

Route A: Kent

Route Plans are generally published on an annual basis including the most up-to-date position at that point in time. In 2011 we will be publishing information on a route basis as part of our Initial Industry Plan in the Autumn covering CP5 and beyond.

In the meantime we have retained the 2010 Route Plans, updated where appropriate with current information including our plans to the end of CP4. This document, therefore, should be read in conjunction with the equivalent 2010 Route Plan.

Should you require any further information, please contact the Route Plan 2011 mailbox at routeplans@networkrail.co.uk.

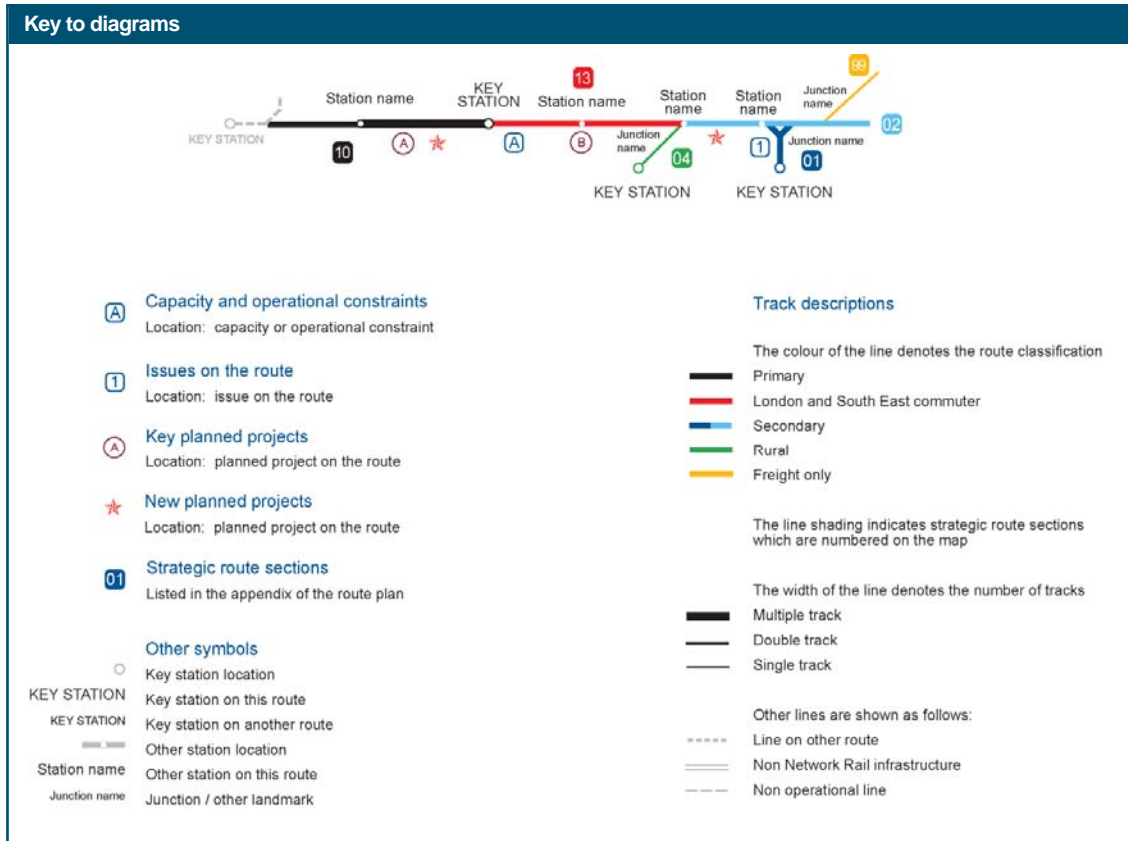
| Summary of alterations | | | | | | | |
|---|--------------------------|------------------------|---|--------------------|----------------|-----------------------------|---|
| Reference | Data | Location in Route Plan | Change | | | | |
| Page 3 | Route Map | Page 3 | Route Map labels updated to match Appendix B. | | | | |
| Figure 11 | Forecast end of year PPM | Page 12 | <table border="0"> <tr> <td>Southeastern 88.4%</td> </tr> <tr> <td>Southern 89.6%</td> </tr> <tr> <td>First Capital Connect 89.2%</td> </tr> <tr> <td>The above is based on 2010/2011 Period 11 data.</td> </tr> </table> | Southeastern 88.4% | Southern 89.6% | First Capital Connect 89.2% | The above is based on 2010/2011 Period 11 data. |
| Southeastern 88.4% | | | | | | | |
| Southern 89.6% | | | | | | | |
| First Capital Connect 89.2% | | | | | | | |
| The above is based on 2010/2011 Period 11 data. | | | | | | | |

