



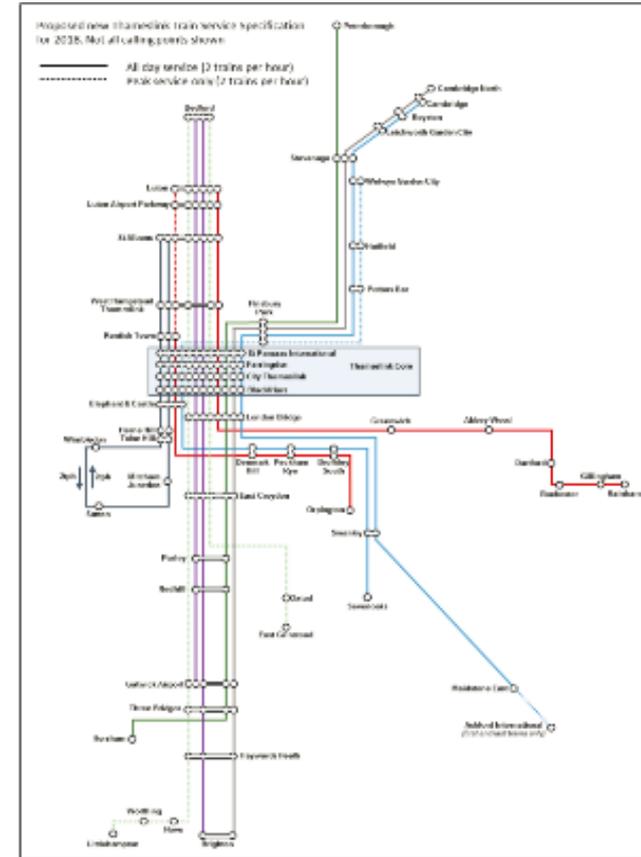
RailFuture

Brighton Main Line Improvement Project Update

27 November 2018

Improving Resilience

- Thameslink Resilience Programme - a £300m programme to improve reliability for passengers on key routes both north and south of the Thameslink 'core' through central London, cutting delays by up to 15% ahead of expanded Thameslink timetables
- Additionally the programme will boost reliability and resilience of most other Southern services on South East route
- Using a performance data-driven approach, we are targeting those areas where the most significant asset-related delays currently originate
- £205m is being spent on the railway in Sussex and Kent.
 - **£67m is being spent on the Brighton Main Line**



