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6 November 2015

Dear John,

Access to the ECML – further clarification and feedback

Purpose of this letter

1. This letter seeks to clarify a number of points in my letter of 2 October 2015 in response to feedback. Questions have been raised as follows:
 - by applicants in response to this letter,
 - in the meeting chaired by ORR with applicants and Network Rail on 14 October 2015,
 - the meeting chaired by ORR with interested Freight operators on 16 October 2015,
 - the meeting held between ORR and Network Rail on 20 October 2015, and
 - the meeting chaired by Network Rail with applicants, interested parties, ORR and DfT on 4 November 2015.
2. This letter is also being copied to all applicants and freight operators and will be published by ORR on its website.
3. This letter follows on from our first capacity report, EC2020 Capacity Options, of 11 September 2014, our subsequent capacity report of 17 December 2014 and our letters of 15 May 2015 and 2 October 2015. The assumptions that have been used

throughout this work are those agreed through consultation with industry parties¹ at the start of this process. To confirm, our view about capacity for LDHS on the ECML remains the same as that expressed in previous correspondence.

4. This letter should be read in conjunction with all previous reports and letters.

Clarification of my letter of 2 October 2015

Further clarification has been requested regarding the meaning of the statement in paragraph 1 on Page 3.

5. This paragraph states “It should also be noted that during peak hours there are currently more paths required by franchised operators’ Service Level Commitments than are available”. This statement refers to analysis contained within a report that has been completed in response to a Change Order from the DfT, received 14 July 2014, as part of the timetable development process for the 2018 timetable (Development Timetable 2014 or DTT2014).
6. The analysis was required to
“prepare an initial timetable for peak hour (24tph) [through the Thameslink core] and standard off peak hour... [taking] into account GTR’s plans for services elsewhere on the network, Kent service and high speed services on East Coast and Midland Main line”.
7. It concluded that the combined level of passenger services tested exceeds the available capacity in the peak timetable. The report recommends that the level of service over the Welwyn viaduct specified in franchise service specifications is examined and reduced to a level that can be accommodated, specifically during one morning peak hour between 0800 and 0900.
8. The analysis included in DTT2014 assumed 13 GTR and 7 LDHS services between 0800 and 0900 whereas the assumptions agreed for the East Coast 2020 analysis were 10 GTR and 8 LDHS services in the same hour.
9. The report was shared with industry parties between 3 July 2015 and 21 October 2015 and the issues raised in this report are being worked through with DfT and industry colleagues in support of the development of the December 2018 timetable through the Event Steering Group. The Event Steering Group is aiming to propose solutions to the issues highlighted in DTT2014 by the end of December 2015 and to

¹ See Appendix A of EC2020 Capacity Options report 110914 for more details

have an indicative peak and off-peak timetable by April 2016, but these timescales are recognised as being ambitious.

Further clarification of Network Rail’s level of confidence of being able to path 8 LDHS services per hour has been requested.

10. The following statement is included in paragraph 2 on page 3 “Since the capacity gain given by these enhancements, and their journey time and performance implications, is to some degree dependent on the pattern and routing of services, it is not possible at this time to definitively confirm whether it is possible to run 8 LDHS services once the Connectivity outputs have been delivered.” This has led to applicants and ORR raising concerns that Network Rail’s position in relation to capacity being available to path 8 LDHS service per hour has changed between our letter of 15 May 2015 and our letter of 2 October 2015.

