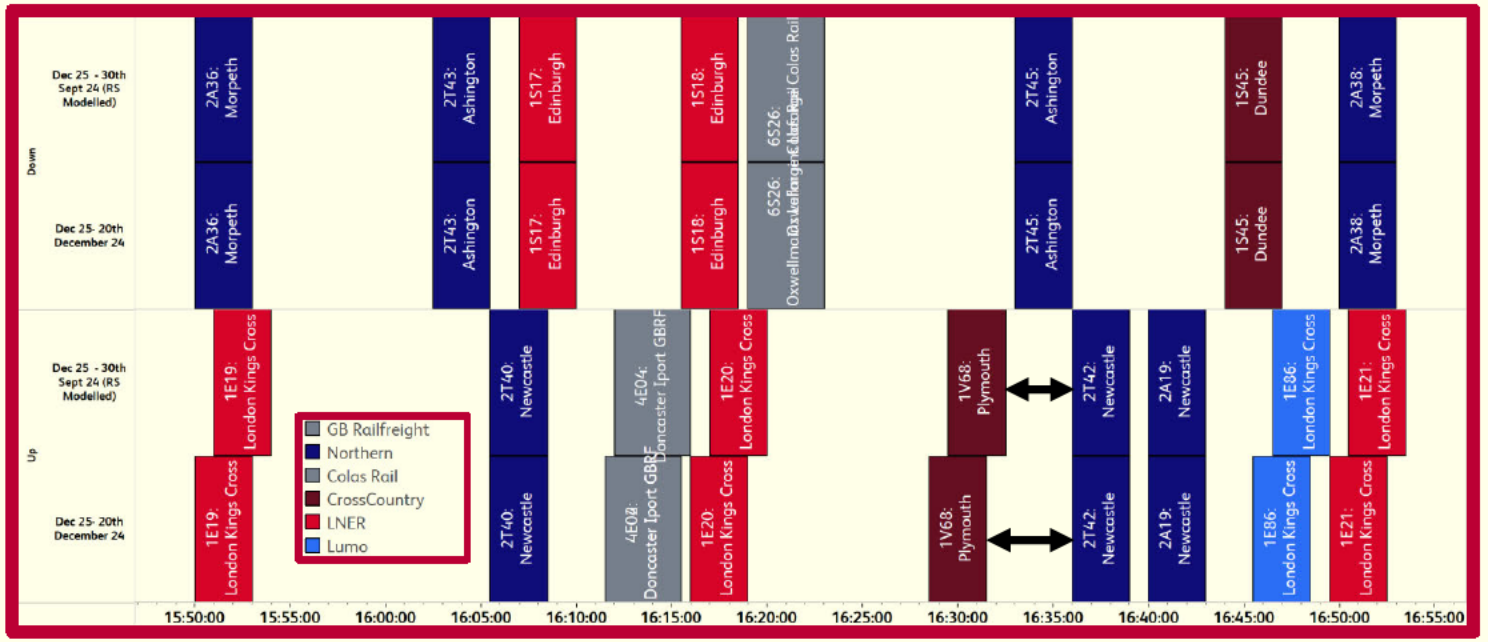
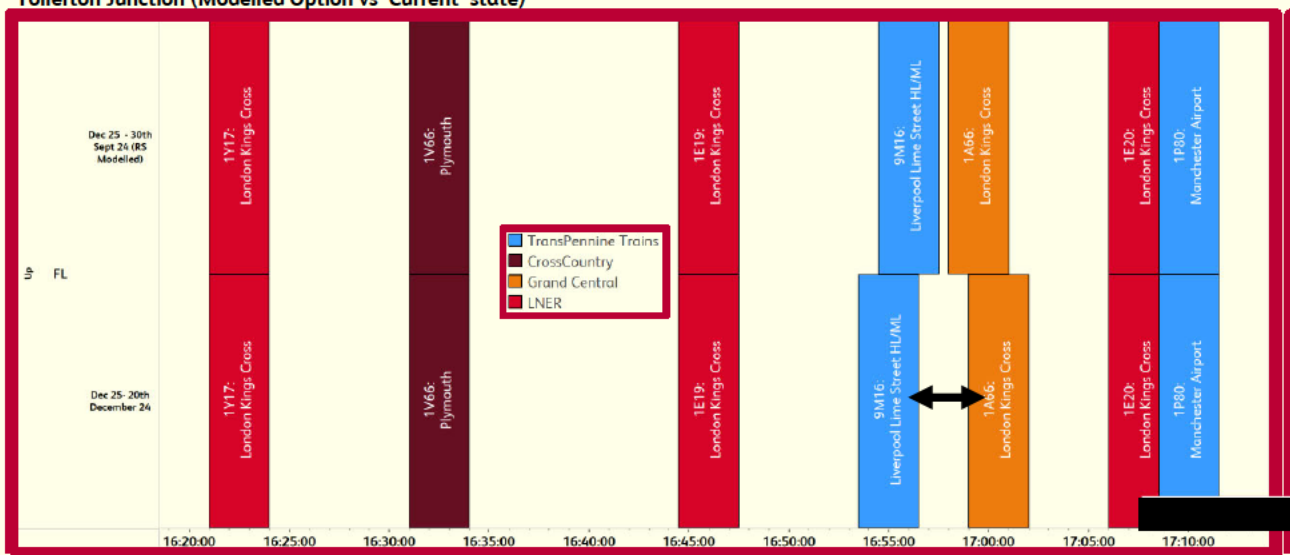
Next Steps – building in performance throughout timetable production

- Unless instructed by Task Force, no more modelling runs are planned, focus is now on utilising the insight from the latest round of modelling to improve the timetable and/or maintain performance improvements that have been structured. I.e.:
  - To incorporate the new 1Y20 (NCL > KGX) and 1M72 (NCL > BHM) – highlighted bottom right - the following 1V71 (EDI > Bristol) has had its dwell time at Newcastle extended from 4 to 7.5 minutes, which allows for T-3 recovery. This change is crucial in stabilising punctuality before entering the now more congested path south of Newcastle, ensuring this service arrives to York with T-3 improvements in comparison with the Base.
  - Changes made to the gap between the TransPennine Trains and Grand Central through Tollerton Junction (below) and the increased gap between the Up CrossCountry 1V's at Benton North Junction (right).
- Capacity Planning, the Region and Operators need to focus now on performance improvement ideas. Capacity Planning will be taking timetable cuts at strategic points to monitor developments i.e. PWTT, PDNS.

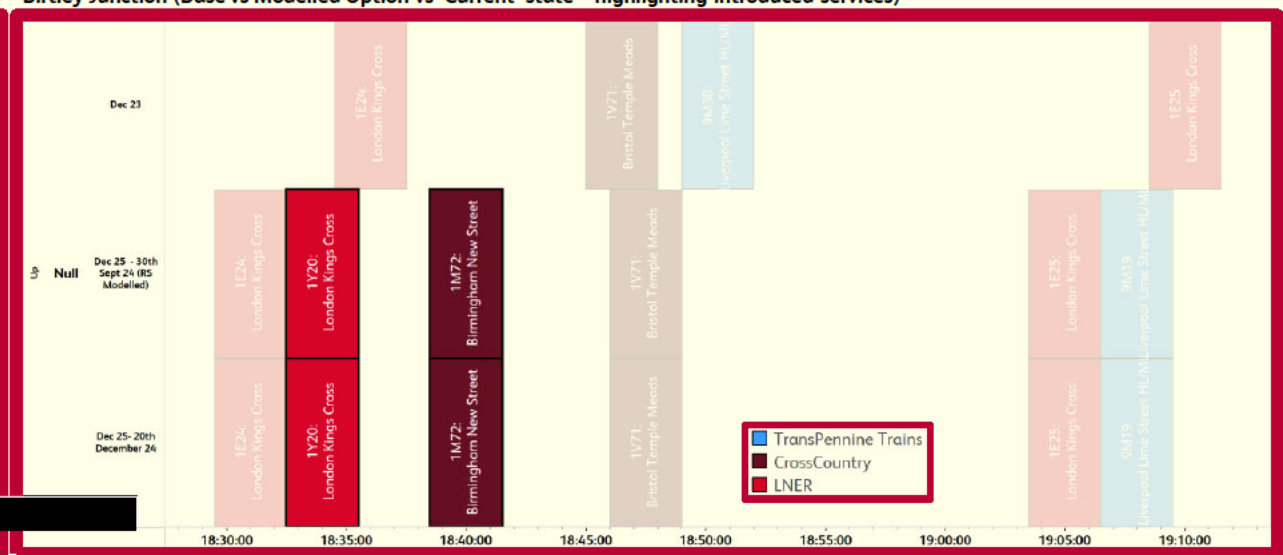
Benton North Junction (Modelled Option vs 'Current' state)



Tollerton Junction (Modelled Option vs 'Current' state)



Birtley Junction (Base vs Modelled Option vs 'Current' state – highlighting introduced services)



Annex L - Timetable Performance Analysis

1 Timetable Resilience

1.1 It is important to have a timetable that is resilient. A resilient timetable is one that, on a good day when no major unplanned disruption is taking place, can withstand typical variations in train presentation without significant spread of delay between services and across service groups. This is typically a function of either the content of the timetable plan itself or the content of the resource plan. Factors that underpin a resilient timetable plan include:

- Firebreaks in the timetable at key conflict points to prevent spread of delay service group to service group.
- Turnaround times that are robust to minor delays on inbound workings.
- Dwell times that reflect reality.
- Robust analysis before compliant but risky moves are introduced e.g., overtaking, splitting and joining, repeated re-occupations on minimum headways etc.

