Annex 3

Dec 06 ECML capacity review - problems identified SX.

1D21 06.35 Kings Cross to Leeds (GNER)

Following consultation with FCC (GN), 3R53 will be retimed to depart 06+28 and remain running FL to Woolmer Green to precede 1D21. 0L78 (GBRf) MO has been further retimed to depart 07.00 from Peterborough shed

1D22 07.10 Kings Cross to Leeds (GNER)

to avoid confliction with 1A04 at New England North.

Retiming of 1T01 (GN) removes pathing time approaching Cambridge where the working in platform 1 is extremely tight, and also reacts on 2H04 ('one') arriving Cambridge.

1H01 07.20 Kings Cross to Hull (HT)

Retiming to 1A11 at Peterborough to run through UFL after arrival of 1P11 (GN) in platform 3A causes a clash at the north end of the station with 2K41 (CT) departing from platform 3 down the USL. 2K41 has been retimed 2 minutes later throughout to Lincoln, which reacts at Sleaford North Jn on 2K13 which has also been retimed 2 minutes later throughout. This reduces the turnround at Peterborough on to 2K16 to 5 minutes, (2 mins substandard). It is understood some of the [4] in these trains south of Spalding is no longer required which would resolve this problem.

1N25 08.04 Kings Cross to Sunderland (GC) 1D24 08.10 Kings Cross to Leeds (GNER)

3P53 (GN) has been amended to run to Huntingdon via Connington South as it is no longer possible to give a robust turnround at Peterborough and there is no margin to reach the bay at Huntingdon. 2P53 therefore starts from Huntingdon at booked time after connecting out of 1P55 from Peterborough. This also removes the need to retime 2P02.

1N35 (CT) has been retimed 2 mins earlier from Ely to Stamford, and 0A35 (GBRf) has been retimed 4 mins later from the shed to improve the working at Peterborough.

1D26 09.10 Kings Cross to Leeds (GNER)

Retiming to 2F00 (GN) to Letchworth would cause reaction on 1C01 (GN) at Letchworth, so it has retimed earlier to depart Hitchin 09.27, with 1A14 (GNER) adjusted to pass Hitchin $09/30\frac{1}{2}$.

There are problems with the suggested retiming to 1L09 (CT) between Grantham and Ely due to :

- a) insufficient margin at Grantham
- b) clashes with 6L77 (EWS) (Q) at Ely North Jn
- c) the dwell time at Ely on 1L09 must remain at 4 mins due to reversal
- d) a later path from Ely clashes with 1T59 (GN) at Ely North Jn to which there is no easy solution.

I have therefore implemented the following:

1M09 (CT) to be retimed 3 minutes earlier from Peterborough running SL to Stoke and 4½ earlier from Grantham to Bingham. This enables 1L09 to arrive and depart from Grantham 4½ earlier and run SL from Grantham to High Dyke to enable 1A18 (GNER) to overtake. 1A18 has been retimed 1 later from Grantham to Kings Cross following 1L09, but at present 1L09 will still be 1½ minutes later from Peterborough due to 1H02 passing on the DF.

1H02 09.48 Kings Cross to Hull (HT)

Earlier retiming of 2E59 (CT) continues to Lincoln Cen arr 11.25. Earlier retiming of 2M60 (CT) continues to Nottingham arr 11.30% then as booked.

1D28 10.10 Kings Cross to Leeds (GNER)

0P03 (GNER route refresher) Kings Cross to Kings Cross has been retimed to follow departing 10.12 arriving back 11.56.

2C04 (GN) running SL to Potters Bar clashes with 5V61 (GN). 5V61 has since been withdrawn in FCC bid 3.

Suggested replatforming of 5V64 (GN) at WGC to allow 4L65 (EWS) an earlier path not possible as platform 4 occupied by 2K16 formed off 2V10. 4L65 has therefore been diverted via Hertford North running as booked from Letchworth. The later path for 4L65 over Cambridge Jn requires a consequential retiming to 1A20 (GNER) which restores most of its performance time to its correct position north of Hitchin, unaltered at Kings Cross. 2C55 (GN) has since been retimed to follow 1A20 from New Barnet, Kings Cross 12.20, with 1A21 following 2C55 from Finsbury Park arriving 12.23.