11. To confirm, nothing has changed and our view remains the same as that expressed in previous correspondence – that our development of a standard hour pattern has demonstrated that it will be possible to path 8 LDHS services an hour once the Connectivity outputs have been delivered. However, at this stage we are not able to definitively confirm whether the final timetable structure will be able to accommodate all specifically desired features (e.g. timetable pattern, journey time, performance outputs). This is consistent with the conclusion of our Capacity Report from 17/12/2014 which states:

12. *“The central finding is that, in accordance with the previous report, any of these service scenarios could operate alongside the potential TSGN service structure (including 8 LDHS and 10 TSGN in the evening peak), but there are a number of choices to be made regarding performance, connectivity, service structure and impact on other services.”*

An expansion of the table showing the capacity requirement for enhancement schemes has been requested

13. The table that we included on page 4 of our letter of 2 October 2015 is shown again below including some further schemes. Schemes north of Doncaster are shown as ‘N/A’ in the first two columns as the capacity choices are different on this part of the infrastructure. As per our EC2020 Capacity Options report of 11/09/2014 there are choices over the level of service that can operate here – the scenarios tested were:

- 3 LDHS, 3 Inter regional, 2 Class 4 or 6 Freight or
- 4 LDHS, 3 Inter regional, 1 Class 4 or 6 Freight

Enhancement	Required to unlock capacity for 7 tph?	Required to unlock capacity for 8 tph?	Required to limit journey time impact?	Required to operate a robust timetable?	Adds timetabling flexibility?
London King's Cross remodelling	No	Yes ²	No	Yes	Yes
Huntingdon-Woodwalton four-tracking	Yes	Yes	Yes	Yes	Yes
Fletton-Peterborough speed improvements	No	No	Yes	Yes	Yes
Werrington grade separation	Yes	Yes	No	Yes	Yes
Doncaster bay platform and signalling	No	No	No	Yes	Yes
York North Throat	N/A	N/A	No	Yes	Yes
Northallerton to Newcastle Freight Loops	N/A ³	N/A	Yes	Yes	Yes
Power Supply Upgrade Works	Yes ⁴	Yes	N/A	N/A	N/A

It has been highlighted that the table on pages 6 – 8 did not include ETCS, Kings Cross re-modelling, or Trans-pennine Electrification.

14. The table, shown in Appendix A, has been updated to include King's Cross re-modeling and ETCS. It has also removed Stevenage bay platform and split out Gordon Hill turnback.

² Our previous report has stated that the approach to Kings Cross is being redesigned, and this is needed to enable the effective use of the higher numbered platforms following the introduction of the Thameslink timetable changes in December 2018. It may be possible to accommodate 8 LDHS trains in some timetable scenarios without this enhancement.

³ Although technically the capacity does exist to run an additional train without the enhancement this would require up to 20 minutes of pathing time to be added to LDHS services and so is not considered a viable option

⁴ Power supply upgrade works are required to run any additional electric services

15. Due to the very recent un-pausing of the Trans-pennine Electrification we are unable to provide the same level of detail for this scheme at this stage and so it has not been included within the table. We are now working to establish a firm detailed design for this scheme which increases benefits to passengers compared to the previous paused scheme and this will be concluded by the end of 2017.
16. The dates shown for Four Tracking Huntingdon to Woodwalton and GN / GE Southern Access (Werrington Grade Separation) are outside of CP5. Our assumption of CP5 into CP6 for delivery for Werrington Grade Separation and Huntingdon to Woodwalton Four Tracking is based on scheme complexity and the need for planning consents (TWAo). Whilst we are targeting scheme completion for December 2020 the programme will be confirmed on completion for GRIP 3 AIP following determination of the TWAo. The table we have shared reflects the current position.
17. In developing this response Network Rail has assumed the infrastructure enhancements detailed within the Enhancement Delivery Plan are completed. It is important to note that this programme is currently subject to the review by Sir Peter Hendy as announced by the Secretary of State, which is due to report later in the year. As part of this process industry partners were involved in our review of deliverability and prioritisation of schemes. For schemes that are not due to be completed in CP5 we would currently expect to include the completion of these in the CP6 IIP and therefore have an expectation that these will be funded, although this cannot yet be confirmed.

It has been commented that any capacity gains anticipated through the introduction of ETCS have not been included in Network Rail's analysis.

18. At the stakeholder meeting on 14 October we explained that the revised headways from ETCS are not yet available. The capacity analysis we have undertaken has been based on the capability of the existing signalling systems.