2 Timetable Resilience as shown through Time Signal At Red (TSAR)

2.1 Timetable resilience can be shown by the amount of time that signals are clear (or not). Using the Time Signal at Red (TSAR) metric this gives an indication of how long it takes for a signal to clear from a red aspect to a proceed aspect – this is important as Network Rail plan services to 'clear' aspects, so the higher the TSAR, the more risk to clear running.

2.2 Analysis (Image 1) based on observed data, considering line speed, shows that TSAR would be expected to be around 35-40 seconds at 16 trains per hour (tph) over the Welwyn Viaduct in the Down Direction. However, when you get to 19tph, TSAR increased to 60 - 65 seconds on average. Therefore, it is seen that 18tph is the maximum TSAR threshold over the viaduct, whilst protecting capacity.

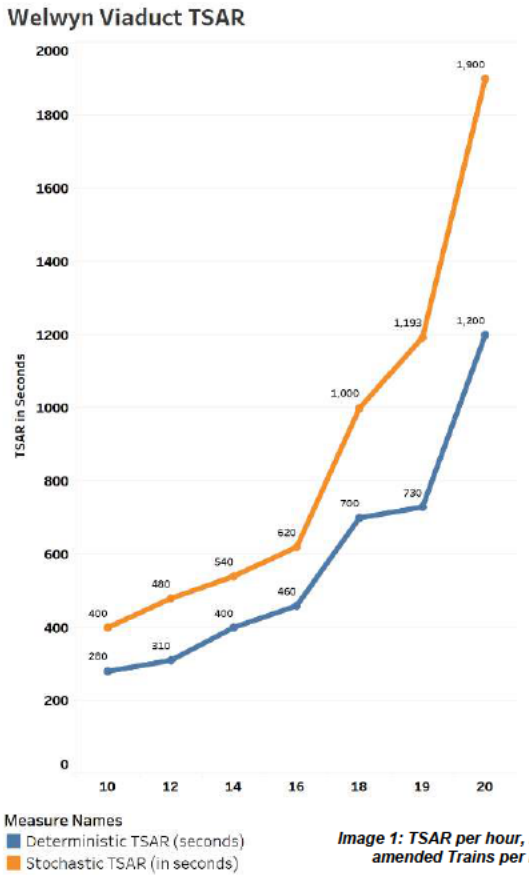


Image 1: TSAR per hour, based on amended Trains per Hour

2.3 This conclusion is reached because by 18tph the gap between the deterministic blue line (*which is data based on a perfect run, with no delay, apart from interactions between trains*) and the orange stochastic line starts to increase. The stochastic line is created by the importation of delays into the model area and is much more realistic of a typical day and forms the basis for the analysis.

2.4 Image 2 shows the modelled flighting over Digswell Junction within the ECML ESG TT which is now up to 18 tph. It is clear from Image 1, which shows the protecting signals at Digswell Junction, that the relationship between TSAR and Trains per Hour (tph) up to 16tph is consistent between a perfect and normal day, meaning the impact to TSAR is minimal. From 16tph the gap between a perfect day (blue line) and normal day (orange line) starts to widen as the quantity of trains occupying the network increases. Therefore, when 19tph is planned over the Welwyn Viaduct, it is highly likely trains will receive more restrictive aspects, due to the longer reset time of the protecting signals at Digswell.

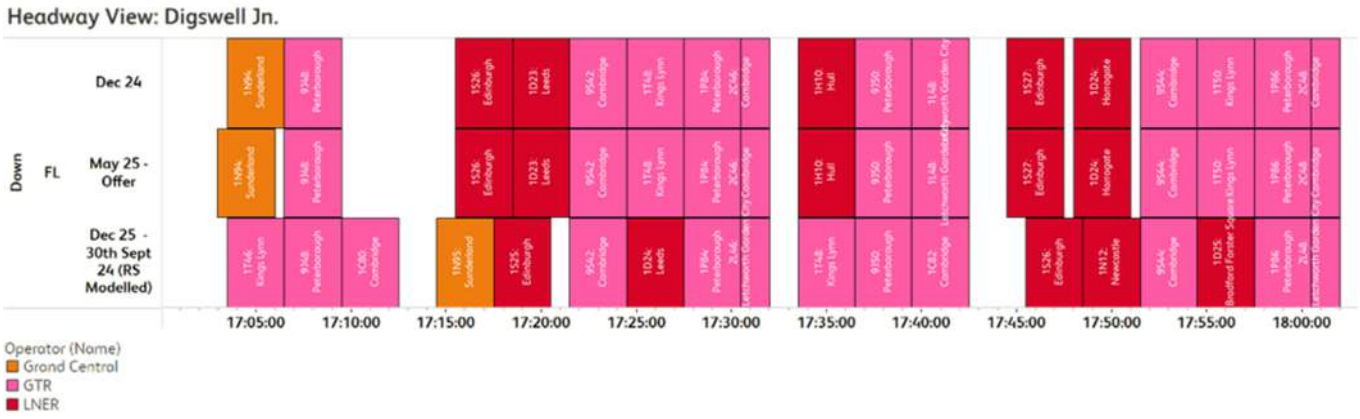


Image 2 – modelled flight in the performance modelling (last row)

2.5 The gap between orange and blue lines, in Image 1, indicates the network becomes more congested and the best and normal days start to suffer with signals now at red for longer, meaning less clear routes for traffic and delays as the timetable is based on clear running. Sectional Running Times (SRTs) are typically calculated assuming clear running. When services see an increased number of cautionary aspects/red signals this results in time loss through braking and acceleration and consequentially a performance risk to the timetable.

2.6 The lack of resilience in the ECML ESG TT is evidenced by the modelled results which shows from 15:00, one in every 5 trains through Hitchin in the Down Direction on a good day is at least 3 minutes late and will be running in the Headway slot behind (Image 3).

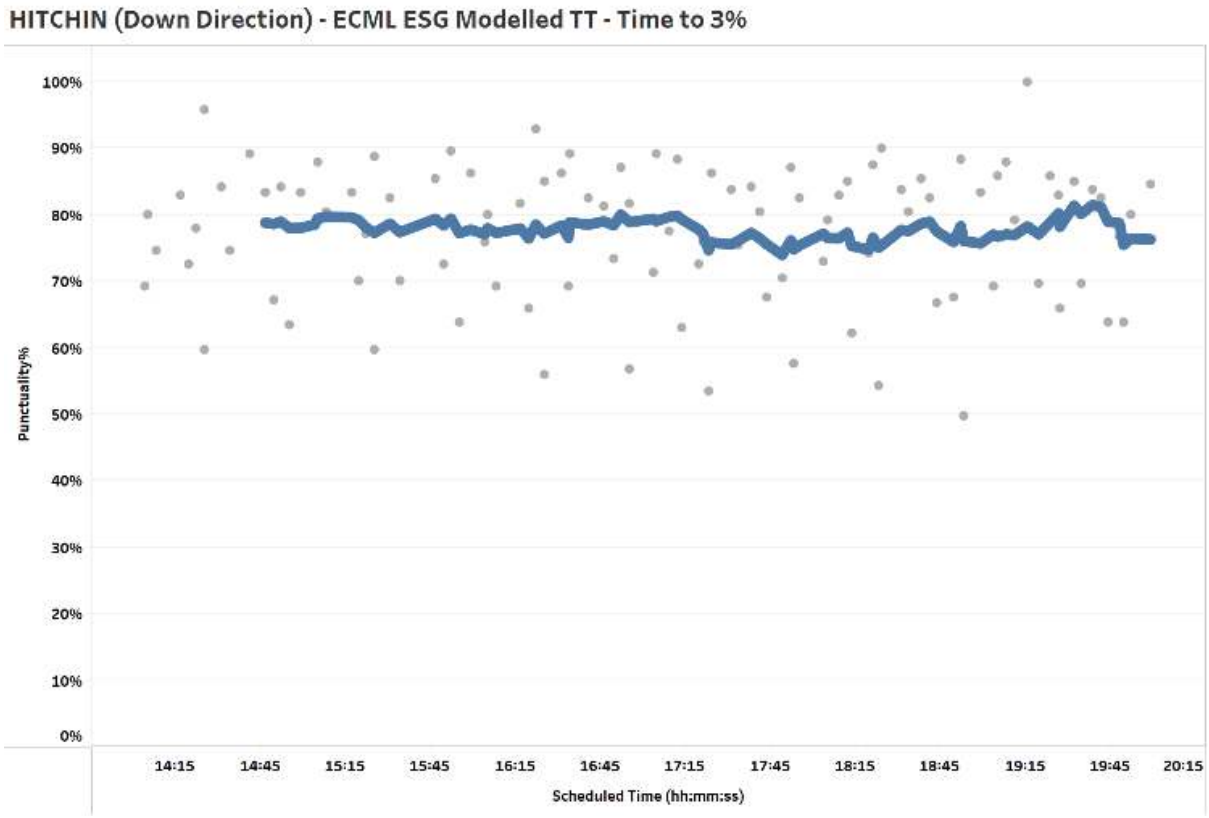


Image 3 – Modelled Punctuality at Hitchin

2.7 Together, the modelled results of the ECML ESG TT and the TSAR analysis show that the risk of going over and above the ECML ESG specification will provide a high performance risk which will reduce a punctual delivery of services along the East Coast Mainline (and beyond).