1N26 11.27 Kings Cross to Sunderland (GC)

1D31 11.35 Kings Cross to Leeds (GNER)

Suggested path for 6E14 is too close in advance of 1D30 at Grantham. Train retimed to follow 1D30 from Stoke, recessing at Claypole for 1N26, 1N06, 1D31, 1H03 and 1S15, Carlton for 1D32 and Babworth for 1N07 arriving Belmont 28 minutes later than suggested. $\frac{1}{2}$ min pathing approaching Newark in 1N26 needs to be moved to approaching Barkston.

1H03 11.48 Kings Cross to Hull (HT)

½ min pathing moved from approaching Newark to approaching Peterborough to give headway behind 1P15.

Path also clashes with 1L13 (CT) at Peterborough. 1L13 has been retimed $2\frac{1}{2}$ mins later from Peterborough which can be recovered before Norwich, however there may be a knock on effect on 4L65 (EWS) at Ely North Jn.

 $\frac{1}{2}$ min pathing added to 1H03 approaching Retford to maintain headway behind 1D31.

1D33 12.35 Kings Cross to Leeds (GNER)

Suggested path clashes with 5V66 (GN) Kings Cross to WGC. This train has since been retimed later in FCC bid 3.

Also clashes with 1M20 (CT) which has been retimed to run SL Peterborough to Stoke, later through Grantham but unaltered at Netherfield Jn.

1D34 13.10 Kings Cross to Leeds (GNER)

Suggested path for 6M67 WFO (EWS) has substandard headway behind 2C07 (GN) at Alexandra Palace and clashes with 1D35 at Welwyn North. 6M67 has been amended to follow 2V18 (GN) from Alexandra Palace to Welwyn, 1D35 from Digswell and 4E24 (FL) from Langley Junction which avoids the need for it to overtake between Hitchin and Sandy (see 1D36). Both trains are unaltered from Holme.

1D35 13.36 Kings Cross to Leeds (GNER)

Suggested path for 2P08 has substandard headway at Alexandra Palace behind 1D35. It has therefore been retimed a further $\frac{1}{2}$ minute later from Alexandra Palace to Peterborough, which reacts on 2V19 $\frac{1}{2}$ min later Potters Bar to WGC and on 1C27 $\frac{1}{2}$ min later at Stevenage. 2P08 also clashes at Peterborough with 1E12 (GNER) which has had its Peterborough dwell time reduced to 3 mins to run SL to Fletton to avoid confliction.

Suggested path for 1L19 clashes with suggested retiming of 6E07/6E35/6M35 Eccles Road – Barrow Hill or Peak Forest (FLHH) at Grantham in connection with 1D36. Options routed via ECML to Doncaster retimed later from Stoke to Babworth then as suggested, options routed via Bingham retimed later through Grantham but unaltered forward from Netherfield Jn.

1D36 14.10 Kings Cross to Leeds (GNER)

See 1D34 for remarks regarding suggested path for 6M67, also 6M67 clashes with 4E33 (GBRf) at Peterborough which has been adjusted.

4E24 (FL) has adjustment time inserted from Holme to allow for acceleration from the junction making it 1 min later at Peterborough, as suggested from Tallington to Claypole, but there is no need for this train to be recessed north of Claypole, so it has been retimed earlier, reaching Loversall Carr Jn 2 hrs 3 mins earlier than suggested. 6E87 (EWS) has been recessed at Newark Northgate instead of Carlton which removes an existing clash at the flat crossing, and follows 1S21 and 4E24 from there, 9 mins later at Retford.

See 1D35 for remarks concerning 1L19 (CT) and 6E07/6E35/6M35 (FLHH).

1D38 15.10 Kings Cross to Leeds (GNER)

Suggested path for 1L21 (CT) reacts on 4L78 (GBRf) at Peterborough which has been retimed 2 mins later forward.