A concern was raised that the analysis on page 11 in relation to power supply works appears to identify a new issue that had not been previously discussed.

19. There is a requirement to upgrade existing ECML electrification in order to support increased electric train operation, as identified in the CP5 Strategic Business Plan, as it is operating at capacity in some areas. In line with asset policy a high level review of future requirements to meet a step change in demand was undertaken which indicated that Auto Transformer conversion of the ECML supported by a

number of new grid supply points would be required to enable additional electric train services to operate. This was split into two power supply projects in the Enhancements Delivery Plan, supported by three other enhancements which provided new grid supply points supporting the ECML.

20. **IEP – East Coast Power Supply Upgrade** provides increased capability in the area between Wood Green and Bawtry (approximately Kings Cross – Doncaster). In early CP5 more detailed engineering work identified additional engineering solutions to improve power supply resilience, cost and deliverability. The resulting works are now in delivery with increased capacity on ECML by December 2017.
21. **ECML Routes Traction Power Supply Upgrade** provides increased capability on the remainder of the ECML, with £50m development and early work programmed to begin in CP5 and the remaining upgrade in CP6. In common with the IEP – East Coast Power Supply Upgrade project, more detailed engineering development is now being undertaken to identify additional solutions to enhance affordability and deliverability. This work has been expanded in order to support the capacity allocation process by providing indicative interim results for LDHS services on ECML; GRIP 2 completion is expected in December 2015.
22. **Hornsey grid supply point upgrade** enables increased capacity between Kings Cross and Wood Green and is now complete.
23. **East Ardsley grid supply point upgrade** increase enables increased capacity between South Kirkby and Leeds on the Leeds branch, and is now complete.
24. **Transpennine electrification** was planned to provide a new grid supply point near to the Leeds-Hull/ECML junction. Prior to the pause of the Trans-pennine electrification project similar detailed engineering development was underway to identify the most efficient solution with discussions at an advanced stage for procurement of options in the Gascoigne Wood or Hambleton areas. Depending on the option selected, this was anticipated to commission in 2018 or 2019.
25. Since the Strategic Business Plan, one additional requirement has arisen. The owners of a new depot south of Doncaster have requested NR to provide a power supply as enabling works which is to be provided through a new grid supply point that is currently in development. This does not affect available capacity on the ECML but expansion to provide additional mainline capacity is an option under development.

26. All of these projects are at present proceeding according to Enhancements Delivery Plan schedule with the exception of Transpennine Electrification, which was recently paused. As the associated grid supply point is an essential part of the traction power works to enable increased ECML train operation, this was identified as a risk in our letter of 2 October 2015. The project has now been un-paused with a new scope of works. A project delivery team is being reformed and programme implications will be shared when fully understood.
27. Overall the nature of the analysis that we have undertaken has been iterative and we have sought to include new information as soon as it becomes available. ECML Routes Traction Power Supply Upgrade is being developed using the 2020 ECML Indicative Train Service Specification developed through the ECML Industry Planning Group. As agreed all participants of ORR's meeting on 14 October 2015 will be updated as information becomes available. The ECML Routes Traction Power Supply Upgrade GRIP 2 report will detail route capacity constraints and incremental capacity/upgrade options up to the full 2020 Indicative Train Service Specification and outlook to 2043.

Further clarifications following the ORR meeting with GB Railfreight, DB Schenker Rail UK and Freightliner Group Limited on 16 October 2015

28. The table attached as Appendix B responds to each of the points captured in ORR's letter of 30 October 2014 following the meeting on 16 October 2014 between ORR and interested freight operators. A summary of the key points follows.
29. The assumptions that have been used for freight growth are consistent with the figures that have been used throughout our analysis. The assumptions are originally from the ECML 2020 Industry Planning Group Indicative Train Service Specification.
30. On page 4 of our letter we note the impact of Northallerton – Newcastle Freight Loops on LDHS passenger services; the capacity analysis that we have undertaken assumes a consistent number of freight paths (2 TPH) both with and without these loops. In our EC2020 Capacity Options report from 11 September 2014 there are choices about the level of service that can operate here – the scenarios tested are either:
- 3 LDHS, 3 Inter regional, 2 Class 4 or 6 Freight or
 - 4 LDHS, 3 Inter regional, 1 Class 4 or 6 Freight