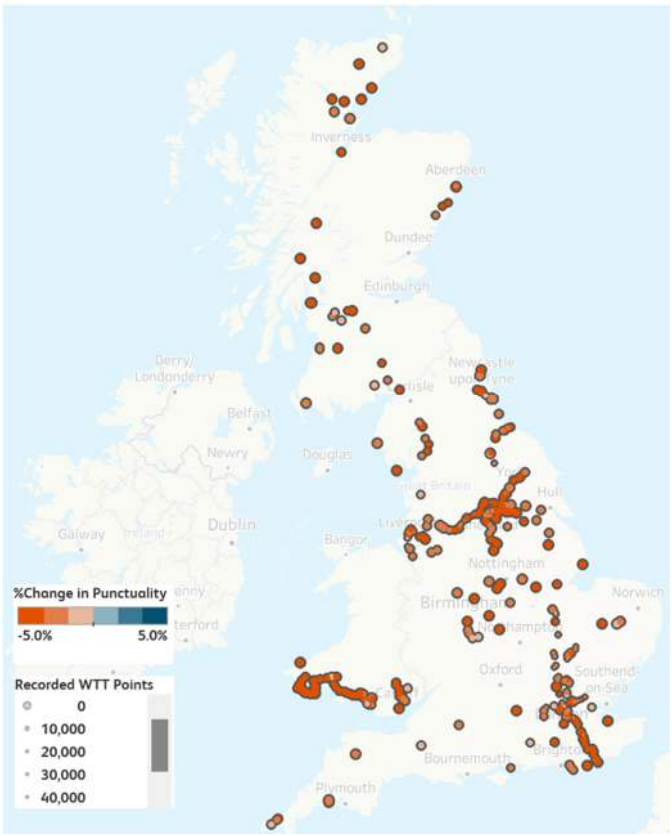
3 Performance – North of England focus

3.1 The December 2024 timetable was implemented successfully, with improved capacity and connectivity for passengers on some routes. Notable changes were made to Northern who have commenced services on the newly opened Northumberland Line between Newcastle and Ashington, whilst TransPennine Trains (TPT) reintroduced their full service across the Pennines. Whilst services have improved connectivity, capacity and journey times for passengers; performance outcomes for the December 2024 timetable have been poor, particularly across TPT.

3.2 TPT in December 2024 are currently performing between 2.5 and 3 percentage points lower at Time-to-3 compared to the June 2024 timetable. Currently, only 3 in every 5 timetabled points across the TPT operation is being achieved within the 3 minute threshold.

3.3 Coupled with performance decrements in the north of England across the Pennines (as shown by the below map), the level of congestion events between services during the December 2024 timetable at, and between Colton Junction / York has increased.

Locations showing Time-to-3 worsenment of -1.5% +



3.4 York station is a critical point on the network that contributes to the delivery of high-performance outcomes across both the East Coast Mainline and cross-Pennines / services towards Birmingham. Data shows that during the current December 2024 timetable long distance services are causing congestion and further delays to other services at York. This is particularly evident across the TPT 9M - Newcastle to Liverpool Lime Street and 1P - Redcar Central to Manchester Airport services who approach from the north. South-end presentation is key also – the LNER 1S - London Kings Cross to Edinburgh flow and TPT 1P - Manchester Victoria to Scarborough flow also contribute to congestion events within York station that causes delays to other services.

3.5 The final round of timetable performance modelling saw On Time punctuality drop at York by 4.4 percentage points. Any quantum of services above that included in the ECML ESG quantum would further increase the pressure that York station is under and will further undermine the successful delivery of performance outcomes in the future.

3.6 The December 2025 TT modelling showed that the change in Time-to-3 performance in the Down Direction for LNER services between London Kings Cross and Edinburgh was driven by worsening dwell performance in the Option due to a higher proportion of trains being planned on minimum dwells and therefore a reduction in resilience within the base plan. Planning services on TPR minimum dwells reduces the resilience to any external factors that may cause an extension in dwell time. At York, within the model scope, 78% of trains were planned on TPR minimum values in the Option, compared to 50% of stops in the Base. A similar story is true in the Up Direction at York where 100% of Edinburgh to London Kings Cross dwells are on minimum values – up from 50% in the Option.

3.7 Similar trends are noted elsewhere across the north in the December 2025 modelling, for example Grand Central Down Sunderland services see worsening performance in the Option due to worsening dwell performance. Dwells at York have been reduced to between 2-3 minutes from dwells at 5 and 7 minutes – which did allow for recovery of above threshold delay. Moving northwards to Thirsk and Northallerton, all dwells are now on TPR minimums and offer no resilience against factors that affect dwell length, nor offer any recovery of delay.

4 Summary

4.1 Factoring in the increasing level of TSAR above 16 tph over the Welwyn Viaduct and the modelled punctuality of the ECML ESG TT, any quantum of services above that included in the ECML ESG quantum would further increase the number of services planned on minimum headway, reducing the number of firebreaks in the timetable and the ability to withstand typical variations in train presentation without significant spread of delay between services and across service groups.

4.2 As it stands, there are several hours where 18tph or more are using the Welwyn Viaduct in the ECML ESG Timetable. These hours present a heightened performance risk in the base timetable as evidenced through TSAR analysis.

- In the Up Direction at Digswell Junction on a weekday, between 08:00 – 11:00 there are 18 tph in these three adjacent hours.

- In the Down Direction at Digswell Junction, there were:

    - 18tph between 11:00 – 11:59, 12:00 – 12:59 and 17:00 – 17:59;
    - 19tph between 16:00 – 16:59 (1 Grand Central, 10 GTR, 1 Hull, 7 LNER); and
    - 20tph between 19:00 – 19:59 (1 Freight, 1 Grand Central, 10 GTR, 1 Hull, 7 LNER).

4.3 Analysis at York – based on December 2024 outputs and the modelled version of December 2025, shows the resilience within the ECML ESG quantum has started to reach a breaking point and decrements to performance have been accepted by the ECML Task Force (as described in the main body of the letter).

4.4 The analysis conducted has shown the importance of ample recovery being available to absorb sub threshold delays before locations where there are multiple services tightly flighted. In the modelled ECML ESG Option there has been a reduction in recovery within dwell times and allowances for some flows which, in many cases, is the primary driver of additional sub-threshold delay, or reactionary above threshold delay. The Capacity Planning Performance & Simulation Team has recommended that where possible, dwell times at stations and performance allowances are used in key locations to protect performance, based on the modelling outputs and also the actual data that is now available post-December 2024 Go-Live to start informing any potential performance improvement activity.

System Operator

NetworkRail

ECML Dec 2025 Option Timetable: Timetable Performance Modelling Executive Summary

Timetable Performance & Simulation Team
Capacity Planning, System Operator

Monday, January 27th, 2025

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Simpler.
Better.
Greener.

History

- A large volume of analysis and modelling has been conducted across the ECML geography since 2020, which include:
  - 2020: Time Signal at Red analysis that stated to the ESG to restrict the Welwyn viaduct to 18 tph in the Down.
  - 2021: targeted modelling studies using Trenolab software.
  - 2022: ECML-wide simulation model using Trenissimo by Rail Aspects utilising a PRA produced sample timetable
  - 2023/24: ECML ESG Railsys Performance Modelling exercise conducted by Capacity Planning.

- Capacity Planning undertook the 2023/24 Performance Modelling work as scoped by the ESG. As with all modelling exercises it is crucial to understand there is a different level of maturity regarding timetable development between the December 2023 (Base) and the December 2024/2025 Option timetables as assessed. The Base was a D26 standard whilst the Options are at an earlier stage of development.

- The 2023/24 Modelling did not cover the Greater Manchester area or the additional extensions to Bradford Forster Square. There were also missing freight paths in the model because of decisions that were not yet made on how to resolve outstanding conflicts. It was assumed at the time that performance would worsen when these services were added to the Plan and Network Rail set out overlays to results presented at the October 10th 2024 Task Force in the meantime to ensure these risks were communicated clearly.

- To address concerns raised in the PMO deferral letter (April 2024) for a December 2024 introduction, the modelling scope for a December 2025 introduction was adapted and commenced on September 30th, 2024, to coincide with the completion of the timetable sprint work.

