

# HS3 Mk2 Route Loadings

## *Introduction*

Deriving the route loadings for a given service plan can be a difficult and tedious matter, and very prone to error. Furthermore, understanding what a given loading consists of can be problematic at a later time, requiring effectively as much effort to interpret as it originally took to produce (the only way reliably to work it out is effectively to regenerate it). The problem is especially acute with HS3 Mk2, since this is the most complicated of the various routes, involving the most elaborate mix of services and extensive interactions with other routes.

For my own convenience as much as anything else, the present article elucidates the route loadings corresponding to service plans 5 and 6. Service Plan 5 is the full service plan for HS3 Mk2 at its full extent, but before any of the quadrupling made possible thereby has been implemented. (The loadings corresponding to earlier service plans are significantly simpler, and easily understood by a process of working back from SP5.) Service Plan 6 details the situation after quadrupling (between London and Garforth East Junction) has been completed, and many extra services introduced.

The present article, though really of no interest to anyone but myself, will nonetheless be published on the website, just in case anyone feels moved to challenge my figures, in which case they will be able to see how I derived them, without having to pester me personally.

The service plans are given in full, since otherwise the information would not be self-contained, and would require consulting the original Route and Service Plans article also.

## *Service Plan 5*

### HS3 UHS:

- 2tphG Eastbourne – Lewes – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – York – Darlington – Durham (Relly Mill) – Consett – Hexham – Hawick – Edinburgh Waverley HS – Haymarket – Edinburgh Airport – Bellgrove – Glasgow St. Enoch
- 2tphG Newhaven Marine – Newhaven Town – Lewes – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – South Yorkshire – York – Darlington – Durham (Relly Mill) – Consett – Newcastle
- 2tphG Tunbridge Wells – Tonbridge – East Croydon – Victoria (LL) – Pancras Cross – South Yorkshire – Leeds HS – York HS
- 2tphG Tunbridge Wells – Tonbridge – East Croydon – Victoria (LL) – Pancras Cross – Sheffield HS – Manchester HS – (Manchester) Victoria LL – Liverpool Lime St.
- 2tphC Newcastle – Hexham – stations to Carlisle
- 2tphG Newcastle – Hexham – Hawick – Edinburgh Waverley HS – Haymarket – Edinburgh Airport – Bellgrove – Glasgow St. Enoch
- 2tphC Hawick – Edinburgh -> Inverness

(Note that the Newcastle – Hexham and Hawick – Inverness services are included in the UHS section because they interface with the Glasgow service.)

### HS3 Metro:

- 2tphGG Brighton – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – Luton & Dunstable Parkway – Northampton – Leicester – Nottingham – Sheffield HS – Huddersfield – Leeds HS – York HS
- 2tphGG Brighton – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – Luton & Dunstable Parkway – Northampton – Leicester – Nottingham – Sheffield HS – Manchester HS – Manchester Victoria (LL) – Bolton – Preston
- 2tphC St. Pancras – Luton & Dunstable Parkway – Northampton – Leicester – Loughborough – Derby – Chesterfield – Sheffield Midland – South Yorkshire (Meadowhall) – Rotherham – Wakefield Westgate – Leeds City – Micklefield – York
- 2tphC St. Pancras – Luton & Dunstable Parkway – Northampton – Leicester – East Midlands Parkway – Derby – Matlock – Bakewell – Miller's Dale (from/to Buxton) – Chinley – Stockport – Manchester Piccadilly (alternatively: – Derby – Chesterfield – Sheffield (reverse) – Chinley – if the Peak route has not yet been reopened.)
- 2tphC St. Pancras – Luton & Dunstable Parkway – Northampton – Rugby – Coventry – Birmingham International – Birmingham New Street – Wolverhampton – :
  - 1) – Stafford – Crewe – Runcorn – Liverpool South Parkway – Liverpool Lime Street
  - 2) – Telford – Wellington – Shrewsbury – Wrexham – Chester

## MML and other Regional Metro:

- 2tphR St. Pancras – St. Albans – Luton Airport Parkway – Luton – Bedford – Wellingborough – Kettering – Market Harborough – Leicester – Loughborough – Attenborough – Beeston – Nottingham
- 2tphR St. Pancras – St. Albans – Luton Airport Parkway – Luton – Bedford – Wellingborough – Kettering – Market Harborough – Leicester – East Midlands Parkway – Attenborough – Beeston – Nottingham
- 2tphR St. Pancras – St. Albans – Luton Airport Parkway – Luton – Bedford – Wellingborough – Kettering – Corby – Oakham – Melton Mowbray – Nottingham – Langley Mill – Alfreton & Mansfield Parkway – Chesterfield – Sheffield Midland – South Yorkshire (Meaadowhall) – Rotherham – Pontefract – York (note that this uses HS3 on the approach to Nottingham)
- 2tphR St. Pancras – St. Albans – Luton Airport Parkway – Luton – Bedford – Olney – Northampton – Rugby – Coventry – Birmingham Int'l – Birmingham New St. – University – Bromsgrove – Droitwich Spa – Worcester Shrub Hill.
- 2tphR (Thameslink) Brighton → Bedford – Olney – Northampton
- 2tphR Birmingham New St. – Coleshill Parkway – Nuneaton – Hinckley – Leicester – Melton Mowbray – Oakham – Stamford – Peterborough – March – Ely – Bury St. Edmunds – Ipswich – Harwich International – Harwich Town
- 2tphR Bournemouth – Brockenhurst – Southampton – Southampton Airport Parkway – Winchester – Basingstoke – Reading – Oxford – Banbury – Leamington Spa – Kenilworth – Coventry – Birmingham Int'l – Birmingham New St. (reverse) – Tamworth – Burton-on-Trent – Derby – Chesterfield – Sheffield – South Yorkshire (Meadowhall) – Rotherham – Wakefield Westgate – Leeds City – Micklefield – York
- 2tphR Plymouth – Ivybridge – Totnes – Newton Abbot – Teignmouth – Dawlish – Exeter St. David's – Cullompton – Tiverton Junction – Taunton – Bridgwater – Highbridge – Weston Super Mare – Bristol Temple Meads – Bristol Parkway – Gloucester (reverse) – Cheltenham Spa – Ashchurch – Worcester Shrub Hill – Droitwich Spa – Bromsgrove – University – Birmingham New St. – Tamworth – Burton on Trent – Derby – Chesterfield – Sheffield – South Yorkshire (Meadowhall) – Rotherham – Wakefield Westgate – Leeds City – Micklefield – York
- 2tphR Norwich – Wymondham – Thetford – Ely (reverse) –  
2tphR Stansted Airport – Cambridge – Ely (join/split) –  
– March – Peterborough – Stamford – Oakham – Melton Mowbray – Nottingham – Langley Mill – Alfreton and Mansfield Parkway – Chesterfield – Sheffield (reverse) – Chinley – Stockport – Manchester Piccadilly – Manchester Oxford Road – Salford Crescent – Bolton – Horwich Parkway – Chorley – Leyland – Preston – Lancaster – Morecambe
- 2tphR York – Thirsk – Northallerton – Darlington – Durham – Chester le Street – Newcastle – Morpeth – Alnmouth – Berwick-upon-Tweed – Dunbar – Drem – Edinburgh Waverley
- 2tphRS (Tees Valley Metro) Bishop Auckland – Shildon – Newton Aycliffe – Heighington – North Road – Darlington – Dinsdale – Tees-Side Airport – Allen's West – Eaglescliffe – Thornaby – Middlesbrough – British Steel (Redcar) – Redcar Central – Redcar East – Marske – Saltburn