1H05 16.05 Kings Cross to Hull (HT)

1H05 has substandard margins at Hitchin behind 1C29 (GN) crossing and substandard headway behind 1S23 (GNER) at Tallington. Allowances have been adjusted to correct.

1D40 16.10 Kings Cross to Leeds (GNER)

Clashes with 6E96 MWFO (EWS) which has been retimed 5 mins later into Peterborough West Yard. 6E48 TThO has been retimed earlier to arrive in the same path. See comments under 1D36 regarding 4E24 (FL).

Suggested path for 1E19 (GNER) has a substandard margin at Newark Flat Crossing following passage of 2M76 so has been retimed $\frac{1}{2}$ minute later Newark to Potters Bar.

Suggested path for 1A40 (GNER) clashes with 2K48 (CT) departing from platform 3 at Peterborough, so 2K48 has been retimed 1 min later throughout. Also 1T71 (GN) has been retimed 1 min later from Welwyn Garden City to maintain headway behind 1A40.

Suggested path for 1L26 clashes with 1Z16 MO (NMT) at Peterborough. 1Z16 has had its Retford stop removed and has been retimed earlier to Kings Cross. 6L65 (EWS) has been further retimed to follow 1Z16 from Newark to Claypole. 2E75 (CT) has been retimed ½ min later from Newark Flat Crossing to Boultham Jn. following 1Z16 over the crossing. 1L26 (CT) has been further amended to run SL from Stoke to Peterborough to enable 1Z16 to precede, forward unaltered. 1P74 (GN) has been retimed to depart Peterborough 18.45, forward unaltered from Huntingdon.

1N28 16.50 Kings Cross to Sunderland (GC)

To reduce conflicting movements in the Kings Cross area, First Capital Connect (GN) wish to amend 1P21 to depart 16.53 running FL throughout to Woolmer Green following 1N28, also 2R00 to depart 16.52 running SL. This will mean 1S25 (GNER) being retimed 1 min later Woolmer Green to Grantham, then as suggested, 1D42 (GNER) running 1 min later from Woolmer Green, ½ min later at Retford, 1L24 (CT) running 1 min later from Peterborough to Ely which will cause further consequential retimings in the Ely area, 4E25/4D56 (EWS) running 1 min later from Grantham following 1D42, unaltered from Babworth, 1H07 and 1S26 (GNER) both retimed 1 min later from Retford following 4E25/4D56.

The path suggested for 1S04 (GBRf) using platform 3 clashes with 1A37 (GNER) which must use platform 3 due to platform 2 being occupied by 2K33 (CT) forming 2K44. 1S04 has been amended to use platform 4 running SL Peterborough to Stoke, forward unaltered with 4D56/4E25 retimed to follow from Peterborough, also unaltered at Stoke, but see notes on 1D40 above for path from Grantham.

1D46 18.33 Kings Cross to Leeds (GNER)

Suggested paths for 1N14/1S28 (GNER) with stops removed at Stevenage and Peterborough and 1D46 (GNER) have substandard headway at Peterborough with 1P24 (GN). Also suggested retiming of 5P02 (GN) from Peterborough to Nene Sdgs has insufficient time for driver to change ends (12 car set). Following consultation with FCC (GN), 1N14/1S28 and 1D46 have been retimed earlier through Peterborough with 1P24 waiting at Holme to follow 1D46, arriving Peterborough 19.25. 1P02 (GN) runs between 1N14/1S28 and 1D33 arriving Peterborough 18.11½. As a result both 1N14/1S28 and 1D46 are 3 mins earlier at Retford. See 1D36 above for remarks concerning 4E24 (FL).

1H06 18.50 Kings Cross to Hull (HT)

Clashes with 1L28 (CT) at Peterborough. 1L28 has been amended to run FL Stoke to Peterborough and now uses platform 4, 2½ mins earlier forward. Pathing time inserted in 1H06 and timed 1½ mins later to Retford.

2F10 (GN) has been retimed earlier from Hitchin to Letchworth.