2024/25 Modelling

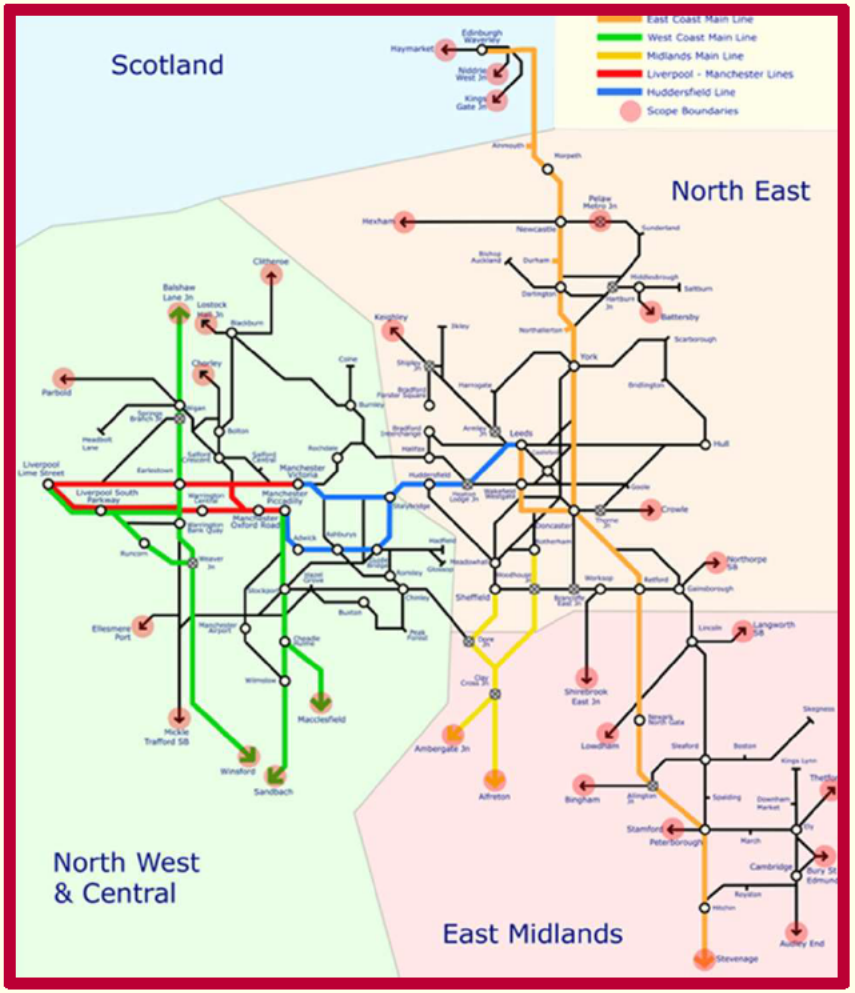
- The model parameters were kept the same as the original ESG remit to ensure some correlation can be made between the previous and current modelling runs (i.e. a Wednesday between 14:00 and 20:00), but due to concerns raised by in the PMO letter of April 2024, the model geography was adapted to ensure areas of concern were addressed.

- The main change was an extension of the geography westwards from the 2023/24 model entry points of Hebden Bridge and Marsden, to now include all of Manchester, Liverpool and parts of the West Coast Mainline.

- The revised geographical scope is shown.

- RailSys is modelling what performance will be like on a good day – effectively what the timetable can achieve when there is lateness in the system, calibrated against the Base, but the system does not require significant regulation to operate. **Emphasis should therefore be placed on delta change between the Base and the Option.**

- There is a point in every modelling study where a snapshot of the timetable needs to be taken, in order to start delivering simulation and onwards analysis. It is key to note that the development of the timetable continued after the final cut was provided and therefore what is ultimately offered will always be different to what has been modelled. Capacity Planning will be undertaking a sweep through our internally developed PIF Analyser which allows us to understand differences in timetable states.



High Level Results – Operator Modelled Punctuality delta changes

Executive Summary

In the previous round of modelling, Long-Distance High-Speed (LDHS) operators saw a worsening of performance on a good day. The ranges of impact set out at the October 2024 Task Force were 7-8% T-1 (Time-to-1%) for LDHS operators and 3-4.5% for T-3 (Time-to-3%) LDHS. These ranges on top of the base results were in recognition of at the time missing freight paths that were still to be resolved and concern around elements of the operation at Peterborough and Leeds including LNER extensions to Bradford that were not in the original ESG plan and models. The new results which include additional freight paths and these extensions confirm it was sensible to provide these overlays. The results are inside or close to the previously reported ranges with in general LDHS operators performing slightly worse than the range at T-1 and most within or slightly better at T-3. As expected TransPennine Trains projections improve following work to re-plan the TransPennine suggested by the PMO and requested by the Task Force.

Operator	Time to 1%			Time to 3%			Time to 10%		
	Base	Option	Delta	Base	Option	Delta	Base	Option	Delta
Abellio Greater Anglia	79.8%	80.3%	0.5%	94.5%	93.3%	-1.2%	99.3%	99.5%	0.2%
CrossCountry	58.4%	58.8%	0.4%	81.8%	81.2%	-0.6%	96.6%	96.3%	-0.3%
East Midlands Railway	56.6%	57.4%	0.8%	85.3%	85.5%	0.2%	98.2%	98.2%	0.0%
First Hull Trains	74.5%	63.7%	-10.8%	93.9%	90.4%	-3.5%	99.7%	97.8%	-1.9%
Govia Thameslink Railway	60.6%	56.6%	-4.0%	83.0%	79.9%	-3.1%	96.7%	96.6%	-0.1%
Grand Central	76.0%	67.1%	-8.9%	94.5%	92.1%	-2.4%	99.5%	97.7%	-1.8%
London North Eastern Railway	77.1%	68.4%	-8.7%	92.9%	89.7%	-3.2%	98.5%	97.6%	-0.9%
Lumo	84.5%	79.7%	-4.8%	95.1%	89.6%	-5.5%	98.5%	99.9%	1.4%
Northern Trains Ltd	65.0%	64.9%	-0.1%	90.9%	90.2%	-0.7%	99.1%	99.3%	0.2%
ScotRail	75.6%	73.9%	-1.7%	92.6%	92.6%	0.0%	99.5%	99.3%	-0.2%
TransPennine Trains	53.3%	56.1%	2.8%	81.0%	82.0%	1.0%	97.3%	97.2%	-0.1%

Figures refer to passenger operators running as Train Class 1, 2 and 9, based on punctuality at Origin, Termination and Arrivals, within [redacted] 0-2000
Figures relate to only those trains that are active in the model within the model scope, and do not refer to whole Operator figures.
Project Abraham (EMR) was not in the East Coast ESG base and is not in these modelling results.

Operator Summary

As has been the case since the new timetable was conceived and access rights awarded, implementation will see a notable deterioration in punctuality for customers, for example, **LDHS operators degrade by between 8.7 and 10.8 On Time percentage points (pp)**. Lumo is the exception dropping by -4.8pp. T-3 degradation for LDHS (-2.4 to -5.5 pp) is broadly within the forecasted overlay presented at October 2024's Task Force.

This model run includes LNERs preferred 81 min layovers at Leeds. The reinstating of TransPennine Trains paths as per Dec 24 (which are different paths to the previous modelling) sees them improve T-1 by +2.8pp overall and by +1pp at T-3.

A comparative model run was conducted with Leeds turnarounds being planned as 21 minutes. This 21 minute Option showed a slightly improved performance overall.

High Level Results – Network Rail Route Modelled [redacted] Punctuality delta changes

Executive Summary

In the previous round of modelling, Long-Distance High-Speed (LDHS) operators saw a worsening of performance on a good day. The ranges of impact set out at the October 2024 Task Force were 7-8% T-1 (Time-to-1%) for LDHS operators and 3-4.5% for T-3 (Time-to-3%) LDHS. These ranges on top of the base results were in recognition of at the time missing freight paths that were still to be resolved and concern around elements of the operation at Peterborough and Leeds including LNER extensions to Bradford that were not in the original ESG plan and models. The new results which include additional freight paths and these extensions confirm it was sensible to provide these overlays. The results are inside or close to the previously reported ranges with in general LDHS operators performing slightly worse than the range at T-1 and most within or slightly better at T-3. As expected TransPennine Trains projections improve following work to re-plan the TransPennine suggested by the PMO and requested by the Task Force.

Route	Time to 1%			Time to 3%			Time to 10%		
	Base	Option	Delta	Base	Option	Delta	Base	Option	Delta
Anglia	73.6%	69.0%	-4.6%	91.1%	87.0%	-4.1%	98.8%	98.4%	-0.4%
East Coast	64.9%	62.9%	-2.0%	87.5%	85.8%	-1.7%	97.5%	97.4%	-0.1%
East Midlands	59.8%	56.9%	-2.9%	85.6%	85.1%	-0.5%	98.9%	98.4%	-0.5%
North & East	62.2%	61.2%	-1.0%	90.5%	88.9%	-1.6%	98.8%	98.9%	0.1%
North West	63.8%	65.5%	1.7%	88.1%	88.9%	0.8%	98.6%	98.8%	0.2%
Scotland	73.7%	71.4%	-2.3%	91.5%	91.0%	-0.5%	99.2%	98.9%	-0.3%

Figures refer to passenger operators running as Train Class 1, 2 and 9, based on punctuality at Origin, Termination and Arrivals, within the ESG agreed time scope of 1400-2000
Figures relate to only those trains that are active in the model within the model scope, and do not refer to whole Operator figures.
Project Abraham (EMR) was not in the East Coast ESG base and is not in these modelling results.