#### HS7 North of Birmingham:

- 2tphG Plymouth – Exeter St. David’s – Taunton – Bristol Temple Meads HS – Bristol Parkway HS – Cheltenham Spa – Worcester Shrub Hill – Birmingham Interchange – Derby – Sheffield HS – Huddersfield – Leeds HS – York – Darlington – Durham (Relly Mill) – Consett – Newcastle
- 2tphG Swansea – Port Talbot – Cardiff (Rhoose) Airport – Cardiff HS – Bristol Parkway HS – Cheltenham Spa – Worcester Shrub Hill – Birmingham Interchange – Derby – Nottingham – Peterborough – Norwich
- 2tphGG Birmingham HS – Derby – Sheffield HS – Huddersfield – Leeds HS – York
- 2tphC Birmingham HS – Derby – Nottingham – Newark Castle – Lincoln Central – Market Rasen – Grimsby Town – Cleethorpes

#### HS8:

- 2tphGG Norwich – Peterborough – Nottingham – Sheffield HS – Manchester HS – Manchester Victoria LL – Bolton – Preston

#### HS9:

- 2tphGG Liverpool Lime Street – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – York HS – Darlington – Durham (Relly Mill) – Consett – Newcastle
- 2tphC Liverpool Lime Street – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – Micklefield – York – Thirsk – Northallerton – Yarm – Eaglescliffe – Thornaby – Middlesbrough
- 2tphC Liverpool Lime Street – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – Micklefield – York – Thirsk – Northallerton – Yarm – Eaglescliffe – Stockton – Hartlepool – Seaham – Sunderland - Newcastle
- 2tphC Preston – Bolton – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – Micklefield – Selby – Hull
- 2tphC Preston – Bolton – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – Micklefield – York – Malton – Seamer – Scarborough

#### HS6:

- 2tphC St. Pancras (East) – Stratford HS – Stansted Airport – Cambridge – Ely – Peterborough – Doncaster – York – Darlington – Durham – Newcastle – Berwick upon Tweed – Edinburgh Waverley

Representative Hourly Non-Cross-Platform Interchange Pattern at Bedford:

- 00R St. Pancras – York via Melton Mowbray  
R (Thameslink) Brighton – Bedford
- 07R St. Pancras – Nottingham  
(Thameslink) Horsham – Northampton
- 15R (Thameslink) Brighton – Corby  
(no connection)
- 23R St. Pancras – Nottingham  
(Thameslink) Horsham – Northampton

– repeating at 30, 37, 45 and 53 minutes past.

Representative Hourly Interchange Pattern at Northampton (the HS3/MML connections are not cross-platform, but the intra-WCML ones are; see the WCML Service Plans article for full details of these):

- 00C St. Pancras – Wolverhampton → Liverpool / Chester  
R (Thameslink) Brighton → Northampton  
R Euston – Crewe via Stoke  
R Euston – Rugby
- 07C St. Pancras – Derby – Sheffield – York  
R Euston – Birmingham New St.
- 15R St. Pancras – Birmingham New St. – Worcester  
R Euston – Crewe via Stafford  
R Euston – Rugby
- 23C St. Pancras – Derby – Matlock (or Sheffield) – Manchester  
R Euston – Barrow in Furness

– repeating at 30, 37, 45 and 53 minutes past.

Representative Hourly Cross-Platform Interchange Pattern at Leicester:

- 00R St. Pancras – East Midlands Parkway – Nottingham  
C St. Pancras – Loughborough – Derby – Sheffield – York
- 07GG Brighton – York  
(no connection)
- 15C St. Pancras – East Midlands Parkway – Derby – Matlock/Sheffield – Manchester  
R St. Pancras – Loughborough – Nottingham
- 23GG Brighton – Preston  
R Birmingham New St. – Harwich Town

– repeating at 30, 45 and 53 minutes past. Note that these services depart in the order stated, thus the RM St. Pancras – Nottingham service, calling at East Midlands Parkway (but not Loughborough) departs

before the CC St. Pancras – York service, calling at Loughborough (but not East Midlands Parkway). This ensures that Loughborough and East Midlands Parkway stations each have 4tph, alternatively to Derby and points north, or to Nottingham, but no CC or RM train serves both. (There is a stopping service between Leicester and Derby, which does.)

Representative Hourly (non-cross-platform) Interchange Pattern at Derby:

- 00G HS7 Plymouth – Newcastle
- R Bournemouth – York
- 07GG HS7 Birmingham – York
- R Plymouth – York
- 15G HS4/HS7 Swansea – Norwich
- C St. Pancras – York
- 23C HS7 Birmingham – Cleethorpes
- C St. Pancras – Manchester

– repeating at 30, 37, 45 and 53 minutes past.

Representative Hourly Cross-Platform Interchange Pattern at Nottingham:

- 00GG HS8 Norwich – Preston (no connection)
- 07GG Pancras Cross – York (HS Metro)
- C Cleethorpes – Birmingham HS
- R St. Pancras – Melton Mowbray – York
- R Norwich / Stansted Airport – Morecambe
- 23GG HS3/HS8 Brighton – Preston (HS Metro)
- G HS8/HS7 Norwich – Swansea

– repeating at 30, 37 and 53 minutes past.

Representative Hourly Cross-Platform Interchange Pattern at Sheffield HS/Midland (refer to the HS Transpennine Routes and Service Plans article for full details of the Regional Metro services). The HS services have cross-platform interchange, and the RM services have longer stops, to allow for the platform change. The pattern is:

- 00GG Brighton – York (HS Metro)
- GG HS8 Norwich – Preston
- R Skegness - Liverpool
- 07G HS7 Plymouth – Newcastle
- (no cross-platform connection)
- R Cleethorpes – Blackpool
- 15GG HS3/HS8 Brighton – Preston
- GG HS7 Birmingham HS – York
- R Norwich / Stansted Airport – Morecambe

23G HS3/HS8 Tunbridge Wells - Liverpool  
(no cross-platform connection)  
R Hull – Southport

– repeating at 30, 37, 45 and 53 minutes past.

#### Representative Hourly Cross-Platform Interchange and Terminating Pattern at York

00G Eastbourne – Glasgow  
GG Brighton – York (HS Metro)

07G Tunbridge Wells – York (UHS, Leeds fast)  
G Plymouth – Newcastle  
C St.Pancras (West) – York (via Derby – not cross platform)

15G Newhaven – Newcastle  
GG Birmingham HS – York

23GG Liverpool – Newcastle  
C St. Pancras (East) – Edinburgh  
R St. Pancras (West) – York (via Melton Mowbray – not cross-platform)

– repeating at 30, 40, 45 and 55 minutes past. The services terminating at 07 and 23 minutes past are obviously intended for (non-cross-platform) connection into those 7 / 8 minutes later.

#### Representative Hourly Cross-Platform Interchange Pattern at Darlington:

00G Eastbourne – Glasgow  
RS Bishop Auckland – Middlesborough – Saltburn

07G Plymouth – Newcastle  
RS Bishop Auckland – Middlesborough – Saltburn

15G Newhaven – Newcastle  
RS Bishop Auckland – Middlesborough – Saltburn

23GG Liverpool – Newcastle  
C St. Pancras (East) – Edinburgh (not cross-platform – uses ECML platforms)  
RS Bishop Auckland – Middlesborough – Saltburn

– repeating at 30 and 45 minutes past.