Clarification on current use of capacity across Welwyn Viaduct

31. A number of operators have asked us to confirm the numbers of trains that run in the current timetable (First Group have asked us to confirm whether there are some hours with 7 LDHS services and as part of the meeting that ORR held with freight operators we were asked to confirm whether there is an hour in which 2 class 4 freight services run across Welwyn Viaduct).

32. Although our analysis to date has focused on a standard hour, there are variations across each hour in the current timetable. In order to help clarify the current position please see the table below showing the number of paths in the December 2015 timetable that are planned to operate across the Welwyn Viaduct in each hour from 0700 - 2100.

Northbound

	TOTAL	LDHS	GTR	Freight ⁵
0700 – 0800	16	6	10	0
0800 – 0900	13	5	8	0
0900 – 1000	13	5	8	0
1000 – 1100	12	5	7	0
1100 – 1200	14	7	6	1
1200 – 1300	13	6	6	1
1300 – 1400	12	6	6	0
1400 – 1500	12	6	6	0
1500 – 1600	14	6	5	2
1600 – 1700	16	7	9	0
1700 – 1800	15	6	9	0
1800 – 1900	16	6	10	0
1900 – 2000	17	7	10	0
2000 - 2100	11	5	6	0

Southbound

	TOTAL	LDHS	GTR	Freight
0700 – 0800	13	3	10	0
0800 – 0900	18	6	12	0
0900 – 1000	15	8	7	0
1000 – 1100	15	7	8	0
1100 – 1200	10	4	6	0

⁵ This includes Royal Mail Class 1s, NR measurement trains, test trains, RHTTs and National Delivery Supply Chain Services

1200 – 1300	13	7	6	0
1300 – 1400	13	6	6	1
1400 – 1500	12	6	6	0
1500 – 1600	12	6	6	0
1600 – 1700	11	5	6	0
1700 – 1800	15	7	8	0
1800 – 1900	16	6	10	0
1900 – 2000	14	6	8	0
2000 - 2100	13	6	7	0

Capacity Constraints faced by proposed services off the core ECML

33. This section seeks to clarify whether any works are currently planned in the current Control Period to deal with the capacity constraints highlighted off the core ECML. For areas where capacity constraints have been highlighted, but where no scheme is listed below, it should be noted that we are in the process, through the Long Term Planning Process, of developing the next stage of choices for funders for investment for future Control Periods to meet forecast demand to 2023 and beyond.

34. No detailed capacity analysis has been undertaken to date off the core ECML.

35. For services to/from Mirfield, Bradford Forster Square, Huddersfield and Micklefield there may be capacity improvements under the Trans-pennine Route Upgrade, but this is currently still at an early development stage and final scope will not be determined before the end of 2017.

36. For services to/from Harrogate we are working with a 3rd party who are funding a scheme, currently at GRIP 1, to double-track some, but not all, of the line between Harrogate and York. This may give potential for 1-2tph capacity improvement, in addition to the Harrogate turnback. Timescales for implementation are currently unknown due to early stage of development and funding agreements.

37. For services to/from Hull (via Selby), Hull to Ferriby-Gilberdyke re-signalling is at GRIP 4 but this is planned as like for like, with no enhancement proposed. Micklefield-Hull Journey Time Improvement is an NRDF scheme intended to provide a minor journey time improvement and unlikely to provide any capacity improvement. We are also working with a 3rd party on a scheme to electrify to Hull and a number of key issues relating to funding, land purchase, access etc. are still to be resolved and the benefits of this scheme are still to be confirmed.

38. For services to/from Middlesborough no capacity schemes are currently planned or proposed in the current Control Period.