[redacted]

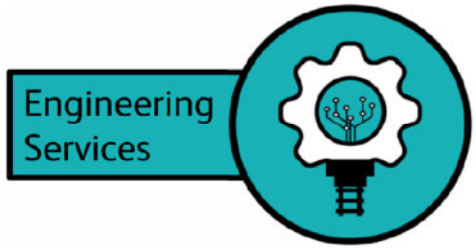
East Coast Route Executive Summary

In the current round of modelling, **East Coast Route T-1 performance degrades by -2pp, and -1.7pp at T-3**. The main driver for this degradation within East Coast Route is **a drop in LNER performance within the confines of East Coast Route by -2.9 T-3 pp along with fellow Long-Distance High-Speed operators** (*details in Appendix A*).

There are generally positive stories in the south of the Route with EMR (-0.1 T-3pp) and GTR (-0.3 T-3 pp) broadly neutral.

Whilst TransPennine Trains show an overall positive picture at an Operator level (+1pp at T-3), this is driven by positive changes across the North West. These changes are the transfer to electric traction which improves acceleration and deceleration; coupled with changes in the stopping pattern across the Dewsbury Corridor compared to the Base which for longer distance services improves the reliability and lateness transferring into East Coast Route. Within East Coast Route, TransPennine Trains lose -2.8 T-3 pp compared to the Base (see Appendix A).

DESIGN
DELIVERY



Eastern Region ESG Timetable & Train Operator Aspirations
Traction Power Summary Report

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Contents

1 Introduction

1.1 Purpose

The purpose of this document is to summarise the work that Engineering Services Design Delivery (ESDD) have undertaken to assess potential additional electric rolling stock as part of the Event Steering Group timetable being introduced in Eastern Region in December (Dec) 2025.

In total 10 timetable options were modelled as well as 3 composite scenarios where combinations of the timetable options were modelled together.

The entirety of the East Coast Mainline (ECML) from Kings Cross – Reston was assessed, the route to Leeds from Doncaster was excluded as there was no changes to train service proposed in this area. The electrical infrastructure modelled is the post Power Supply Upgrade (PSU) infrastructure.

1.2 Assumptions

The following assumptions have been made as part of this study:-

- Passenger loading is assumed to be AW1 for long distance high speed (LDHS) services and AW2/AW3 for all other services.
- In line with Siemens report 121948-SIE-0_0-00REP-HV-0541 A static load of 5.6 MVA has been applied for the Doncaster Depot.
- 24-hour weekday timetable has been modelled.
- Regenerative braking is included in all results.
- FSC uplifts at Kirkstall and Bingley to 14 MVA each are delivered in the Spring of 2025.

1.3 Exclusions

The following exclusions have been made:-

- No assessment of weekend train service.
- Does not include proposed rolling stock changes by Northern.
- Does not include final Transpennine route upgrade (TRU) train service.
- Does not include N-2 assessment of system resilience.

1.4 References

1. – East Coast Mainline 2025 ESG Timetable Traction Power Modelling - NE1409-ESDD-EPD-REP-000001 v1.0
2. – EC PSU- Traction Power Design History & Final System Modelling 1.0

2 ESG Timetable & Timetable Options Investigated

2.1 ESG 2024 Updates

The following assumptions have been made regarding the modelled timetable:

- 2022 ESG CIF timetable was used and modified to create the 2025 ESG Timetable
- The following changes are made to the 2022 ESG timetable:
    - New electrified line between Church Fenton and Colton Junction (Jcn)
    - Existing TransPennine Express trains running through Church Fenton have their electric running section extended from York to Church Fenton
    - Northern Newcastle to Morpeth trains disabled in baseline (No Longer Electric in baseline) (They are Class 323 in composite options 2 and 3)
    - Caledonian Sleeper 2 trains per day (tpd) added (running on ECML as diversionary route from WCML on electric mode)
    - The following Govia Thameslink Railway headcodes included: 1C81 1C83 1C87 1C91 1P81 1P83 1P85 1P87 1P89 1P91.
    - LNER Class 91 trains in 2022 ESG Modelling changed to Class 800 9-car.
- 4 diagrams of LNER train workings modelled as Class 91s,
- Rolling Stock information was taken from the Train Workings Diagrams; they remain unchanged from LNE May 2022 ESG modelling unless otherwise specified.
- 4 diagrams of train workings forming Kings Cross to Leeds/Newcastle services have been modelled as Class 91s.
- No electric freight has been included in the baseline modelling.
- All Class 91s were modelled as a Class 91 Loco + DVT + 7 carriages.
- Services between Chathill and Reston were modelled with a 100 % power available – on the assumption that current 80 % restriction is lifted.

2.2 Train Operator Aspirations Assessed

A total of ten options were assessed, taking into account the train operation aspirations Network Rail have been informed about, this includes a number of sub-options for Option 1 – Grand Central and Option 10 – GBRF.

Timetable Options	Descriptions
ESG 2025 (Baseline)	Baseline for all timetables, changes are made to ESG 2022 (existing model): TPE extended to Church Fenton, LNER rolling stock changes, added Caledonian Sleepers, added GTR AM peak. Northern Newcastle – Morpeth trains removed from baseline. See section in the main report on timetable assumptions for details. Options below ***add services*** to this Baseline timetable.
Option 1A **Grand Central**	Grand Central Existing Services to Electric Grand Central **6tpd** Sunderland – Kings Cross and **4tpd** Bradford Interchange – Kings Cross. Total **10tpd** Model as 5 car 802

Timetable Options	Descriptions
Option 1B **Grand Central**	Grand Central Additional Services, Option 1A plus York to Kings Cross **1tpd** additional service, total **11tpd** - Model as 10 car 802 for the York service
Option 1C **Grand Central**	Grand Central Additional Services, Option 1A, 1B plus **2tpd** additional Bradford Interchange services and a **1tpd** down only Kirkgate service, total **13.5tpd** Model as 5 car 802 for the additional services
Option 2 **Lumo**	**Lengthen** Lumo **existing 5tpd** (no additional services) between Edinburgh – Kings Cross. Model as a 10 car 803; replacing existing 5 car 803
Option 3 **TPE**	TransPennine Express **8tpd** between Newcastle – Edinburgh. – Currently diesel north of Chathill MPTSC, modelled as electric 5 car 802 for the whole route
Option 4 **Lumo**	Additional Lumo service **1tpd** between Newcastle – Kings Cross. Model as a 5 car class 803.
Option 5 **Lumo**	Additional Lumo service **1tpd** between Newcastle – Kings Cross. Model as a 10 car class 803. (As opposed to 5 car class 803 in option 4)
Option 6 **Hull Trains**	Hull Trains additional Sheffield service; **2tpd** between Kings Cross – Sheffield. Model as a 5 car class 802.
Option 7 **TPE**	TPE Saltburn service **1trains per hour (tph)**, electric between York – Northallerton. Model as a 5 car class 802.
Option 8 **Hull Trains**	Hull Trains rolling stock changes – currently **8tpd** Down and **7tpd** Up; mix of 5 car and 10 car class 802. Model as all 10 car class 802 trains.
Option 9 **Alliance Rail**	New Alliance Rail **5tpd** service; electric between Doncaster – Edinburgh. Based on provisional alliance rail paths. Model as all 9 car class 800 bi mode units.
Option 10 **GBRF**	GBRF Class 99 specified head codes **9tpd**: Trailing Loads based on CIF Indicative paths are summarised in section 2.3 below
Option 10A **GBRF**	New GBRF freight paths, replacing Tyne – Drax **2tpd** in option 10 with **4tpd**, total **11tpd**
Option 10B **GBRF**	New GBRF Skipton Line Tarmac Services; **5tpd** Skipton to Leeds as electric. Modelled in addition to Option 10A; total **16tpd** **Not included** in Composite Option 3

Table 1 – Individual Operator Changes

2.3 GBRF Class 99 Paths

A full list of freight services is included in section 7.2 Appendix A2 (List of Freight Train Details) of the main report. A summary of the proposed paths is listed below

1. Doncaster iPort – Mossend via ECML
2. Tilbury Docks – Wakefield
3. North Blyth – Fort William
4. London Gateway – Doncaster iPort/ Masborough
5. Whitemoor – Hoo Jcn
6. Tyne Docks – Drax – via Durham Coast – Option 10
7. Tyne Docks – Drax via ECML – Option 10A & 10B
8. Rylstone – Hull Dairycoates

2.4 LNER additional 0.5tph

LNER hold additional rights for a further 0.5tph between Kings Cross and Leeds, above those in the baseline ESG timetable. These services have been included in later composite scenarios.