Appendix A: Updated Route Map

Appendix B: Updated list of infrastructure investment in CP4

Appendix C: Constraints and issues on the route

Appendix A: Updated Route Map



Appendix B: Infrastructure investment in CP4

Figure 20 HLOS enhancements (capacity metric & specified schemes)

| Implementation date | Project | Project description | Output change | Funding | GRIP stage |
|---------------------|---|--|---|----------------------|------------|
| December 2011 | (A) Thameslink Programme Key Output 1 | 12-car platform lengths at Farringdon 12-car platform lengths at Blackfriars, with new bay platforms | Allows 12-car services to operate across central London Provides congestion relief at Farringdon, integrated with future Crossrail requirements Provides congestion relief and a new South Bank entrance at Blackfriars | Periodic Review 2008 | 6 |
| Mid 2012 | (B) Other Thameslink Programme work pre-Olympics | Civil engineering works for Borough Market viaduct Resignalling of Thameslink core route | Provides early infrastructure for Thameslink Key Output 2 | Periodic Review 2008 | 6 |
| June 2012 | (C) Suburban 12-car operations (routes to Dartford) | 12-car operations west of Dartford. Scheme covers the Hayes, Grove Park, Sidcup, Bexleyheath and Greenwich/Woolwich lines, plus Dartford station itself. | Enables lengthening of certain services to Charing Cross / Cannon Street | Periodic Review 2008 | 5 |
| March 2014 | (D) Extension of 12-car operations to Gravesend | Gravesend remodelling scheme. To include 12-car platform lengths and an additional bay platform. | Additional capability for 12-car operations into Charing Cross and Cannon Street Improved operational flexibility at Gravesend | Periodic Review 2008 | 4 |
| Dec 2018 | (E) Completion of Thameslink Programme | Completion of London Bridge station works, with nine through and six terminal platforms Completion of remodelling of approach tracks, including Bermondsey diveunder and Tanners Hill flydown | Increase in through trains via London Bridge, with all trains calling. 88tph total capacity comprising: 22tph to Cannon Street, 28tph to Charing Cross, 18tph to Thameslink and 20tph terminating | Periodic Review 2008 | 3 |
| 2011-2014 | Power supply upgrade | Power supply strengthening works | Provide sufficient power supply for future levels of service, including allowing all services into/via London Bridge running as 12-car Implementation of regenerative braking to reduce energy consumption | Periodic Review 2008 | 2 |

Figure 21 Other enhancements

| Implementation date | Project | Project description | Output change | Funding | GRIP stage |
|---------------------|---|---|--|---|------------|
| 2011 | (F) Cannon Street station redevelopment | Station redevelopment scheme | Improved station facilities | Network Rail | 6 |
| 2012 | (G) Waterloo East access improvements | Waterloo balcony scheme & installation of a new entrance via Southwark underground station ticket hall. | Reduces congestion and walk times into station | Network Rail Discretionary Fund | 3 |
| 2016 | (H) Victoria station redevelopment | Station redevelopment scheme | Improved station facilities | Network Rail | 3 |
| to 2011 | Access for All Programme | Works to improve accessibility at the following: New Cross; Canterbury West; Blackheath; Bromley South; Sittingbourne | Provision of a step-free route between station entrance and station platforms at these sites | Department for Transport | 1-7 |
| 2012 | (I) Crofton Road Junction Removal of approach control | Removal of approach control by a minor PSR reduction and signalling changes | Increases capacity across junction and performance | Network Rail Discretionary Fund | 4 |
| 2012 | (J) East London Line extension to Clapham Junction | Connection of East London Line to South London Line and onwards to Clapham Junction as part of London Overground | 4tph service ELL to Clapham Junction | Transport for London | 4 |
| - | Isle of Grain passing loop | Project closed (not proceeding) | - | - | - |
| 2012 | (K) East Kent Resignalling phase 1 | Resignalling scheme including remodelling of Ramsgate, Margate and Faversham areas | Facilitates more efficient operations in these areas to increase capacity | Network Rail, including an enhancement element at Faversham | 4 |
| to 2014 | Car park expansion programme | Works to improve and extend car parking facilities at selected stations: Canterbury West; Chatham; Folkestone West; Gravesend; Marden; Sevenoaks; Sittingbourne; Staplehurst; Tonbridge; Paddock Wood | Enhanced parking facilities at stations with existing or anticipated problems. | Network Rail | 1-7 |
| 2011-2014 | (L) Outer area linespeed increments | Linespeed increases on the Kent main lines, principally east of Ashford | Further journey time reductions for principal locations served by trains using HS1 | Network Rail Discretionary Fund | - |