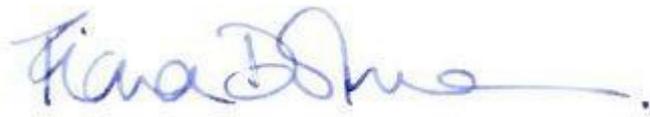
39. For services to/from Newcastle-Sunderland re-signalling is planned in this Control Period but this is expected to be like for like with no enhancement proposed.

40. For services to / from Cleethorpes no schemes are currently planned or proposed in this Control Period.

Next Steps

41. Network Rail asks the ORR to confirm that you now have all of the capacity information required from Network Rail to reach a view on what rights should be sold on the ECML. At this stage our understanding is that there is no requirement to undertake any further analysis; if there is a requirement it would be useful to have sight of this at your earliest opportunity for resource planning purposes.

Yours sincerely,



Fiona Dolman

Copies to:

Ian Yeowart (GNER)
Chris Hanks (GNER)
Leo Goodwin (ECML Co Ltd)
Russell Evans (ECML Co Ltd)
Andy Sparkes (VTEC)
Phil Dawson (VTEC)
Ian Kapur (GBRF)
Chris Wilson (Freightliner)
Stan Kitchin (DB Schenker)
Andrew Murray (DfT)
Enrico Russo (DfT)
Dan Moore (DfT)
Ian Williams (ORR)
Rob Plaskitt (ORR)

Appendix A – Enhancements Summary Table

OP Number	Project Name	Practical Completion (Infrastructure available for use)	AFC cash prices (£m)	Funding	GRIP Stage	GRIP 3 Forecast Date	RAG
Intercity Express Programme - Infrastructure Capability							
118937	IEP ECML Gauging (known) LNE	Aug-17	22.032	HLOS LNE002a - ECML IEP Capability	4	n/a	Green
146199	IEP ECML Gauging (known) Scotland	Aug-17	10.561	HLOS LNE002a - ECML IEP Capability	4	n/a	Green
144269	IEP ECML Gauging Placeholders	Aug-17	7.888	HLOS LNE002a - ECML IEP Capability	2	Sept 2016	Green
118938	IEP ECML OLE	Aug-17	7.446	HLOS LNE002a - ECML IEP Capability	4&5	n/a	Green
129199	ECML OLE Resilience	Aug-17	10.034	HLOS LNE002a - ECML IEP Capability	3	n/a	Green
118939	IEP LNE Platform Extns (Incl 145700 and 136803)	Aug-17	6.551	HLOS LNE002a - ECML IEP Capability	5-8	n/a	Green
	IEP Edinburgh	Aug-17	6.000	HLOS LNE002a - ECML IEP Capability	4	n/a	Green
145700	IEP Stations Durham	Aug-17	3.076	HLOS LNE002a - ECML IEP Capability	4	n/a	Green
121945	ECPSU: NG Connections	Aug-17	34.367	HLOS LNE002b - ECML IEP PSU	4-8	n/a	Green
121948	ECPSU: Power supply system	Aug-17	201.907	HLOS LNE002b - ECML IEP PSU	5-8	n/a	Green
120213	Ardsley Feeder Station	complete	6.098	HLOS LNE002b - ECML IEP PSU	7	n/a	n/a - scheme completed
TOTALS			315.96				
HLOS Enhancement							
122009	Gordon Hill Turnback	Dec-18	10.10	HLOS LNE004 - Gordon Hill Turnbacks	3	Dec 2015	Amber
TOTALS							
East Coast Connectivity							
141734	Four Tracking Huntingdon to Woodwalton	Dec-20	86.52	East Coast Connectivity	3	September 2018	Amber
140365	Upgrade Down Slow Fletton to Peterborough	Mar-19	13.62	East Coast Connectivity	3	November 2016	Green
140365	GN/GE Southern Access (Werrington Grade separation)	Dec-20	96.20	East Coast Connectivity	3	September 2018	Amber
128248	Newark grade separation (GRIP 2 development only)	n/a	3.00	East Coast Connectivity	2	n/a	n/a
139058	Doncaster Station Area Enhancements	May-17	21.17	East Coast Connectivity	4	n/a	Amber
n/a	Shaftholme - contribution to enhance S&C renewal	complete	0.70	East Coast Connectivity	7	n/a	scheme complete
141787	York Station North Throat	Dec-20	8.76	East Coast Connectivity	2	Dec 2017	Amber
140366	Northallerton to Newcastle Freight Loops	Mar-19	65.19	East Coast Connectivity	3	December 2016	Amber
TOTALS			295.15				
ECML ETCS							
132572	ECML ERTMS Phase 1 - King's Cross Re-modelling	31/03/19	Total = £378.870 KX element = £169.692	Resignalling-ERTMS (S) S&C Delivered-Full (Tr) DfT F011 ETCS Cab Fitment F003 East Coast Connectivity	3	20/01/16	Green
132572	ECML ERTMS Phase 1 - ETCS	31/08/20	Total = £378.870 ETCS element = £209.178	Resignalling-ERTMS (S) S&C Delivered-Full (Tr) DfT F011 ETCS Cab Fitment F003 East Coast Connectivity	3	20/01/16	Green