15%

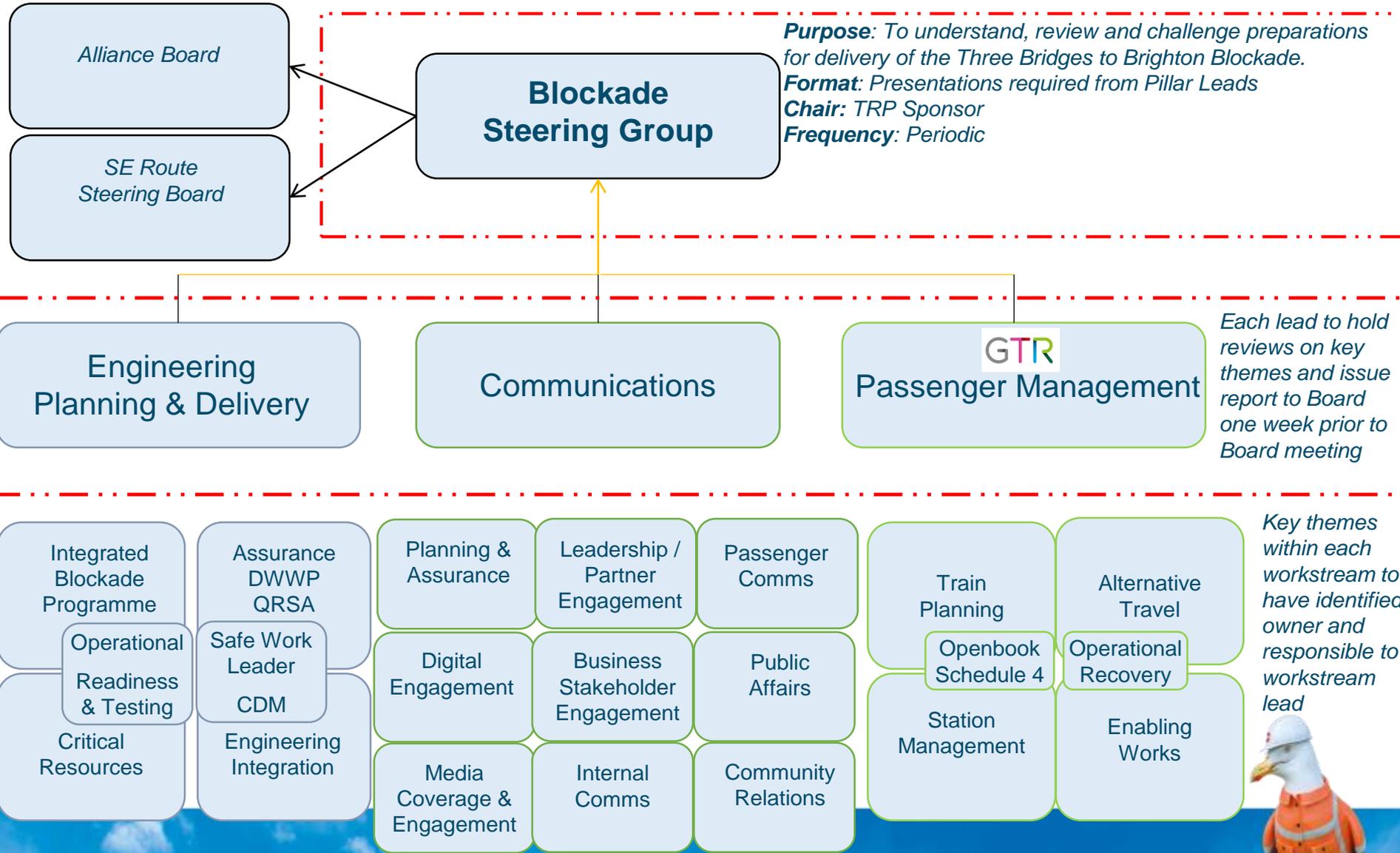


Three Bridges to Brighton

- £67m programme of improvement works between Three Bridges and Brighton and Three Bridges and Lewes
- Works Delivered over 9-day blockade over February half term, supported by 15 weekends September 2018 – May 2019
 - Balcombe Tunnel Junction Renewal, including signalling track release
 - Keymer Junction Power Supply Upgrade
 - Track Renewals –Clayton & Patcham Tunnels & Haywards Heath Tunnel South,
 - Signalling works –Reed / AC track circuits conversion;
 - LED signal-heads between Croydon & Brighton; signal controls Keymer & P/Park Jct,
 - E&P Resilience works – LUG Replacement;
 - Conrail renewal, ramp shrouding & cable doubling,
 - Signalling electric supply change over,
 - Veg Clearance, trespass fencing & platform end protection,
 - Balcombe Tunnel - Shaft water management and Track Drainage
 - Haywards Heath cutting drainage
 - Minor station refurbishments
 - Resolving wet bed issues and refurbishing points on diversionary read in advance of these works
- The closures directly impacts all stations between Three Bridges and Brighton and between Wivelsfield and Lewes.
- The closures will indirectly affect the timetable for both the West and East Coastway lines.



Blockade - 3 Pillars Organisation



Full works programme

2018	Saturday	Sunday
October		
6 & 7	X	X
13 & 14	X	X
20 & 21	X	X
27 & 28	X	X
November		
3 & 4	X	
10 & 11	X	
17 & 18		
24 & 25	X	X
December		
1 & 2		
8 & 9		
15 & 16		
22 & 23		!
29 & 30	!	!