#### Representative Hourly Cross-Platform Interchange Pattern at Newcastle:

00G Plymouth – Newcastle  
R York – Edinburgh

07G Newhaven – Newcastle  
(no connection)

15GG Liverpool – Newcastle  
C St. Pancras (East) – Edinburgh

– repeating at 30 and 45 minutes past.

Representative Hourly Cross-Platform Interchange Pattern at Hexham:

00G Eastbourne – Glasgow  
C Newcastle – Carlisle  
R Newcastle – Hexham (all stations)

15G Newcastle – Glasgow  
(no interchange)

– repeating at 30 and 45 minutes past.

Representative Hourly Cross-Platform Interchange Pattern at Hawick:

00G Eastbourne – Glasgow  
C Hawick – Inverness  
R Hawick – Aberdeen via the bridges  
15G Newcastle – Glasgow  
R Hawick – Dundee via the bridges

– repeating at 30 and 45 minutes past.

Service Plan 5 is the full service plan for HS3 Mk2 at its full extent, but before any of the quadrupling made possible thereby has been implemented. The loadings which it imposes are:

• Pancras Cross	– West Hampstead Junction	12tph
• St. Pancras	– West Hampstead Junction	14tph
• West Hampstead Junction	– Collingtree Junctions	18tph
• Collingtree Junctions	– Langborough Junction	8tph
• Collingtree Junctions	– Northampton Castle station	10tph
• Northampton Castle station	– Langborough Junction	8tph
• Langborough Junction	– Watkin Road Junction	16tph
• Watkin Rd. Junction	– Humberstone Rd. Junction (main line)	8tph
• Watkin Rd. Junction	– Regent St. Junction	8tph
• Regent St Junction	– Swain St. Junction	14tph
• Swain St. Junction	– Humberstone Rd. Junction	4tph
• Humberstone Rd. Junction	– Stanford Junction	12tph
• Stanford Junction	– Nuthall South Junction (main line)	8tph
• Stanford Junction	– Edwalton Junction	4tph
• Asfordby Junction	– Edwalton Junction	6tph
• Edwalton Junction	– Manvers St. Junction	10tph
• Manvers St. Junction	– Nottingham HS station	10tph
• Manvers St. Junction	– Nottingham classic station	2tph
• Nottingham HS station	– Strelley Junction	10tph
• Strelley Junction	– Awsworth Junction	4tph
• Strelley Junction	– Nuthall South Junction	6tph
• Nuthall South Junction	– Nuthall North Junction	14tph



• Awsworth Junction	– Nuthall North Junction	4tph
• Nuthall North Junction	– Beighton Junction	18tph
• Beighton Junction	– Woodhouse HS Junction	12tph
• Woodhouse HS Junction	– Ladybower Junction	12tph
• Ladybower Junction	– Guide Bridge HS Junction	6tph
• Ladybower Junction	– Paddock Junction	6tph
• Paddock Junction	– Gelderd Rd. North Junction	14tph
• Beighton Junction	– Altofts Junction	6tph
• Altofts Junction	– Gelderd Road North Junction	2tph
• Altofts Junction	– Garforth East Junction	4tph
• Gelderd Road North Junction	– Garforth West Junction	16tph
• Garforth West Junction	– Garforth East Junction	12tph
• Garforth West Junction	– Micklefield HS Junction	6tph
• Garforth East Junction	– York HS station	14tph
• York HS station	– Derwent Hill Junction	8tph
• Derwent Hill Junction	– Stocksfield Junction	2tph
• Derwent Hill Junction	– Paradise Junction	6tph
• Newcastle	– Paradise Junction	10tph
• Paradise Junction	– Stocksfield Junction	4tph
• Stocksfield Junction	– Tynegreen Junction	6tph
• Tynegreen Junction	– Hawick	4tph
• Hawick	– Edinburgh	6tph

Elucidation of the loadings:

1. Pancras Cross – West Hampstead Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
= 12tph
2. St. Pancras – West Hampstead Junction  
2tphC St. Pancras – York (serves Loughborough)  
2tphC St. Pancras – Manchester (serves East Midlands Parkway)  
2tphC St. Pancras – Wolverhampton (Splits/Joins) – Liverpool / Chester  
2tphR St. Pancras – Nottingham (serves East Midlands Parkway)  
2tphR St. Pancras – Nottingham (serves Loughborough)  
2tphR St. Pancras – York via Melton Mowbray  
2tphR St. Pancras – Worcester  
=14tph
3. West Hampstead Junction – Collingtree Junctions  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York (serves Loughborough)  
2tphC St. Pancras – Manchester (serves East Midlands Parkway)  
2tphC St. Pancras – Wolverhampton (Splits/Joins) – Liverpool / Chester  
=18tph
4. Collingtree Junctions – Langborough Junction (direct)  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
=8tph
5. Collingtree Junctions – Northampton Castle station  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York (serves Loughborough)  
2tphC St. Pancras – Manchester (serves East Midlands Parkway)  
2tphC St. Pancras – Wolverhampton (Splits/Joins) – Liverpool / Chester  
=10tph

6. Northampton Castle station – Langborough Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York (serves Loughborough)  
2tphC St. Pancras – Manchester (serves East Midlands Parkway)  
= 8tph
  
7. Langborough Junction – Watkin Rd. Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York (serves Loughborough)  
2tphC St. Pancras – Manchester (serves East Midlands Parkway)  
=16tph
  
8. Watkin Rd. Junction – Humberstone Rd. Junction (direct)  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
=8tph
  
9. Watkin Rd. Junction – Regent St. Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York (serves Loughborough)  
2tphC St. Pancras – Manchester (serves East Midlands Parkway)  
=8tph
  
10. Regent St. Junction – Swain St. Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York (serves Loughborough)  
2tphC St. Pancras – Manchester (serves East Midlands Parkway)  
2tphR St. Pancras – Nottingham (serves Loughborough)  
2tphR St. Pancras – Nottingham (serves East Midlands Parkway)  
2tphR Birmingham New St. – Harwich  
=14tph
  
11. Swain St. Junction – Humberstone Rd. Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
=4tph

12. Humberstone Rd, Junction – Stanford Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
= 12tph
13. Stanford Junction – Nuthall South Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
=8tph
- 14 Stanford Junction – Edwalton Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
=4tph
- 15 Asfordby Junction (HS8) – Edwalton Junction  
2tphG HS7 Norwich – Swansea  
2tphGG HS8 Norwich – Preston  
2tphR St. Pancras – York via Melton Mowbray  
= 6tph
16. Edwalton Junction – Manvers St. Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphG HS7 Norwich – Swansea  
2tphGG HS8 Norwich – Preston  
2tphR St. Pancras – York via Melton Mowbray  
= 10tph
17. Manvers St. Junction – Nottingham HS station  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphG HS7 Norwich – Swansea  
2tphGG HS8 Norwich – Preston  
2tphC HS7 Cleethorpes – Birmingham HS  
= 10tph
18. Manvers St. Junction – Nottingham (classic station, NB only services coming from HS3)  
2tphR St. Pancras – York via Melton Mowbray  
=2tph