Appendix B – responses to Freight Operators as raised in ORR’s Letter of 30 October 2015

<i>NR 2 October letter reference</i>	<i>Concern as raised by FOCs</i>	<i>Network Rail Response</i>
Page 2, last paragraph	It should be noted that all projects are conditional on the Hendy review and we need to keep in mind what uncertainties this may cause – a lot of schemes are dependent on others and the Hendy review may affect schemes that the benefits of other schemes are dependent on.	Agreed.
Page 3 – TSGN	It is important in the context of the Dec18 Timetable for TSGN that there is no mention in NR’s letter of the freight requirement Hitchin to Cambridge – under DTT2011 this was impossible and is not mentioned in DTT2014 (assumption no freight on the line). There is existing freight on the route section.	Noted.
Page 3, table	i. London-Peterborough: GBRF had questioned the weight limit stated for the Hertford Loop but NR has now confirmed the correct limit is 2200t – NR needs a process for regularly updating FOCs with all Route Loads Books so this misunderstanding doesn’t occur again.	Provided
	ii. London-Peterborough: FOCs believe based on freight growth they need to move more than 2200t so there will be a requirement for a Class 6 via Welwyn. To align with freight traffic forecasts elsewhere on the network (and with NR’s specification in the table on Page 13) the Class 6 path via Welwyn will need to be capable of at least 2600 tonnes trailing;	Assumptions on freight growth have been consistent throughout the analysis; these are originally from the ECML 2020 IPG ITSS.
	iii. Peterborough-Doncaster: 1 class 6 via Welwyn and GN/GE at least is required. Need for freight via Grantham for diversionary route knowledge and for electric freight services was noted;	

	<p>iv. Doncaster-York: also requires at least 1 class 6 Doncaster to Shaftholme Junction as SFN money has been spent on upgrading Shaftholme Junction for all services and freight needs to be able to be routed this way. Query what the 1 regional Local at Doncaster was;</p>	<p>Assumptions on freight growth have been consistent throughout the analysis; these are originally from the ECML 2020 IPG ITSS.</p> <p>1 regional local at Doncaster is 'Doncaster – Sheffield – Hull service' as per page 41 of EC2020 Timetable Assessment, 17/12/14.</p>
	<p>v. No mention of Doncaster-Leeds route in this table, which is critical to freight (although power supply was mentioned elsewhere).</p>	<p>The work completed on Doncaster – Leeds can be found on page 51 of our ECML 2020 Capacity Report 17/12/2014.</p>
Page 4	<p>Comment relating to Northallerton to Newcastle freight loops – what would be the impact on freight capacity of this? The table on page 4 should include key power supply works.</p>	<p>The analysis undertaken has assumed a consistent level of both freight and passenger capacity both with and without the loops. As per our Capacity Report 11092014 there are choices over the level of service that can operate here – the scenarios tested are either 3 LDHS, 3 Inter regional, 2 Class 4 or 6 Freight or 4 LDHS, 3 Inter regional, 1 Class 4 or 6 Freight</p> <p>Power supply works added to table.</p>
Pages 6-8, table	<p>i. Kings Cross remodelling should be in this table;</p>	<p>Now added</p>
	<p>ii. Stevenage and Gordon Hill turnbacks: NR has informed the industry that Stevenage is not going ahead. This either needs splitting out from Gordon Hill or clarifying;</p>	<p>Gordon Hill turnback is now split out in the table.</p>
	<p>iii. Some dates seem inconsistent – e.g. between GRIP stage projects are currently at and the GRIP 3 forecast date. Each date needs checking and this needs to be made clearer, possibly by reordering columns so the GRIP 3 date is to the left of the completion date.</p>	<p>Dates have been checked and are confirmed as correct</p>