Down Direction	
London Kings Cross	Leeds
08:00	10:02
10:00	11:57
12:00	14:02
14:00	16:02
16:00	18:02
18:00	20:00

Up Direction	
Leeds	London Kings Cross
08:30	10:28
10:30	12:28
12:30	14:29
14:30	16:28
16:30	18:28
18:30	20:28

Table 2 – Additional LNER Services

Note the 08:00, 16:00 & 18:00 were retimed to remove clashes with the baseline ESG timetable.

2.5 Composite Timetables

To test the impact of the proposed rolling stock changes beyond the individual changes three composite scenarios were created based on a gradual increase in changes, the order of these were agreed with the East Coast (EC) PSU sponsor.

A further three composite scenarios were modelled, numbers four, five and six based on existing access rights from operators these are described below.

Timetable	Description
Composite Option 1 (Comp 1)	**Grand Central** **6tpd** Sunderland – Kings Cross and **4tpd** Bradford Interchange – Kings Cross. – 5- car class 802 York to Kings Cross **1tpd** additional service – 10 Car Class 802 **2tpd** additional Bradford Interchange services and a **1tpd** down only Kirkgate service, Total - **13.5tpd** **Lumo** **existing 5tpd** between Edinburgh – Kings Cross. Lengthened modelled as a 10 car 803 **TPE** TransPennine Express **8tpd** between Newcastle – Edinburgh operating as electric for whole route– 5-car class 802 **GBRF** Summary of paths in section 2.3, Full list of Freight Train Details in main report GBRF freight paths modelled as Class 99 hauled, option 10b total 11tpd operating across Eastern region
Composite Option 2 (Comp 2)	Composite Scenario 1 & **TPE** Saltburn service **1tph**, electric between York – Northallerton modelled as a 5 car class 802. **Hull Trains** Currently **8tpd** Down and **7tpd** Up; Modelled all as 10 car class 802 trains.
Composite Option 3 (Comp 3)	Composite Scenario 2 & **Lumo** Additional service **1tpd** between Newcastle – Kings Cross. Model as a 10 car class 803. **Hull Trains** Additional Sheffield service; **2tpd** between Kings Cross – Sheffield. Model as a 5 car class 802. **Alliance Rail** **5tpd** service; electric between Doncaster – Edinburgh. Based on provisional alliance rail paths. Model as all 9 car class 800 bi mode units. **Northern** Newcastle – Morpeth in ESG 2022 timetable re-enabled, modelled as Class 323 3-Car. All options (apart from 10B) included in this composite option.
Composite 4	**Grand Central** Grand Central Existing Services to Electric Grand Central **6tpd** Sunderland – Kings Cross and **4tpd** Bradford Interchange – Kings Cross. Total **10tpd** **LNER** Additional 0.5tph to Leeds as summarised in section 2.4 above, modelled as 9-car Class 801 **GBRF** Summary of paths in section 2.3, Full list of Freight Train Details in main report GBRF freight paths modelled as Class 99 hauled, option 10 total 9tpd operating across Eastern region.

Timetable	Description
Composite 5	**TPE** TransPennine Express **8tpd** between Newcastle – Edinburgh operating as electric for whole route– 5-car class 802 **Lumo** Additional service **1tpd** between Newcastle – Kings Cross. Model as a 10 car class 803. **Hull Trains** Currently **8tpd** Down and **8tpd** Up; Modelled all as 10 car class 802 trains. Additional Up service Hull to Kings Cross compared to option 8. **GBRF** Summary of paths in section 2.3, Full list of Freight Train Details in main report GBRF freight paths modelled as Class 99 hauled, option 10 total 9tpd operating across Eastern region.
Composite 6	**TPE** TransPennine Express **8tpd** between Newcastle – Edinburgh operating as electric for whole route– 5-car class 802 **Lumo** Additional service **1tpd** between Newcastle – Kings Cross. Model as a 10 car class 803. **Hull Trains** Currently **8tpd** Down and **8tpd** Up; Modelled all as 10 car class 802 trains. Additional Up service Hull to Kings Cross compared to option 8. **Grand Central** Grand Central Existing Services to Electric Grand Central **6tpd** Sunderland – Kings Cross and **4tpd** Bradford Interchange – Kings Cross. Total **10tpd** **LNER** Additional 0.5tph to Leeds as summarised in section 2.4 above, modelled as 9-car Class 801 **GBRF** Summary of paths in section 2.3, Full list of Freight Train Details in main report GBRF freight paths modelled as Class 99 hauled, option 10 total 9tpd operating across Eastern region.
Composite 7	**Grand Central** Grand Central Existing Services to Electric Grand Central **6tpd** Sunderland – Kings Cross and **4tpd** Bradford Interchange – Kings Cross. Total **10tpd** **GBRF** Summary of paths in section 2.3, Full list of Freight Train Details in main report GBRF freight paths modelled as Class 99 hauled, option 10 total 9tpd operating across Eastern region.

Table 3 – Composite Timetable Scenarios

3 Traction Power Infrastructure & Assessment Criteria

3.1 Infrastructure

Full details of the traction power infrastructure can be found in the main report. Figure 1 below shows the normal feeding configuration on the East Coast Mainline upon completion of the Power Supply Upgrade projects, this includes the delivery of FSC enhancements at Coreys Mill. Little Barford and Bretton. Simulation of Normal feeding and N-1s scenarios has been undertaken and is based on the future post-PSU feeding scenarios.

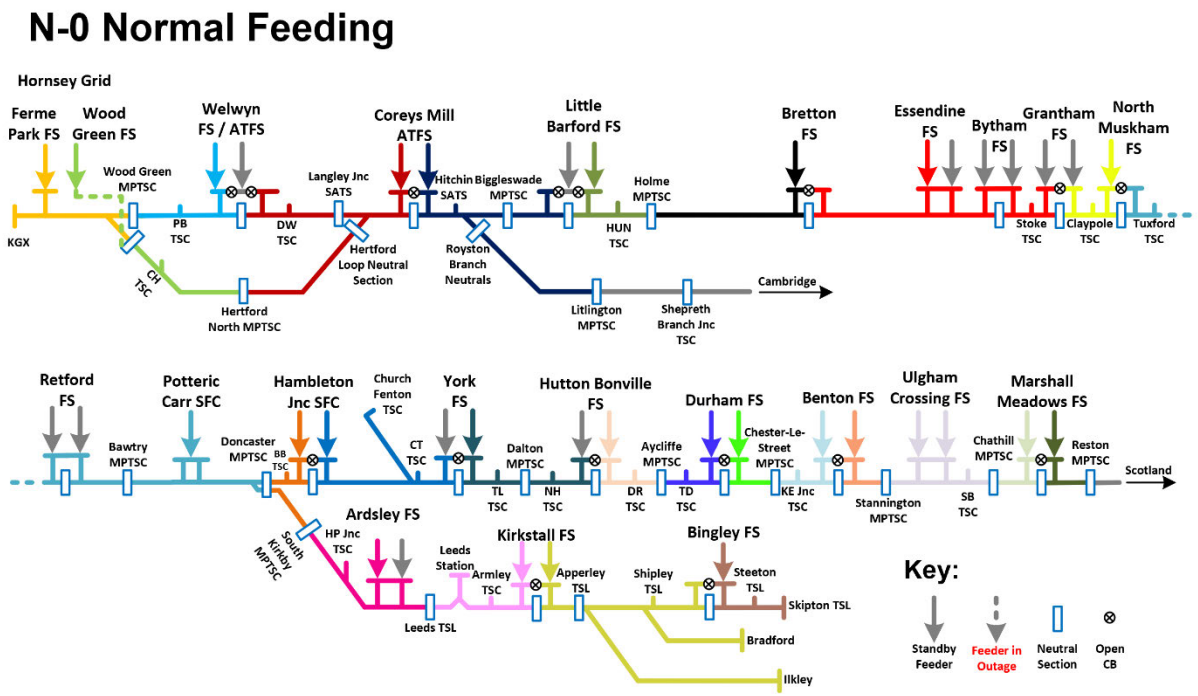


Figure 1- ECML Traction Power Infrastructure

3.2 Assessment Criteria

The traction power infrastructure must be able to meet the below acceptance criteria in both normal feeding (N-0) and when one key piece of equipment is out of service (N-1). The acceptance criteria are summarised in the bullet points below:-

- Maximum Power
  - 30-minute power below Firm service capacity (FSC) limits that have been agreed with the supplier.
  - 30-minute loading against equipment ratings.
  - P-Q Plots for Instantaneous and 30 Minute Loads at SFC sites
- Negative Phase Sequence (NPS).
  - ENA Engineering Recommendation P24 (2020) [1] for % NPS voltage unbalance limits.
- Voltage regulation – minimum busbar voltages.
  - based on BS EN 50163:2004+A1:2007 including special national conditions as the ECML is a non-NTSN line
- OLE currents against the thermal ratings.

4 Dec 2025 Baseline

At the time of implementation of the ESG timetable not all of the power supply enhancements to be delivered by EC PSU will be completed.

In Dec 2025 the commissioning of Little Barford and Coreys Mill Autotransformer Feeder Station (ATF) will not be complete, because of this delay, additional modelling has been done to look at what the power supply capacity will be in Dec 2025, without the ATF commissioned.