19. Nottingham HS station – Strelley Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphG HS7 Norwich – Swansea  
2tphGG HS8 Norwich – Preston  
2tphC HS7 Cleethorpes – Birmingham HS  
= 10tph
20. Strelley Junction – Awsworth Junction  
2tphG HS7 Norwich – Swansea  
2tphC HS7 Cleethorpes – Birmingham HS  
= 4tph
21. Strelley Junction – Nuthall South Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
= 6tph
22. Nuthall South Junction – Nuthall North Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
= 14tph
23. Awsworth Junction – Nuthall North Junction  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS7 Birmingham HS – York HS  
= 4tph
24. Nuthall North Junction – Beighton Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphG Tunbridge Wells – Leeds HS – York HS  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS7 Birmingham HS – York HS  
=18tph

25. Beighton Junction – Woodhouse HS Junction  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS7 Birmingham HS – York HS  
=12tph
26. Woodhouse HS Junction – Sheffield HS – Ladybower Junction  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS7 Birmingham HS – York HS  
=12tph
27. Ladybower Junction – Guide Bridge HS Junction  
2tphG Tunbridge Wells – Sheffield HS – Liverpool  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
=6tph
28. Ladybower Junction – Paddock Junction  
2tphGG Brighton – York  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS7 Birmingham HS – York HS  
=6tph
29. Paddock Junction – Huddersfield – Gelderd Rd. North Junction  
2tphGG Brighton – York  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS7 Birmingham HS – York HS  
2tphGG HS9 Liverpool – Newcastle  
2tphC HS9 Liverpool – Middlesbrough  
2tphC HS9 Preston – Hull  
2tphC HS9 Preston – Scarborough  
=14tph
30. Beighton Junction – Altofts Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG Tunbridge Wells – Leeds HS – York HS  
=6tph

31.     Altofts Junction – Gelderd Rd. North Junction  
        2tphG Tunbridge Wells – Leeds HS – York HS  
        = 2tph
  
32.     Altofts Junction – Garforth East Junction  
        2tphG Eastbourne – Glasgow  
        2tphG Newhaven – Newcastle  
        =4tph
  
33.     Gelderd Rd. North Junction – Leeds HS – Garforth West Junction  
        2tphG Tunbridge Wells – Leeds HS – York HS  
        2tphGG Brighton – York  
        2tphG HS7 Plymouth – Newcastle  
        2tphGG HS7 Birmingham HS – York HS  
        2tphGG HS9 Liverpool – Newcastle  
        2tphC HS9 Liverpool – Middlesborough  
        2tphC HS9 Preston – Hull  
        2tphC HS9 Preston – Scarborough  
        =16tph
  
34.     Garforth West Junction – Garforth East Junction  
        2tphG Tunbridge Wells – Leeds HS – York HS  
        2tphGG Brighton – York  
        2tphG HS7 Plymouth – Newcastle  
        2tphGG HS7 Birmingham HS – York HS  
        2tphGG HS9 Liverpool – Newcastle  
        2tphC HS9 Liverpool – Middlesborough  
        =12tph
  
35.     Garforth West Junction – Micklefield Junction  
        2tphC HS9 Liverpool – Middlesborough  
        2tphC HS9 Preston – Hull  
        2tphC HS9 Preston – Scarborough  
        = 6tph
  
36.     Garforth East Junction – York HS  
        2tphG Eastbourne – Glasgow  
        2tphG Newhaven – Newcastle  
        2tphG Tunbridge Wells – Leeds HS – York HS  
        2tphGG Brighton – York  
        2tphG HS7 Plymouth – Newcastle  
        2tphGG HS7 Birmingham HS – York HS  
        2tphGG HS9 Liverpool – Newcastle  
        = 14tph
  
37.     York HS – Derwent Hill Junction  
        2tphG Eastbourne – Glasgow  
        2tphG Newhaven – Newcastle

- 2tphG HS7 Plymouth – Newcastle  
 2tphGG HS9 Liverpool – Newcastle  
 = 8tph
38. Derwent Hill Junction – Stocksfield Junction  
 2tphG Eastbourne – Glasgow  
 = 2tph
39. Derwent Hill Junction – Paradise Junction  
 2tphG Newhaven – Newcastle  
 2tphG HS7 Plymouth – Newcastle  
 2tphGG HS9 Liverpool – Newcastle  
 = 6tph
40. Paradise Junction – Newcastle  
 2tphG Newhaven – Newcastle  
 2tphG HS7 Plymouth – Newcastle  
 2tphGG HS9 Liverpool – Newcastle  
 2tphG Newcastle – Glasgow  
 2tphC Newcastle – Carlisle  
 = 10tph
41. Paradise Junction – Stocksfield Junction  
 2tphG Newcastle – Glasgow  
 2tphC Newcastle – Carlisle  
 = 4tph
42. Stocksfield Junction – Tyne Green Junction  
 2tphG Eastbourne – Glasgow  
 2tphG Newcastle – Glasgow  
 2tphC Newcastle – Carlisle  
 = 6tph
43. Tyne Green Junction – Hawick  
 2tphG Eastbourne – Glasgow  
 2tphG Newcastle – Glasgow  
 = 4tph
44. Hawick – Edinburgh  
 2tphG Eastbourne – Glasgow  
 2tphG Newcastle – Glasgow  
 2tphC HS14 Hawick – Inverness  
 = 6tph



## *Service Plan 6*

### HS3 UHS:

- 2tphG Eastbourne – Lewes – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – York HS – Darlington Bank Top – Durham Relly Mill – Consett – Hexham – Hawick – Edinburgh Waverley HS – Haymarket HS – Edinburgh Airport – Bellgrove – Glasgow St. Enoch
- 2tphG Newhaven Marine – Newhaven Town – Lewes – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – York HS – Darlington Bank Top – Durham Relly Mill – Consett – Newcastle
- 2tphG Tunbridge Wells West – Tunbridge Wells – Tonbridge – East Croydon – Victoria (LL) – Pancras Cross – Sheffield HS – Manchester HS – Manchester Victoria (LL) – Liverpool Lime St.
- 2tphG Tunbridge Wells West – Tunbridge Wells – Tonbridge – East Croydon – Victoria (LL) – Pancras Cross – Sheffield HS – Manchester HS – Manchester Victoria (LL) – Bolton – Preston
- 4tphG Tunbridge Wells West – Tunbridge Wells – Tonbridge – East Croydon – Victoria (LL) – Pancras Cross – South Yorkshire – Leeds HS
- 2tphG Portsmouth & Southsea – Hayling Island – Chichester – Arundel HS – Horsham – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – Nottingham – Derby
- 2tphG Newcastle – Hexham – Hawick – Lauder – Edinburgh Waverley HS – Haymarket HS – Edinburgh Airport – Bellgrove – Glasgow St. Enoch
- 2tphC Newcastle – Hexham – Haydon Bridge – Bardon Mill – Haltwhistle – Brampton – Wetheral – Carlisle Citadel
- 2tphC Hawick – Lauder – Edinburgh Waverley HS – Haymarket HS – Edinburgh Airport – Stirling – Gleneagles – Perth – Dunkeld & Birnam – Pitlochry Blair Atholl Dalwhinnie – Newtonmore – Kingussie – Aviemore – Carrbridge – Inverness

(Note that the Newcastle – Hexham and Hawick – Inverness services are included in the UHS section because they interface with the Glasgow service. Note also that the Tunbridge Wells – Leeds service, now doubled in frequency, used to continue on to York, but now connects at Leeds into services to Newcastle.)