	<p>iv. Werrington: DfT has not confirmed funding is available in CP6, as has been discussed at the East Coast Programme Board. Can NR provide any further detail on CP6 funding? It was noted that there were issues about freight traffic reaching the Peterborough Up side yards that had to cross the ECML Fast Lines, which was a problem that wasn't recognised in many circles. Costs for Werrington looked higher than the East Coast Programme Board's last briefing.</p>	<p>Current position is clarified in letter.</p>
	<p>v. ERTMS is not in the table – what is the assumption? It would be helpful to include and articulate if no link to capacity is being assumed. This may be linked just to KGX remodelling, or further along the route, in which case make that clear either way.</p>	<p>At the stakeholder meeting on 14 October we explained that as the revised headways from ETCS are not yet available the capacity analysis we have undertaken has been based on the capability of the existing signalling systems.</p>
Page 9	<p>i. The answer to point 9 does not answer the question or mention any works, it just mentions the restrictions. Please can NR explain the works that are needed;</p>	<p>Clarified in letter.</p>
	<p>ii. Mirfield services: Trans-Pennine freight services need to be mentioned here.</p>	<p>Agreed that Trans-Pennine freight services operate on this route.</p>
Page 10	<p>Services to Newcastle-Sunderland: resignalling of this line is proposed for 2016/17, and this will be the right time to see what is needed to cater for a mix of services. This could be a missed opportunity if NR replace like for like. Also, MCBOD level crossings are going to be put in on this route. This "will likely" lead to a drop in usable capacity – could NR provide further details on the impact of this.</p>	<p>Durham Coast is a like for like re-signalling although with modern equivalent which gives passive provision for future line speed improvements. MCBOD will not limit capacity in terms of headway/margins etc. but does impose limits on the number of trains which can cross a road in an hour. This is something which is agreed via local consultation. Newcastle-Sunderland has no planned re-signalling scheme and has significant constraints relating to level crossings.</p>

<p>Page 11</p>	<p>i. Point 10, 4th paragraph: so is any power upgrade actually needed and, if so, on which sections of line? FOCs noted problems with power supply north of Newcastle and are under the impression that all hooking in points to national grid have been used – if so is there any chance of any more electric capacity north of Newcastle?</p>	<p>Clarified in letter. Further detail on power supply will be provided in the ECML Routes Traction Power Supply Upgrade GRIP 2 report in December.</p>
	<p>ii. Last paragraph: this is the first FOCs have heard of this power supply constraint. What does this mean? More information is needed on this constraint.</p>	
<p>Page 13, table</p>	<p>i. In general this table doesn't show:</p> <ul style="list-style-type: none"> a. Royal Mail Class 1s; b. NR measurement trains, test trains and RSTTs; and c. National Delivery Supply Chain. <p>Further – accommodation of these trains is not mentioned in any ECML capacity report or the latest DTT2014 report.</p>	<p>Agreed. Work to date has focussed on development of standard hour timetable patterns; individual characteristics of freight services are not generally considered until later in the timetable development process.</p>
	<p>i. Current timetable column – FOCs do not agree with assumptions made – this is a recycled table from over a year ago and is incorrect:</p> <ul style="list-style-type: none"> a. London-Peterborough via Welwyn – in certain hours there are 2 Class 4s an hour instead of the Class 6. b. London-Peterborough via Hertford – can run up to a 2200t Class 6 currently. c. Peterborough-Doncaster via Grantham – worth spelling out what “varying weight and class” means? d. Peterborough-Doncaster via GN/GE – this should be a Class 4 1800t, and should also include a Class 6 2200t. 	<p>Assumptions have remained consistent throughout our analysis for this timetable and assume an ‘average’ number of freight paths (which, as stated is ‘recycled from over a year ago’). Work to date has focussed on development of standard hour timetable patterns; individual characteristics of freight services are not generally considered until later in the timetable development process. Please refer to WTT for full detail of existing freight paths.</p>