1D47 19.03 Kings Cross to Leeds (GNER)

Substandard headway approaching Peterborough behind 1P25 (GN), also suggested path for 1P25 has insufficient headway follwing 5P03. Following consultation with FCC (GN), 1P25 has been retimed to follow 1D47 from Holme, so 1D47 can be earlier to Retford. As a result 6E38 (EWS) has been timed later over Newark Flat Crossing running later as far as Langworth. 1A97 (HT, see below) has had (1) moved north of Newrk Flat Crossing to follow 6E38.

Suggested path for 1P04 (GN) has substandard headway following 1D47 at Alexandra Palace, also 2C16 (GN) has substandard headway following 1P04 from Finsbury Park. This causes retimings as follows:

1P04 ½ min later to Peterborough arr 20.05.

1P26 (GN) 1 min later Huntingdon to Holme.

2C16 (GN) 1 min later to Hitchin forward unaltered from Letchworth.

2F09 (GN) ½ min later Hitchin to Letchworth arr. 19.35, ECS to depot later.

1C11 (GN) $\frac{1}{2}$ min later Potters Bar to WGC and 1 later Letchworth to Shepreth Branch Jn.

1P27 (GN) ½ min later Hitchin to Peterborough arr 20.27.

1D48 (GNER) 1 min later from Hitchin. (Mismatch Retford).

1D49 20.03 Kings Cross to Leeds (GNER)

5E66 (HT) will need to be retimed 7 mins later throughout if still required. Suggested path for 1P05 (GN) has substandard headway following 1D47 at Alexandra Palace causing:

1P05 ½ min later to Peterborough arr 21.05.

2F19 (GN) later to Letchworth arr 21.34½, ECS to depot later.

1T15 (GN) 2 mins later Letchworth to Shepreth Branch Jn (Mismatch)

1D49 (GNER) has a substandard headway from Peterborough ahead of 4E50 (FL) which has been retimed earlier to run SL not stopping Peterborough.

1H08 20.27 Kings Cross to Hull (HT)

Clashes with 1Z16 MO (NMT) Kings cross to Belle Isle. Outstanding. Clashes with 1L30 (CT) Peterborough.

Retiming to 1D50 (GNER) clashes with 2K55 (CT) at Peterborough. 2K55 has been retimed to depart Spalding 21.00, running later to Melton Mowbray, but unaltered from Syston East Jn. 1L31 (CT) has been retimed to arrive Peterborough 1 min later, forward unaltered.

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1A60 06.53 Sunderland to Kings Cross (GC)

Suggested path for 6E95 (EWS) is not sufficiently earlier to provide a robust margin to cross New England North Jn ahead of 1E02 (GNER). It has therefore been retimed to follow 1A60 arriving Peterborough Yard 09.57.

1A92 08.12 Hull to Kings Cross (HT)

Unnecessary pathing time approaching Connington has been moved to approaching Hitchin and WGC. Retimed to arrive 10.51 to maintain headway behind 1A60 (GC) at Alexandra Palace and 2P53 (GN) at Holloway.

1A16 08.40 Leeds to Kings Cross (GNER)

Retiming of 1A17 (GNER) is 2 mins later than shown on F3 print supplied. This enables 2P54 (GN) to depart 10.15 reducing dwell time at Huntingdon. 2C54 (GN) has been retimed a further ½ min later from Potters Bar to maintain headway behind 1A17, arriving Kings Cross 11.17. Further retiming of 1A17 at Peterborough causes a substandard headway ahead of 4O20 (GBRf) which has been further retimed to follow. This reacts on 1A18 (GNER) a minute later (KX arr 11.19) following 4O20 clearing into Connington loop, and this also reacts on 2F02 (GN) which has been retimed 1 min later Hitchin to Letchworth.

1A19 09.40 Leeds to Kings Cross (GNER)

Substandard margin behind 1P66 (GN) Finsbury Park, which has been amended to use platform 1 at Finsbury Park, running SL and arriving KX 11.59. Replatforming of 2P55 (GN) means it must run FL to Fletton Jn.