### HS Metro:

- 2tphGG Brighton – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – Luton & Dunstable Parkway – Northampton Castle – Leicester – Nottingham – Sheffield HS – Huddersfield – Leeds HS – York HS
- 2tphGG Brighton – Gatwick Airport – East Croydon – Victoria (LL) – Pancras Cross – Luton & Dunstable Parkway – Northampton Castle – Leicester – Nottingham – Sheffield HS – Manchester HS – Manchester Victoria (LL) – Bolton – Preston
- 2tphC St. Pancras West – Luton & Dunstable Parkway – Northampton Castle – Leicester – Loughborough – Derby – Chesterfield – Sheffield Midland – South Yorkshire (Meadowhall) – Rotherham – Wakefield Westgate – Leeds City – Micklefield – York
- 2tphC St. Pancras West – Luton & Dunstable Parkway – Northampton Castle – Leicester – East Midlands Parkway – Derby – Matlock – Bakewell – Miller's Dale (from/to Buxton) – Chinley – Stockport – Manchester Piccadilly (alternatively: – Derby – Chesterfield – Sheffield Midland (revers) – Chinley – if the Peak route has not yet been reopened.)

- 2tphC St. Pancras West – Luton & Dunstable Parkway – Northampton Castle – Rugby HS – Coventry HS – Birmingham International – Birmingham New St. – Wolverhampton (splits/joins):
  1. – Stafford – Crewe – Runcorn – Liverpool South Parkway – Liverpool Lime St.
  2. – Telford – Wellington – Shrewsbury – Wrexham – Chester
- 2tphC St. Pancras West – Luton & Dunstable Parkway – Northampton Castle – Rugby HS – Coventry HS – Birmingham International – Birmingham New St. – University – Bromsgrove – Droitwich Spa – Worcester Shrub Hill (NB this was formerly a RM service)
- 2tphC Bournemouth – Brockenhurst – Southampton – Southampton Airport Parkway – Winchester – Basingstoke – Reading (reverse) – Oxford – Banbury – Rugby (GC) – Leicester – Nottingham – South Yorkshire HS – York HS – Darlington – Durham Relly Mill – Consett - Newcastle
- 2tphC Paddington – Old Oak Common – LHR Interchange – Slough – Maidenhead – Bourne End (to/from Marlow) – High Wycombe – Princes Risborough – Calvert – Rugby (GC) Leicester – Melton Mowbray

#### MML and other Regional Metro:

- 2tphR St. Pancras – St. Albans – Luton Airport Parkway – Luton – Bedford – Wellingborough – Kettering – Market Harborough – Leicester – Loughborough – Attenborough – Beeston - Nottingham
- 2tphR St. Pancras – St. Albans – Luton Airport Parkway – Luton – Bedford – Wellingborough – Kettering – Market Harborough – Leicester – East Midlands Parkway – Attenborough – Beeston - Nottingham
- 2tphR St. Pancras – St. Albans – Luton Airport Parkway – Luton – Bedford – Wellingborough – Kettering – Corby – Oakham – Melton Mowbray – Nottingham – Langley Mill – Alfreton & Mansfield Parkway – Chesterfield – Sheffield Midland – South Yorkshire (Meaadowhall) – Rotherham – Pontefract – York (note that this uses HS3 on the approach to Nottingham)
- 2tphR (Thameslink) Brighton → Bedford – Olney – Northampton
- 2tphR Birmingham New St. – Coleshill Parkway – Nuneaton – Hinckley – Leicester – Melton Mowbray – Oakham – Stamford – Peterborough – March – Ely – Bury St. Edmunds – Ipswich – Harwich International – Harwich Town
- 2tphR Bournemouth – Brockenhurst – Southampton – Southampton Airport Parkway – Winchester – Basingstoke – Reading – Oxford – Banbury – Leamington Spa – Kenilworth – Coventry – Birmingham Int'l – Birmingham New St. (reverse) – Tamworth – Burton-on-Trent – Derby – Chesterfield – Sheffield – South Yorkshire (Meadowhall) – Rotherham – Wakefield Westgate – Leeds City – Micklefield – York
- 2tphR Plymouth – Ivybridge – Totnes – Newton Abbot – Teignmouth – Dawlish – Exeter St. David's – Cullompton – Tiverton Junction – Taunton – Bridgwater – Highbridge – Weston Super Mare – Bristol Temple Meads – Bristol Parkway – Gloucester (reverse) – Cheltenham Spa – Ashchurch – Worcester Shrub Hill – Droitwich Spa – Bromsgrove – University – Birmingham New St. – Tamworth – Burton on Trent – Derby – Chesterfield – Sheffield – South Yorkshire (Meadowhall) – Rotherham – Wakefield Westgate – Leeds City – Micklefield – York
- 2tphR Norwich – Wymondham – Thetford – Ely (reverse) –
- 2tphR Stansted Airport – Cambridge – Ely (join/split) –
- – March – Peterborough – Stamford – Oakham – Melton Mowbray – Nottingham – Langley Mill
- – Alfreton and Mansfield Parkway – Chesterfield – Sheffield (reverse) – Chinley – Stockport –

Manchester Piccadilly – Manchester Oxford Road – Salford Crescent – Bolton – Horwich Parkway – Chorley – Leyland – Preston – Lancaster – Morecambe

- 2tphR York – Thirsk – Northallerton – Darlington – Durham – Chester le Street – Newcastle – Morpeth – Alnmouth – Berwick-upon-Tweed – Dunbar – Drem – Edinburgh Waverley
- 2tphRS (Tees Valley Metro) Bishop Auckland – Shildon – Newton Aycliffe – Heighington – North Road – Darlington – Dinsdale – Tees-Side Airport – Allen’s West – Eaglescliffe – Thornaby – Middlesbrough – British Steel (Redcar) – Redcar Central – Redcar East – Marske – Saltburn

#### HS7 North of Birmingham:

- 2tphG Plymouth – Exeter St. David’s – Taunton – Bristol Temple Meads HS – Bristol Parkway HS – Cheltenham Spa – Worcester Shrub Hill – Birmingham Interchange – Derby – Sheffield HS – Huddersfield – Leeds HS – York – Darlington – Durham (Relly Mill) – Consett – Newcastle
- 2tphG Swansea – Port Talbot – Cardiff (Rhoose) Airport – Cardiff HS – Bristol Parkway HS – Cheltenham Spa – Worcester Shrub Hill – Birmingham Interchange – Derby – Nottingham – Peterborough – Norwich
- 2tphGG Birmingham HS – Derby – Sheffield HS – Huddersfield – Leeds HS – York
- 2tphC Birmingham HS – Derby – Nottingham – Newark Castle – Lincoln Central – Market Rasen – Grimsby Town - Cleethorpes

#### HS8:

- 2tphGG Norwich – Peterborough – Nottingham – Sheffield HS – Manchester HS – Manchester Victoria LL – Bolton – Preston
- 2tphC Hull Paragon – Brigg – Gainsborough Central – Retford (LL) – Worksop – Sheffield HS – Manchester HS – Victoria LL – Liverpool Lime St.
- 2tphC Cleethorpes – Grimsby Town – Brigg – Gainsborough Central – Retford (LL) – Worksop – Sheffield HS – Manchester HS – Victoria LL – Bolton – Preston