Site Information Summary									Maximum Average Apparent			Peak NPS (%)			Voltage (kV)	
Supply Point Name	*OSLO ID*	*Incoming Voltage (kV)*	*Capacity (MVA)*	*Fault Level (MVA)*	*Feeder Station Name*	*FSC (MVA)*	*Supply Type*	*Supply Voltage (kV)*	*01 Minute*	*10 Minutes*	*30 Minutes*	*01 Minute*	*10 Minutes*	*30 Minutes*	*Minimum*	*Maximum*
Wood Green	FPF1	132	26.5	1950	Hornsey Grid	20	Classic	25	26.56	14.39	12.48	1.36%	0.74%	0.64%	22.62	25.50
Welwyn	WEL1	132	26.5	1997	Welwyn FS	22	Classic	25	28.53	17.73	14.85	1.43%	0.89%	0.74%	21.80	25.32
Coreys Mill F1	CMF1	400	80	10000	Coreys Mill FS	40	Classic	26.25	49.48	29.15	26.28	0.49%	0.29%	0.26%	21.48	26.51
Little Barford F1	LBA1	132	18	2096	Little Barford FS	21	Classic	25	30.17	20.35	17.56	1.44%	0.97%	0.84%	20.99	25.32
Essendine	ESF1	400	40	10000	Essendine FS	40	Classic	25	25.90	16.49	12.90	0.26%	0.16%	0.13%	22.40	26.96

Table 4 – Summary of December 25 Timetable Results

The assessment only focussed on the south of Peterborough area as that is where EC PSU will be incomplete. Little Barford FS will be the highest loaded FS within 16 % of its FSC and the minimum voltage seen is 20.99 kV which is significantly above the minimum permitted and it can be concluded there is sufficient capacity to support the ESG timetable in December 2025 even without EC PSU being completed.

A high-level assessment of the incoming feeder protection has been undertaken for the ESG baseline in N-1 feeding, the assessment pessimistically assumed DT protection rather than IDMT at all sites except Coreys Mill (for which full settings were available), no exceedances of the settings were seen, Marshall Meadows, Ulgham Crossing, Welwyn and Ferme Park all saw peak currents within 20 % of the protection settings.

5 Outcome of Operator Aspirations

Each scenario has been run and it can be seen from the table below that the impact of each change and inspection of the different individual options shows that most individual changes cause less than 10% change in an individual supply points peak demand, the exception being Option 9 which introduces additional electric services between Newcastle & Edinburgh where the service is lowest.

It is noticeable that the composite scenarios cause increases to as much 20 & 50% at supplies north of Doncaster in composite 3.

			Ratio of max 30-min average power compared to baseline																			
Feeder Station Name	*FSC (MVA)*	*Base line (MVA)*	*Option 1A*	*Option 1B*	*Option 1C*	*Option 2*	*Option 3*	*Option 4*	*Option 5*	*Option 6*	*Option 7*	*Option 8*	*Option 9*	*Option 10*	*Option 10A*	*Option 10B*	*Comp 1*	*Comp 2*	*Comp 3*	*Comp 4*	*Comp 5*	*Comp 6*
Hornsey Grid	20	12.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Welwyn	21	14.86	1.04	1.04	1.04	1.02	1.00	1.02	1.06	1.00	1.00	1.01	1.00	1.00	1.00	1.00	1.06	1.06	1.08	1.04	1.03	1.06
Coreys Mill	40	31.18	1.01	1.01	1.01	1.00	1.00	1.03	1.05	1.00	1.00	1.01	1.00	1.00	1.00	1.00	1.01	1.01	1.07	1.06	1.03	1.06
Little Barford	21	12.31	1.06	1.06	1.06	1.00	1.00	1.04	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.08	1.21	1.15	1.04	1.15
Bretton	12	6.97	1.09	1.09	1.09	1.00	1.00	1.01	1.05	1.00	1.00	1.00	1.00	1.07	1.07	1.07	1.09	1.09	1.19	1.17	1.07	1.17
Essendine	40	12.89	1.02	1.02	1.11	1.02	1.00	1.04	1.10	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.11	1.11	1.18	1.11	1.10	1.14
North Muskham	14	8.29	1.05	1.05	1.05	1.00	1.00	1.00	1.04	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.05	1.15	1.20	1.15	1.07	1.23
Potteric Carr	27.1	21.01	1.06	1.06	1.06	1.00	1.00	1.00	1.05	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.06	1.12	1.13	1.13	1.03	1.18
Hambleton Jcn	42	12.4	1.00	1.00	1.00	1.14	1.00	1.00	1.00	1.00	1.01	1.03	1.09	1.03	1.09	1.09	1.14	1.21	1.33	1.06	1.03	1.10
York	18	10.87	1.04	1.04	1.04	1.08	1.00	1.00	1.00	1.00	1.00	1.00	1.18	1.20	1.09	1.09	1.28	1.28	1.30	1.19	1.20	1.19
Hutton Bonville	12	5.54	1.00	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.34	1.14	1.14	1.14	1.13	1.14	1.48	1.14	1.14	1.14
Durham	18	7.14	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.35	1.08	1.25	1.25	1.12	1.12	1.57	1.08	1.08	1.08
Benton	12	7.07	1.00	1.00	1.00	1.15	1.06	1.00	1.00	1.00	1.00	1.00	1.19	1.00	1.25	1.25	1.18	1.19	1.44	1.00	1.06	1.06
Ulgham Crossing	14	8.14	1.00	1.00	1.00	1.14	1.09	1.00	1.00	1.00	1.00	1.00	1.39	1.02	1.01	1.01	1.40	1.41	1.43	1.01	1.26	1.26
Marshall Meadows	10	6.43	1.00	1.00	1.00	1.18	1.09	1.00	1.00	1.00	1.00	1.00	1.43	1.10	1.10	1.10	1.27	1.27	1.50	1.10	1.14	1.14
Ardsley	6	5.22	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.17	1.00	1.17
Kirkstall	14	7.41	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.08	1.00	1.00	1.00	1.00	1.00	1.00
Bingley	14	3.44	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.39	1.00	1.00	1.00	1.00	1.00	1.00

Table 5 – Increase in load at individual feeder stations – Normal Feeding

			Ratio of max 30-min average power compared to baseline																			
Feeder Station Name	*FSC (MVA)*	*Base line (MVA)*	*Option 1A*	*Option 1B*	*Option 1C*	*Option 2*	*Option 3*	*Option 4*	*Option 5*	*Option 6*	*Option 7*	*Option 8*	*Option 9*	*Option 10*	*Option 10A*	*Option 10B*	*Comp 1*	*Comp 2*	*Comp 3*	*Comp 4*	*Comp 5*	*Comp 6*
Essendine	40	19.0	1.09	1.09	1.09	1.00	1.00	1.05	1.09	1.00	1.00	1.09	1.00	1.01	1.01	1.01	1.10	1.10	1.16	1.20	1.10	1.20
Grantham	9	8.18	1.05	1.05	1.05	1.00	1.00	1.00	1.03	1.00	1.00	1.07	1.00	1.00	1.00	1.00	1.05	1.15	1.20	1.22	1.07	1.23
Retford	8	6.53	1.15	1.15	1.15	1.03	1.00	1.03	1.04	1.00	1.00	1.11	1.00	1.00	1.00	1.00	1.15	1.24	1.26	1.30	1.11	1.30
Hambleton Jcn	42	28.31	1.04	1.04	1.04	1.12	1.00	1.00	1.00	1.00	1.01	1.14	1.04	1.00	1.00	1.00	1.13	1.26	1.26	1.13	1.14	1.23
Kirkstall	14	9.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25	1.00	1.00	1.00	1.00	1.00	1.00

Table 6 – Increase in load at individual feeder stations – First Outage Feeding

			Grand Central			Lumo	TPE	Lumo		Hull Trains	TPE	Hull Trains	Alliance Rail	GBRF		
Feeding Config	Site Name	Base-line	Option 1A	Option 1B	Option 1C	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9	Option 10	Option 10A	Option 10B
N-0 Intact Feeding	Potteric	Low Voltage (18.6 kV)*														
	H Bonville												Low V			
	Ulgham												Low V			
	M												Low V			
N-1 Alternate Feeding	Essendine															
	Grantham										FSC (Close to Limit)					
	Retford		FSC (Close to Limit)									FSC				FSC
		Peak NPS (when DNO system in outage)														
	Hambleton Jcn (During Potteric Carr N-1)	18.8	Low Voltage (15.1kV) ^													
												OLE				
	Ulgham												Low V			
	Marshall Meadows												Low V FSC			

Table 7 – Summary of Traction Power Issues Identified

Note Bytham feeder station is no longer used in any feeding arrangement and North Muskham feeder station is unused in N-1.