	<p>e. Doncaster-York – the Class 6 should be 2400t.</p> <p>ii. York-Newcastle – this should instead be 2 Class 4s at 1800t and 1 Class 6 2400t but maybe not every hour.</p>	
	<p>iii. Freight growth forecast column:</p> <p>a. London-Peterborough (via Welwyn) – “none” is incorrect and NR needs to look at the freight market study. There will need to be some paths due to Hertford loop weight restrictions. This should be 2600t.</p> <p>b. London-Peterborough (via Hertford loop) –due to network capability the Class 6 2600t cannot go this route and must be via Welwyn. The Class 4 remains via Hertford.</p> <p>c. Doncaster-York – no Class 6 has been mentioned. At the very least Class 6 paths will need to exist between Doncaster and Shaftholme Jn, and Colton Jn and York. It may be possible to satisfy the Class 6 freight requirements between Shaftholme Jn and Colton Jn by alternative routing, subject to no time penalty. The Class 4 intermodal trains, however, will continue to require ECML routing throughout between Doncaster and York due to the restrictive loading gauge on other routes.</p>	<p>Assumptions have remained consistent throughout our analysis for this timetable. The analysis showing the number of freight paths that can be accommodated alongside 7 or 8 LDHS paths still holds true.</p>
	<p>iv. Freight paths alongside 7 LDHS column:</p> <p>a. Peterborough – Doncaster (via Grantham): There’s no weight of freight train mentioned.</p>	<p>Work has assumed a 1600T freight train.</p>

	<p>v. Freight paths alongside 8tph column:</p> <p>a. London-Peterborough (via Hertford loop) – this does not match with the growth that is forecast.</p> <p>b. None via Welwyn or Grantham ignores weight limits and need for electric freight/route knowledge purposes.</p>	<p>‘Freight alongside 8 LDHS TPH’ column shows the level of freight that can run alongside 8 LDHS TPH (and the assumptions for other passenger services)</p>
Page 14	<p>i. Page 14, 2nd paragraph under London-Peterborough: freight growth figures show that 2600t is required.</p>	<p>Assumptions have remained consistent throughout our analysis for this timetable</p>
	<p>ii. Page 14, 1st paragraph under York-Newcastle: as before this should be 2 Class 4s and a Class 6 rather than 3 low-weight Class 4s.</p>	
Page 15	<p>The point related to Stillington branch line is not accurate – use of this branch line is not appropriate as it is not gauge cleared.</p>	<p>Noted</p>
Annex	<p>FOCs are surprised by the cost figures provided in the annex for the four tracking Huntingdon to Woodwalton and Werrington Grade Separation projects – these costs are significantly above what has been seen by FOCs at the programme board.</p> <p>Also, in the cases where the AFCs have changed, have the business cases been re-checked and revised, if required? King’s Cross Re-modelling has already just increased in cost as an example.</p>	<p>The costs provided through this analysis are the AFC in cash prices (as requested) whereas figures shown at Programme Board are AFCs in 2012/13 prices (in line with the Hendy Review)</p>