#### HS9:

- 2tphGG Liverpool Lime Street – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – York HS – Darlington – Durham (Relly Mill) – Consett – Newcastle
- 2tphC Liverpool Lime Street – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – Micklefield – York – Thirsk – Northallerton – Yarm – Eaglescliffe – Thornaby – Middlesbrough
- 2tphC Liverpool Lime Street – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – Micklefield – York – Thirsk – Northallerton – Yarm – Eaglescliffe – Stockton – Hartlepool – Seaham – Sunderland - Newcastle
- 2tphC Preston – Bolton – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – Micklefield – Selby – Hull
- 2tphC Preston – Bolton – Manchester Victoria (LL) – Manchester HS – Huddersfield – Leeds HS – Micklefield – York – Malton – Seamer – Scarborough

HS6:

- 2tphC St. Pancras (East) – Stratford HS – Stansted Airport – Cambridge – Ely – Peterborough – Doncaster – York – Darlington – Durham – Newcastle – Berwick upon Tweed – Edinburgh Waverley

Representative Hourly Non-Cross-Platform Interchange Pattern at Bedford:

- 00R St. Pancras – York via Melton Mowbray  
R (Thameslink) Brighton – Bedford
- 07R St. Pancras – Nottingham  
(Thameslink) Horsham – Northampton
- 15R (Thameslink) Brighton – Corby  
(no connection)
- 23R St. Pancras – Nottingham  
(Thameslink) Horsham – Northampton

– repeating at 30, 37, 45 and 53 minutes past.

Representative Hourly Interchange Pattern at Northampton (the HS3/MML connections are not cross-platform, but the intra-WCML ones are; see the WCML Service Plans article for full details of these):

- 00C St. Pancras – Wolverhampton → Liverpool / Chester  
R (Thameslink) Brighton → Northampton  
R Euston – Crewe via Stoke  
R Euston – Rugby
- 07C St. Pancras – Derby – Sheffield – York  
R Euston – Birmingham New St.
- 15C St. Pancras – Birmingham New St. – Worcester  
R Euston – Crewe via Stafford  
R Euston – Rugby
- 23C St. Pancras – Derby – Matlock (or Sheffield) – Manchester  
R Euston – Barrow in Furness

– repeating at 30, 37, 45 and 53 minutes past.

Representative Hourly Cross-Platform Interchange Pattern at Leicester:

- 00R St. Pancras – East Midlands Parkway – Nottingham  
C St. Pancras – Loughborough – Derby – Sheffield – York
- 07GG Brighton – York  
C Bournemouth - Newcastle
- 15C St. Pancras – East Midlands Parkway – Derby – Matlock/Sheffield – Manchester  
R St. Pancras – Loughborough – Nottingham

23GG Brighton – Preston

R Birmingham New St. – Harwich Town

– repeating at 30, 45 and 53 minutes past. Note that these services depart in the order stated, thus the RM St. Pancras – Nottingham service, calling at East Midlands Parkway (but not Loughborough) departs before the CC St. Pancras – York service, calling at Loughborough (but not East Midlands Parkway). This ensures that Loughborough and East Midlands Parkway stations each have 4tph, alternatively to Derby and points north, or to Nottingham, but no CC or RM train serves both. (There is a stopping service between Leicester and Derby, which does.)

Representative Hourly (non-cross-platform) Interchange Pattern at Derby:

00G HS7 Plymouth – Newcastle

R Bournemouth – York

07GG HS7 Birmingham – York

R Plymouth – York

15G HS4/HS7 Swansea – Norwich

C St. Pancras – York

23C HS7 Birmingham – Cleethorpes

C St. Pancras – Manchester

– repeating at 30, 37, 45 and 53 minutes past.

Representative Hourly Cross-Platform Interchange Pattern at Nottingham:

00GG HS8 Norwich – Preston

C Bournemouth – Newcastle

07GG Pancras Cross – York (HS Metro)

C Cleethorpes – Birmingham HS

R St. Pancras – Melton Mowbray – York

R Norwich / Stansted Airport – Morecambe

23GG HS3/HS8 Brighton – Preston (HS Metro)

G HS8/HS7 Norwich – Swansea

– repeating at 30, 37 and 53 minutes past.

Representative Hourly Cross-Platform Interchange Pattern at Sheffield HS/Midland (refer to the HS Transpennine Routes and Service Plans article for full details of the Regional Metro services). The HS services have cross-platform interchange, and the RM services have longer stops, to allow for the platform change. The pattern is:

00GG Brighton – York (HS Metro)

GG HS8 Norwich – Preston

R Skegness – Liverpool

07G HS3/HS8 Tunbridge Wells – Preston  
G HS7 Plymouth – Newcastle  
C HS8 Hull – Liverpool  
R Cleethorpes – Blackpool

15GG HS3/HS8 Brighton – Preston  
GG HS7 Birmingham HS – York  
R Norwich / Stansted Airport – Morecambe

23G HS3/HS8 Tunbridge Wells – Liverpool  
C HS8 Cleethorpes – Preston  
R Hull – Southport

– repeating at 30, 37, 45 and 53 minutes past.

#### Representative Hourly Cross-Platform Interchange and Terminating Pattern at Leeds HS:

00G Tunbridge Wells – Leeds  
G Plymouth – Newcastle

15G Tunbridge Wells – Leeds  
G Liverpool – Newcastle

– repeating at 30 and 45 minutes past.

#### Representative Hourly Cross-Platform Interchange and Terminating Pattern at York:

00G Eastbourne – Glasgow  
C Bournemouth – Newcastle  
GG Brighton – York (HS Metro)

07G Plymouth – Newcastle  
C St.Pancras (West) – York (via Derby)

15G Newhaven – Newcastle  
GG Birmingham HS – York

23GG Liverpool – Newcastle  
C St. Pancras (East) – Edinburgh  
R St. Pancras (West) – York (via Melton Mowbray – not cross-platform)

– repeating at 30, 40, 45 and 55 minutes past. The services terminating at 07 and 23 minutes past are obviously intended for (non-cross-platform) connection into those 7 / 8 minutes later.

#### Representative Hourly Cross-Platform Interchange Pattern at Darlington:

00G Eastbourne – Glasgow  
RS Bishop Auckland – Middlesborough – Saltburn  
C Bournemouth – Newcastle

07G Plymouth – Newcastle  
 RS Bishop Auckland – Middlesborough – Saltburn

15G Newhaven – Newcastle  
 RS Bishop Auckland – Middlesborough – Saltburn

23GG Liverpool – Newcastle  
 C St. Pancras (East) – Edinburgh (not cross-platform – uses ECML platforms)  
 RS Bishop Auckland – Middlesborough – Saltburn

– repeating at 30 and 45 minutes past.

#### Representative Hourly Cross-Platform Interchange Pattern at Newcastle:

00G Plymouth – Newcastle  
 R York – Edinburgh

07G Newhaven – Newcastle  
 (no connection)

15GG Liverpool – Newcastle  
 C St. Pancras (East) – Edinburgh

23C Bournemouth – Newcastle  
 (no connection)

– repeating at 30, 37, 45 and 53 minutes past.