Feeding Config	Site	Baseline	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Comp 7
N-0	Potteric Carr							Cont load >90 %	
		Low Voltage (17.5 kV)							
	H Bonville				Low V				
	M Meadows		Low Voltage 16.7 kV						
	Ardsley					FSC Exceeded		FSC Exceeded	
N-1	Essendine				Low V				
	Grantham	FSC Close to limit		FSC Exceeded			FSC Close to limit	FSC Exceeded	
	Retford		FSC Close to limit	FSC Exceeded			FSC Close to limit	FSC Exceeded	FSC Close to limit
		Peak NPS when DNO in outage							
	Ardsley					FSC Exceeded		FSC Exceeded	
	Hambleton Jcn			OLE (close to limit)			OLE (close to limit)		
			Low V 15.1 kV			Low V 16.5 kV	Low V 17.6 kV	Low V 16.5 kV	
	Ulgham Crossing								
	Marshall Meadows		Low V						
					FSC				

Table 8 – Summary of Traction Power Issues in Composite scenarios

6 Conclusion

The conclusions presented below are for the baseline ESG timetable and the train operator aspirations, using an electrical infrastructure that contains all the currently remitted enhancements for East Coast Power Supply Upgrade 1 & 2.

6.1 Baseline

The baseline ESG timetable has been modelled twice as part of this modelling [1] & for EC PSU [2] this modelling identifies known weaknesses in the system between Peterborough and Doncaster, primarily low but non-compliant voltages when Hambleton feeds to Retford, Grantham being close to its contractual capacity and potential issues with the Negative Phase Sequence limits at Retford.

The NPS issues at Retford only occur in the unlikely event that Potteric Carr and the Distribution Network Operator (DNO) network are in outage simultaneously.

6.2 Individual Changes

Grand Central

Conversion of Grand Central services from diesel to bi-mode cause between 2 & 10 % increase on feeder station loads between Kings Cross & York.

In addition to the issues noted in the baseline the load at Retford is within 10 % of the Firm Service Capacity (FSC), this applies to all options of Grand Central services.

Lumo

Lengthening of Lumo services to 10 car in Option 2 causes an uplift of between 2 & 17 % between York and Reston.

The addition of one addition train per day between Newcastle and Kings Cross has little impact north of York and south of York causes an uplift in load of between 1&10 %.

Hull Trains

Due to the timing and length of the proposed Kings Cross – Sheffield there is no uplift in peak demand at supply points identified.

Lengthening of existing Kings Cross – Hull services causes between 1 & 11 % uplift in peak demand at supply points between Kings Cross & Hambleton.

There is a risk of potential issues with the OLE thermal rating between Hambleton & Doncaster in N-1 feeding if Hitachi draws its expected capacity of 5.6 MVA at the depot in Doncaster if the Hull Trains services are also lengthened, additionally Retford moves within 10 % of its FSC limit.

TPE

Enabling electric operation of TPE services between Newcastle & Edinburgh leads to an uplift of between 5&12 % at supply points.

Introduction of electric rolling stock on the Saltburn – Manchester route leads to an 8 % uplift on Hambleton F2, this will increase as TRU is delivered and Hambleton feeds further.

Alliance Rail

Introduction of an additional 9 car service between York and Edinburgh leads to increases, the load on supplies by as much as 40 % and leads to low voltages between Newcastle & Reston.

GBRF

The GBRF paths that run on the Southern end of the ECML (south of Doncaster) have minimal impact on load as only 2 paths operate in the daytime.

North of Doncaster the proposed paths with uplifts of between 10 & 40 %, this is particularly noticeable between Newcastle & York where the Tyne Yards to Drax paths operate.

6.3 Composite Scenarios

It should be noted that whilst most individual services changes cause little impact the cumulative effect of them reduces the headroom available at various supply points as seen in the composite scenarios below.

Scenario 1

This is composed of the Grand Centrals fleet switching to bi-mode, lengthening the existing Lumo services to 10 car, operation of the TPE Newcastle – Edinburgh services as electric and introduction of the Class 99 paths by GBRF.

Low voltages are seen in scenario 1 in the Marshall Meadows area, these voltages while compliant with voltage standards will cause performance issues particularly with electrically hauled freight.

In N-1 feeding there are potential overloads of the overhead line between Hambleton and Doncaster and the FSC at Grantham and Retford is within 10 % of agreed limits.

Scenario 2

This scenario included all the changes in scenario one as well as the Saltburn – Manchester services becoming electric and Hull Trains lengthening their services to 10 cars.

In scenario 2 the above issues become more severe with exceedances of the FSC at Grantham and Retford in N-1 feeding.

This is particularly problematic as Network Rail have been unable to secure FSC enhancements at those sites because of weaknesses in the DNO system in this area.

Implementation of changes approaching scenario 3 will likely drive the requirement for interventions between Peterborough & Doncaster.

Scenario 3

This scenario was composed of scenario two and all remaining changes, Lumo operating an additional Newcastle – Kings Cross service, introduction a Kings Cross – Sheffield service, the Alliance rail services and reintroduction of the Morpeth – Newcastle local services as electric.

In scenario 3 the above issues are still relevant and in some cases worsened, low voltages are now being seen at Essendine, and Hutton Bonville as well at Marshall Meadows and between Retford & Doncaster, this indicative of a system with little to no headroom and will not be able to perform during perturbation where rolling stock is out of position.

Implementation of changes approaching scenario 3 will likely drive the requirement for interventions between Peterborough & Doncaster as well as at Marshall Meadows.

Scenario 4

Scenario 4 involved the existing Grand Central paths to Bradford & Sunderland becoming electric, the additional 0.5 tph LNER services to Leeds and the GBRF freight flows becoming electrically hauled.

In this scenario both Ardsley (Leeds Branch) exceeds its FSC in both normal and N-1 feeding, this is resolvable with an uplift in FSC but will need to be developed with Northern Power Grid.

In N-1 Retford and Grantham continue to experience FSC exceedances and this scenario will require interventions between Peterborough and Doncaster.

Scenario 5

In scenario 5 the loads are generally lower than in scenario 4, however Retford and Grantham are still close to their FSCs.

Scenario 6

All the failures identified in Scenario 4 are still present, additionally Potteric Carr moves within 10 % of its rating leaving no capacity for timetable perturbation & Ardsley again exceeds its FSC in Normal and N-1 feeding.

Scenario 7

Scenario 7 is the same as scenario 4 but with the LNER 0.5tph removed. Most of the exceedances seen in 4 are resolved with the exception of Grantham's FSC when used in N-1, however this is only exceeded by a small amount and is within the realms of model accuracy.

6.4 Traction Power Infrastructure

Firm Service Capacity & Power Demand

There are two key criteria when assessing power demand: -

1. That a supply point remains below its Firm Service Capacity and ideally below 80 % of its FSC to allow for headroom in the system for perturbation events.
2. That no equipment ratings are exceeded.

Grantham and Retford supplies are only required as backup supplies when the normal feeding arrangement is not available.

When Grantham is feeding in N-1 then it is within 10 % of its FSC in the baseline and all individual options; and in composite 2 & 3 Grantham exceeds its FSC.

Retford has been identified as being close to its FSC in a number timetable options the Grand Central options, Hull trains lengthening, some GBRF options and in composites 2 & 3 its FSC is exceeded.

As noted above this is problematic as Network Rail have been unable to secure uplifts in the FSC at Grantham or Retford without the need for significant network reinforcement from the electricity supplier.

Negative Phase Sequence

Negative phase sequence (NPS) is the amount by which the single-phase railway load unbalances the three-phase Transmission/Distribution Network and is directly linked to the strength of the Distribution Network.

At Retford the electricity network is particularly constrained, and Network Rail have been provided with two fault levels for the distribution network in normal and N-1 feeding which broadly equate to an available capacity 10.7 MVA (greater than the FSC) in normal feeding and 6.7 MVA (less than the FSC) in N-1.

This leads to a situation where if Network Rail is using Retford to cover an outage and the distribution network is in outage then there are non-compliances in all scenarios. If the network is in normal feeding, then there are no NPS issues until composite scenario 3.

Voltage Regulation

The ECML is a non-NTSN (National Technical Specification Notice) route which means that special national conditions of BS EN 50163 are applicable this allows for system voltages down to 14 kV and as low as 12.5 kV for two minutes, however below 20 kV regulation of the available power to trains is undertaken – different rolling stock restrict power in different ways – meaning that any significant periods of time spent operating at low voltages will impact train performance.

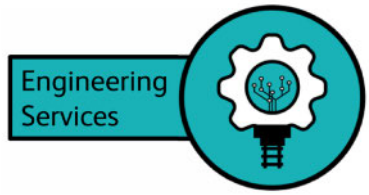
Option 9, the introduction of Alliance rail trains, and composite scenario 3 sees low voltages identified at a significant number of feeder stations along the route that experience low but not non-compliance issues that indicates there is likely to be train performance issues in these scenarios.

OLE Current Rating

Initial modelling noted that there were high loads in the contact system between Hambleton Jcn FS and Doncaster, during an N-1 of Potteric Carr where Hambleton Jcn feeds to Retford FS.

This is due to the 5.6 MVA that Network Rail is contractually obliged to make available to Hitachi at their depot in Doncaster, additional modelling has been undertaken that shows the conductor loading under a 1 MVA depot loading (extracted from 2 weeks of Replay Recordings) that the loading on the conductors is reduced to about 90 % .

DESIGN
DELIVERY



Design Delivery

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