1A93 10.11 Hull to Kings Cross (HT)

Substandard margin behind 2P55 (GN) at Finsbury Park. Following consultation with FCC (GN), 1A93 has now been retimed earlier from Hitchin, preceding 1C25 over Cambridge Jn. As a result of FCC Bid 3, 2P55 now runs SL from Potters Bar enabling 1A93 to arrive earlier at 12.44.

1A94 12.45 Hull to Kings Cross (HT)

Clashes with 6E52 (EWS) at New England North which has been retimed 6 mins later arriving Peterborough.

Substandard headway following 2C58 (GN) at Belle Isle, 1A94 retimed arriving 1 min later Kings Cross 15.20.

1A62 12.30 Sunderland to Kings Cross (GC)

Clashes with 3P00 (GN) Potters Bar to Finsbury Park. This has now been withdrawn in FCC bid 3.

Substandard margin behind 2C59 (GN) at Finsbury Park. 2C59 has been amended to run to platform 1 at Finsbury Park and forward SL, unaltered at KX.

There is an existing performance problem involving 1A31 (GNER) ahead of this train. Following consultation with FCC (GN), 2P59 (GN) has been retimed to depart 15.14 with an extended dwell at Huntingdon, with 1A31 retimed to follow from Peterborough, arriving KX 16.13.

Suggested path for 2M68 (CT) has substandard margin at Newark Flat Crossing behind 1A62. This train has been retimed to depart Lincoln later at 14.38,

Nottingham 15.35-15.38. 6B73 (FLHH) has been adjusted to pass through Lincoln Cen earlier ahead of 2M68, unaltered at Gainsborough Trent Jn.

Suggested path for 2E67 (CT) also has a substandard margin at Newark Flat Crossing and clashes with 2K31 (CT) at West Holmes Jn. 2K31 has been retimed to arrive Lincoln at 15.18, with 2E67 (CT) arriving 15.22. These later paths for 2M68 and 2E67 create a further substandard margin at Newark Flat Crossing ahead of 1D35 (GNER) which has been retimed ½ min later to Retford.

1A32 14.40 Leeds to Kings Cross (GNER)

Substandard margin ahead of 2P60 (GN) at Connington which has been retimed $\frac{1}{2}$ min later to Huntingdon. This reacts on 1A33 (GNER) which has been retimed $\frac{1}{2}$ min later Huntingdon to Finsbury Park.

Substandard margin at Hitchin after passage of 1C08 (GN) , 1A32 has been retimed $\frac{1}{2}$ min later Hitchin to Woolmer Green.

Problems with pathing into Kings Cross, left outstanding pending finalisation of platforming/ECS arrangements.

1A35 15.40 Leeds to Kings Cross (GNER)

Suggested path for 6V25 (EWS) has insufficient margin behind 1A35 and ahead of 1A36 (GNER), and to further retime 1A36 would have further consequential alterations not desirable in the peak period. A new path has been found for 6V25 departing Peterborough at 16.19 and running earlier to Canonbury, but this is not acceptable to EWS due to drivers PNB requirements at Peterborough Yard. Suggested path for 2C61 (GN) has a substandard headway at Alexandra Palace ahead of 2J43 (GN) to which there was no easy solution, so following consultation with FCC (GN) 2C61 has been retimed to precede 1A37 (GNER) running FL from Marshmoor to Finsbury Park arriving KX 18.18. 1A37 follows arriving 18.20. As a result 1N13 departs via A route.

1A37 must use platform 3 at Peterborough (see 1N28 above).

1A94 12.45 Hull to Kings Cross (HT)

Suggested path for 6L55 (EWS) has substandard margin at Peterborough ahead of 1N28 passing on down fast. In view of its existing tight path ahead of 1L81 ('one') and 1L24 (CT) at March, 6L55 has been retimed to follow these trains from Peterborough making the Peterborough crew change 25 mins later.

Suggested path for 6E48 (EWS) clashes with retiming of 1A36, 6E48 has been timed earlier still from Peterborough as per notes above referring to 1D40.

There is a clash at Peterborough East with the existing path for 0L56 and 6E89.