#### Representative Hourly Cross-Platform Interchange Pattern at Hexham:

00G Eastbourne – Glasgow  
 C Newcastle – Carlisle  
 R Newcastle – Hexham (all stations)

15G Newcastle – Glasgow  
 (no interchange)

– repeating at 30 and 45 minutes past.

#### Representative Hourly Cross-Platform Interchange Pattern at Hawick:

00G Eastbourne – Glasgow  
 C Hawick – Inverness  
 R Hawick – Aberdeen via the bridges

15G Newcastle – Glasgow  
 R Hawick – Dundee via the bridges

– repeating at 30 and 45 minutes past.

Adding the new services introduced in service plan 6 to those of plan 5 imposes the following loadings on HS3; note that we now, between London and Beighton Junction, and between Garforth East Junction and York, distinguish between main lines (the inner pair of 4 tracks) and relief lines (the outer tracks). Also the main lines are the two tracks directly linking Beighton and Garforth East Junctions via Altofts Junction, also Altofts Junction to Leeds. Generally speaking, the main lines carry the UHS services, and the relief lines the HS Metro and CC services, though this is not an absolute distinction, since UHS services travel to Manchester and Liverpool / Preston via Sheffield, and to Derby via Nottingham. North of York there are only 2 tracks anyway, so the main/relief distinction expires.

#### Main Lines:

• Pancras Cross	– Stanford Junction	14tph
• Stanford Junction	– Beighton Junction	12tph
• Beighton Junction	– Altofts Junction	10tph
• Altofts Junction	– Gelderd Rd. North Junction	4tph
• Altofts Junction	– Garforth East Junction	6tph
• Garforth East Junction	– York HS station	14tph
• York HS station	– Derwent Hill Junction	10tph
• Derwent Hill Junction	– Stocksfield Junction	2tph
• Derwent Hill Junction	– Paradise Junction	8tph
• Newcastle	– Paradise Junction	12tph
• Paradise Junction	– Stocksfield Junction	4tph
• Stocksfield Junction	– Tynegreen Junction	6tph
• Tynegreen Junction	– Hawick	4tph
• Hawick	– Edinburgh	6tph



## Relief Lines:

• Pancras Cross	– West Hampstead Junction	4tph
• St. Pancras	– West Hampstead Junction	14tph
• West Hampstead Junction	– Watford Gap Junction	12tph
• Watford Gap Junction	– Onley Junction (HS2-CV)	4tph
• Watford Gap Junction	– Cotesbach Junction	8tph
• Rugby HS Junctn (HS2-CV)	– Cotesbach Junction	4tph
• Cotesbach Junction	– Regent St. Junction	12tph
• Regent St. Junction	– Swain St. Junction	18tph
• Swain St. Junction	– Stanford Junction	6tph
• Stanford Junction	– Edwalton Junction	8tph
• Asfordby Junction (HS8)	– Edwalton Junction	6tph
• Edwalton Junction	– Manvers St. Junction	14tph
• Manvers St. Junction	– Nottingham HS station	14tph
• Manvers St. Junction	– Nottingham (classic) station	2tph
• Nottingham HS station	– Strelley Junction	14tph
• Strelley Junction	– Awsworth Junction	6tph
• Strelley Junction	– Nuthall North Junction	8tph
• Awsworth Junction	– Nuthall North Junction	4tph
• Nuthall North Junction	– Beighton Junction	12tph
• Beighton Junction	– Woodhouse HS Junction	14tph
• Woodhouse HS Junction	– Ladybower Junction	18tph
• Ladybower Junction	– Guide Bridge HS Junction	12tph
• Ladybower Junction	– Paddock Junction	6tph
• Paddock Junction	– Gelderd Rd. North Junction	16tph
• Gelderd Rd. North Junction	– Leeds HS (New Lane) station	20tph
• Leeds HS (New Lane) station	– Garforth West Junction	16tph
• Garforth West Junction	– Garforth East Junction	8tph
• Garforth West Junction	– Micklefield Junction	8tph

The 20tph loading between Gelderd Rd. North Junction and Leeds New Lane looks worrying, but in fact this is a very short distance (c.1 mile) and speeds are low on the approach to the station, so I'm fairly relaxed about it. The 18tph between Woodhouse HS Junction and Ladybower Junction, through Sheffield HS station are slightly more worrying, but HS2 Ltd. is entirely relaxed about this loading.

## Elucidation of Main Line Loadings:

1. Pancras Cross – Stanford Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
4tphG Tunbridge Wells – Sheffield – Manchester – Liverpool / Preston alternately  
4tphG Tunbridge Wells – Leeds  
2tphG Portsmouth & Southsea – Nottingham – Derby  
= 14tph
2. Stanford Junction – Beighton Junction (direct)  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
4tphG Tunbridge Wells – Sheffield – Manchester – Liverpool / Preston alternately  
4tphG Tunbridge Wells – Leeds  
= 12tph
3. Beighton Junction – Altofts Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
4tphG Tunbridge Wells – Leeds  
2tphC Bournemouth – Newcastle  
= 10tph
4. Altofts Junction – Gelderd Rd. North Junction  
4tphG Tunbridge Wells – Leeds  
= 4tph
5. Altofts Junction – Garforth East Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphC Bournemouth – Newcastle  
= 6tph
6. Garforth East Junction – York HS  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS9 Liverpool – Newcastle  
2tphGG Brighton – York  
2tphGG HS7 Birmingham – York  
2tphC Bournemouth – Newcastle  
= 14tph
7. York HS – Derwent Hill Junction  
2tphG Eastbourne – Glasgow  
2tphG Newhaven – Newcastle  
2tphG HS7 Plymouth – Newcastle

2tphGG HS9 Liverpool – Newcastle  
2tphC Bournemouth – Newcastle  
= 10tph

8. Derwent Hill Junction – Stocksfield Junction  
2tphG Eastbourne – Glasgow  
= 2tph

9. Derwent Hill Junction – Paradise Junction  
2tphG Newhaven – Newcastle  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS9 Liverpool – Newcastle  
2tphC Bournemouth – Newcastle  
= 8tph

10. Paradise Junction – Newcastle  
2tphG Newhaven – Newcastle  
2tphG HS7 Plymouth – Newcastle  
2tphGG HS9 Liverpool – Newcastle  
2tphC Bournemouth – Newcastle  
2tphG Newcastle – Glasgow  
2tphC Newcastle – Carlisle  
= 12tph

11. Paradise Junction – Stocksfield Junction  
2tphG Newcastle – Glasgow  
2tphC Newcastle – Carlisle  
= 4tph

12. Stocksfield Junction – Tyne Green Junction  
2tphG Eastbourne – Glasgow  
2tphG Newcastle – Glasgow  
2tphC Newcastle – Carlisle  
= 6tph