Figure 21 Other enhancements

| Implementation date | Project | Project description | Output change | Funding | GRIP stage |
|---------------------|--|--|--|--|------------|
| – | Bromley South station congestion relief | Project closed (covered by other works) | – | – | – |
| – | Lewisham station congestion relief | Project closed (completed) | – | – | – |
| 2014 | Ⓞ Maidstone East redevelopment | Station redevelopment scheme | Improved station facilities | Network Rail/Kier Property | 2 |
| to 2014 | National Stations Improvement Programme (NSIP) | Station improvement works at selected stations: Ashford International; Brixton; Bromley South; Canterbury West; Chatham; Crayford; Dartford; Denmark Hill; Deptford; Folkestone Central; Gillingham; Gravesend; Lewisham; Margate; Northfleet; Paddock Wood; Rochester; Sevenoaks; Sittingbourne; Strood; Swanley; Tonbridge; Tunbridge Wells; Waterloo East; Woolwich Arsenal | Improving passenger environment through enhancements to access, egress, security and overall presentation | Network Rail/Third Party | 1-7 |
| 2015 onwards | Ⓟ Charing Cross station congestion relief | Long term (CP5) requirement. Development work ongoing in CP4. | Improved passenger circulation | CP5 advance development fund | 1 |
| 2016 | Ⓞ East Kent Resignalling Phase 2 | Resignalling scheme in the Medway area, including the remodelling of the Rochester area | Potentially facilitates more increased headways through Medway corridor and increased turnback capacity in the Gillingham area Potentially an effective means of delivering 12-car capability at Strood and Rochester | Enhancement element through Network Rail Discretionary Fund and Periodic Review 2008 | – |
| 2018 | Ⓡ Crossrail Abbey Wood branch | Realignment of the North Kent Line between Plumstead and Abbey Wood to accommodate Crossrail route. Potential mitigation works in the Plumstead and Belvedere areas to facilitate any train service amendments at Abbey Wood. | New railway | Department for Transport/Transport for London | 3 |

GRIP stages: 1 Output definition, 2 Pre-feasibility, 3 Option selection, 4 Single option selection, 5 Detailed design, 6 Construction, test and commission, 7 Scheme hand back, 8 Project close out

Appendix C Constraints and issues on the route

Capacity and operational constraints

- A London Bridge: insufficient platform capacity at peak times for either Thameslink route trains to run via this route or for all existing Charing Cross services to call

- B London Bridge west: Borough Market to Metropolitan Junction two track section restricts capacity

- C London Bridge east: flat junctions between Tonbridge main line, Greenwich and Brighton lines restrict capacity

- D Lewisham/Hither Green area: flat junctions restrict capacity

- E Orpington – Tonbridge: mainly two track railway with local stations to serve restricts capacity

- F Heme Hill area: Two track railway shared between fast and slow services, plus flat crossing between Sussex and Kent routes is a significant timetable constraint

- G Tonbridge – Hastings: limited power supply, turnback capability and single track tunnel sections restrict capacity

- H Dartford/Gravesend area: Limited turnback capability for 3 routes to London

- I Charing Cross: Significant operational constraints on 12-car Class 465 operations, including platforms 4-6 being unable to accommodate these trains. Limited concourse capacity and narrow platform widths.

Other issues on the route

- 1 South London line service changes, linked to ELL extension to Clapham Junction, Thameslink works at London Bridge and platform lengthening at Battersea Park

- 2 Anticipated termination points of future Thameslink services

- 3 Abbey Wood: planned interchange with Crossrail

- 4 Abbey Wood to Gravesend: Safeguarding of a potential future Crossrail extension