Suggested path for 2R00 has had an unnecessary [1] removed to arrive Letchworth as current.

1A38 16.40 Leeds to Kings Cross (GNER)

5P04 (GN) has been retimed earlier through Finsbury Park to provide margin ahead of 1A38.

Suggested path for 1M78 (GBRf) has substandard headway ahead of 1P73 at Finsbury Park. To be re-examined.

1A96 17.06 Hull to Kings Cross (GNER)

1P23 (GN) has been retimed to arrive 1 later at Peterborough 18.58 after passage of 1A96.

Suggested paths for 1Z16, 1L26 and 6L65 have been amended, see 1D40 above. 1Z16 is likely to be further amended as it will not be possible to platform it at Kings Cross for that length of time.

1A63 16.30 Sunderland to Kings Cross (GC)

This train has been retimed to 17.30, meaning that the consequential retimings to 6M06, 6E59 (EWS), 1E21 (GNER), and 2P63 (GN) are not required. See appendix for comments on the 17.30 path. 7L84, 6L65 (EWS) and 1P25 (GN) are required to be amended as consequentials of other services.

1A44 18.40 Leeds to Kings Cross (GNER)

Retimed later from Peterborough after passage of 1P04 (GN) to platform 1, unaltered KX. Reacts on 1P75 (GN) ½ min later Woolmer Green, 1 min later KX, also 1Z17 (NMT) which is ½ min later WGC to Finsbury Park, forward unaltered.

Suggested path for 1Z17 in Grantham area conflicts with 1M02 (NR retained postal path) which has been rejected.

Suggested path for 7L84 (EWS) clashes with 1E23 and 1N16 (GNER) at Peterborough, but has been further retimed due to 1A63 (GC) further retimed.

Suggested path for 2F15 19.20 Moorgate – Letchworth (GN) ** causes a conflict between 5F15 and 1T15 (GN) at Letchworth, following consultation with FCC (GN), 1A44 has been retimed to pass Hitchin after passage of 2F15, with pathing time in 1P75 (GN) to follow 1A44 from Woolmer Green. 1A44 now arrives KX at 20.55 with 1P75 following at 21.01. ** 2F15 and 5F15 have since been renumbered 2F11 and 5F11 respectively.

1A97 19.18 Hull to Kings Cross (HT)

Clash at New England North with 6E85 (EWS) which has been retimed to pass after 1A97 and 6M56 (EWS) and arrives Peterborough Yard 21.16. 1A97 also clashes at Eastfield Jn with departure of 6L65 (EWS) which has been retimed 16 mins earlier in former path of 7L84 (see apendix). Will benefit from an improved path Huntingdon to Hitchin if 1M19 (NR retained postal path) can be removed.

Suggested path for 1A47 has the performance and pathing time in the wrong place south of Hitchin. Correction of this removes the clash at Hitchin with 1T16 (GN). Suggested path for 2C65 (GN) has a substandard headway ahead of 2D02 (GN) which has been retimed to follow, arriving KX 1 min later. Also see 1D47 above.

APPENDIX

1A63 17.30 Sunderland to Kings Cross (GC)

Retiming causes the following consequential alterations:

1A45 (GNER) follows 1A63 from Templehirst and 2P64 from Peterborough, 3 mins later KX 21.14.

1A46 (GNER) follows 1A45 from Loversall Carr Jn, 1C63 (GN) from Hitchin and 2P64 (GN) from Woolmer Green to Digswell, 7 mins later KX 21.39.

1E23 (GNER) follows 1A46 from WGC, KX 21.42.

2P64 (GN) departs 20.20 following 1A63 from Peterborough, also follows 1E23 from Potters Bar, KX 21.48.

7L84 (EWS) follows 1A45 from High Dyke Jn and has been retimed to pass through Peterborough after departure of 1D49, passing Peterborough East 23 minutes later in former path of 6L65 (see 1A97 above).

1Z17 (NMT) has been retimed to recess at Newark to allow passage of 1A63 and 1A45, then follow 1A45 to KX 21.21-21.26, later to Royston then as previous.