13. Tyne Green Junction – Hawick  
2tphG Eastbourne – Glasgow  
2tphG Newcastle – Glasgow  
= 4tph

14. Hawick – Edinburgh  
2tphG Eastbourne – Glasgow  
2tphG Newcastle – Glasgow  
2tphC HS14 Hawick – Inverness  
= 6tph

## Elucidation of Relief Line Loadings:

1. Pancras Cross – West Hampstead Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
= 4tph
2. St. Pancras West – West Hampstead Junction  
2tphC St. Pancras – York  
2tphC St. Pancras – Manchester  
2tphC St. Pancras – Wolverhampton (Split/join) \_ Liverpool / Chester  
2tphC St. Pancras – Worcester  
4tphR St. Pancras – Nottingham  
2tphR St. Pancras – York via Melton Mowbray  
= 14tph
3. West Hampstead Junction – Watford Gap Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York  
2tphC St. Pancras – Manchester  
2tphC St. Pancras – Wolverhampton (Split/join) \_ Liverpool / Chester  
2tphC St. Pancras – Worcester  
= 12tph
4. Watford Gap Junction – Onley Junction (HS2-CV)  
2tphC St. Pancras – Wolverhampton (Split/join) \_ Liverpool / Chester  
2tphC St. Pancras – Worcester  
= 4tph
5. Watford Gap Junction – Cotesbach Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York  
2tphC St. Pancras – Manchester  
= 8 tph
6. Rugby HS Junction (HS2-CV) – Cotesbach Junction  
2tphC Paddington – Melton Mowbray  
2tphC Bournemouth – Newcastle  
= 4tph
7. Cotesbach Junction – Regent St. Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York  
2tphC St. Pancras – Manchester  
2tphC Paddington – Melton Mowbray

2tphC Bournemouth – Newcastle  
= 12tph

8. Regent St. Junction – Swain St. Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC St. Pancras – York  
2tphC St. Pancras – Manchester  
2tphC Paddington – Melton Mowbray  
2tphC Bournemouth – Newcastle  
4tphR St. Pancras – Nottingham  
2tphR Birmingham New St. – Harwich  
= 18tph

9. Swain St. Junction – Stanford Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC Bournemouth – Newcastle  
= 6tph

10. Stanford Junction – Edwalton Junction  
2tphG Portsmouth & Southsea – Derby  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphC Bournemouth – Newcastle  
= 8tph

11. Asfordby Junction (HS8) – Edwalton Junction  
2tphG HS7 Norwich – Swansea  
2tphGG HS8 Norwich - Preston  
2tphR St. Pancras – York via Melton Mowbray  
= 6tph

12. Edwalton Junction – Manvers St. Junction  
2tphG Portsmouth & Southsea – Derby  
2tphG HS7 Norwich – Swansea  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich - Preston  
2tphC Bournemouth – Newcastle  
2tphR St. Pancras – York via Melton Mowbray  
= 14tph

13. Manvers St. Junction – Nottingham HS  
2tphG Portsmouth & Southsea – Derby  
2tphG HS7 Norwich – Swansea  
2tphGG Brighton – York  
2tphGG Brighton – Preston

2tphGG HS8 Norwich – Preston  
2tphC Bournemouth – Newcastle  
2tphC HS7 Cleethorpes – Birmingham HS  
= 14tph

14. Manvers St. Junction – Nottingham (classic station; NB only services coming from HS3) 2tphR  
St. Pancras – York via Melton Mowbray  
= 2tph

15. Nottingham HS – Strelley Junction  
2tphG Portsmouth & Southsea – Derby  
2tphG HS7 Norwich – Swansea  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
2tphC Bournemouth – Newcastle  
2tphC HS7 Cleethorpes – Birmingham HS  
= 14tph

16. Strelley Junction – Awsworth Junction  
2tphG Portsmouth & Southsea – Derby  
2tphG HS7 Norwich – Swansea  
2tphC HS7 Cleethorpes – Birmingham HS  
= 6tph

17. Strelley Junction – Nuthall North Junction  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
2tphC Bournemouth – Newcastle  
= 8tph

18. Awsworth Junction – Nuthall North Junction  
2tphG HS7 Plymouth – Newcastle  
2tphG HS7 Birmingham HS – York  
= 4tph

19. Nuthall North Junction – Beighton Junction  
2tphG HS7 Plymouth – Newcastle  
2tphG HS7 Birmingham HS – York  
2tphGG Brighton – York  
2tphGG Brighton – Preston  
2tphGG HS8 Norwich – Preston  
2tphC Bournemouth – Newcastle  
=12tph

20. Beighton Junction – Woodhouse HS Junction  
2tphG Tunbridge Wells – Liverpool

2tphG Tunbridge Wells – Preston  
 2tphG HS7 Plymouth – Newcastle  
 2tphG HS7 Birmingham HS – York  
 2tphGG Brighton – York  
 2tphGG Brighton – Preston  
 2tphGG HS8 Norwich – Preston  
 =14tph

21. Woodhouse HS Junction – Sheffield HS – Ladybower Junction

2tphG Tunbridge Wells – Liverpool  
 2tphG Tunbridge Wells – Preston  
 2tphG HS7 Plymouth – Newcastle  
 2tphG HS7 Birmingham HS – York  
 2tphGG Brighton – York  
 2tphGG Brighton – Preston  
 2tphGG HS8 Norwich – Preston  
 2tphC HS8 Hull – Liverpool  
 2tphC Cleethorpes – Preston  
 = 18tph

22. Ladybower Junction – Guide Bridge HS Junction

2tphG Tunbridge Wells – Liverpool  
 2tphG Tunbridge Wells – Preston  
 2tphGG Brighton – Preston  
 2tphGG HS8 Norwich – Preston  
 2tphC HS8 Hull – Liverpool  
 2tphC Cleethorpes – Preston  
 = 12tph

23. Ladybower Junction – Paddock Junction

2tphG HS7 Plymouth – Newcastle  
 2tphG HS7 Birmingham HS – York  
 2tphGG Brighton – York  
 = 6tph

24. Paddock Junction – Huddersfield – Gelderd Rd. North Junction

2tphG HS7 Plymouth – Newcastle  
 2tphG HS7 Birmingham HS – York  
 2tphGG Brighton – York  
 2tphGG HS9 Liverpool – Newcastle  
 2tphC HS9 Liverpool – Middlesbrough  
 2tphC HS9 Liverpool – Newcastle via Hartlepool  
 2tphC HS9 Preston – Hull  
 2tphC HS9 Preston – Scarborough  
 = 16tph

25. Gelderd Rd. North Junction – Leeds HS  
4tphG Tunbridge Wells – Leeds  
2tphG HS7 Plymouth – Newcastle  
2tphG HS7 Birmingham HS – York  
2tphGG Brighton – York  
2tphGG HS9 Liverpool – Newcastle  
2tphC HS9 Liverpool – Middlesbrough  
2tphC HS9 Liverpool – Newcastle via Hartlepool  
2tphC HS9 Preston – Hull  
2tphC HS9 Preston – Scarborough  
= 20tph
26. Leeds HS – Garforth West Junction  
2tphG HS7 Plymouth – Newcastle  
2tphG HS7 Birmingham HS – York  
2tphGG Brighton – York  
2tphGG HS9 Liverpool – Newcastle  
2tphC HS9 Liverpool – Middlesbrough  
2tphC HS9 Liverpool – Newcastle via Hartlepool  
2tphC HS9 Preston – Hull  
2tphC HS9 Preston – Scarborough  
= 16tph
27. Garforth West Junction – Garforth East Junction  
2tphG HS7 Plymouth – Newcastle  
2tphG HS7 Birmingham HS – York  
2tphGG Brighton – York  
2tphGG HS9 Liverpool – Newcastle  
=8tph
28. Garforth West Junction – Micklefield Junction  
2tphC HS9 Liverpool – Middlesbrough  
2tphC HS9 Liverpool – Newcastle via Hartlepool  
2tphC HS9 Preston – Hull  
2tphC HS9 Preston – Scarborough  
=8tph