2019	Saturday	Sunday
January		
5 & 6		X
12 & 13		
19 & 20		
26 & 27	!	!
February		
2 & 3		
9 & 10	X	X
16 to 24		Nine-day closure period
March		
2 & 3	X	X
9 & 10		
16 & 17		
23 & 24	X	X
30 & 31	X	X
April		
6 & 7	X	X
13 & 14		
20 & 21		
27 & 28		
May		
4 & 5		X



No trains between Three Bridges and Brighton or between Three Bridges and Lewes.



Normal weekend service between Three Bridges and Brighton/Lewes. Other engineering work may be taking place elsewhere on the network, please check before you travel.



No Southern/Gatwick Express services to London Victoria for 10 days over Christmas.



No trains between Gatwick and Redhill and no direct trains between Gatwick and London. Services will operate between Gatwick and London but diverted via Horsham with much longer journey times than normal.

Forward Planning to avoid clashes

Wk	Route	Brighton Main Line	West Coastway	East Coastway	Engineering Schemes
September					
24	8 & 9				
25	15 & 16				Lewes to Newhaven Resignalling
26	22 & 23				
27	29 & 30				Sussex PSU
October					
28	6 & 7				
29	13 & 14		Platforms	Platforms	Brighton Station Maintenance
30	20 & 21				
31	27 & 28				
November					
32	3 & 4				Sussex PSU / Eastbourne station maintenance
33	10 & 11				Polegate - Bexhill general maintenance
34	17 & 18				Sussex PSU
35	24 & 25				
December					
36	1 & 2				Lewes to Newhaven Resignalling
37	8 & 9				
38	15 & 16				Lewes to Newhaven Resignalling
39	22 & 23				Victoria Battersea Pier Renewal
40	29 & 30				

Wk	Route	Brighton Main Line	West Coastway	East Coastway	Engineering Schemes
January					
41	5 & 6				
42	12 & 13				
43	19 & 20				Lewes to Newhaven Resignalling
44	26 & 27				Gatwick blocked
February					
45	2 & 3				Lewes to Newhaven Resignalling
46	9 & 10				
47	16 & 17				
48	23 & 24				
March					
49	2 & 3				Polegate - Bexhill General Maintenance
50	9 & 10				Lewes to Newhaven Resignalling
51	16 & 17				Lewes to Newhaven Resignalling
52	23 & 24				
1	30 & 31				
April					
2	6 & 7				Detailed planning progressing
3	13 & 14				Detailed planning progressing
4	20 & 21				Detailed planning progressing
5	27 & 28				Detailed planning progressing
May					
6	4 & 5				Detailed planning progressing



Recent Success – Week 28,29,30

Week 28: 06-07 October – **23** Sites of Work

- 2.3 Miles of Conductor Rail Renewed
- 13km of cables laid out plus 21 lineside location case delivered
- Enabling works for track renewals consisting of securing 1400 yds of cable route and clearing 1000yds of scrap rail

Week 29: 13-14 October – **24** Sites of Work

- 1002yds of the Down Line cleaned with the High Out Ballast Cleaning systems and returned at linespeed (90mph)

Week 30: 20-21 October – **26** Sites of Work

- 1.4 Miles of Conductor Rail Renewed
- 532 yds of Down Line at Clayton Tunnel Renewed
- 15 Signal Heads renewed
- Streat Green Underbridge Renewed



Various other TRP and BAU works were also delivered within these possessions



Recent Success – Weeks 31,32,33

Week 31 **20** sites of work

- 2992 yards of Conductor Rail Renewed
- 550 yds of Down Line at Clayton Tunnel Renewed
- 5 Signal Heads Converted
- SIN 119 Signal Transformer Changes

Week 32 **10** sites of work

- Follow up tamp and Rail dropped in Clayton Tunnel for Week 35 Renewal
- Signalling installations
- Panel deliveries at Balcombe

Week 33 **12** sites of work

- Signalling prep works
- 340 yards High Output Ballast Cleaning
- FSR Commissioning



Brighton Main Line – The Croydon Bottleneck

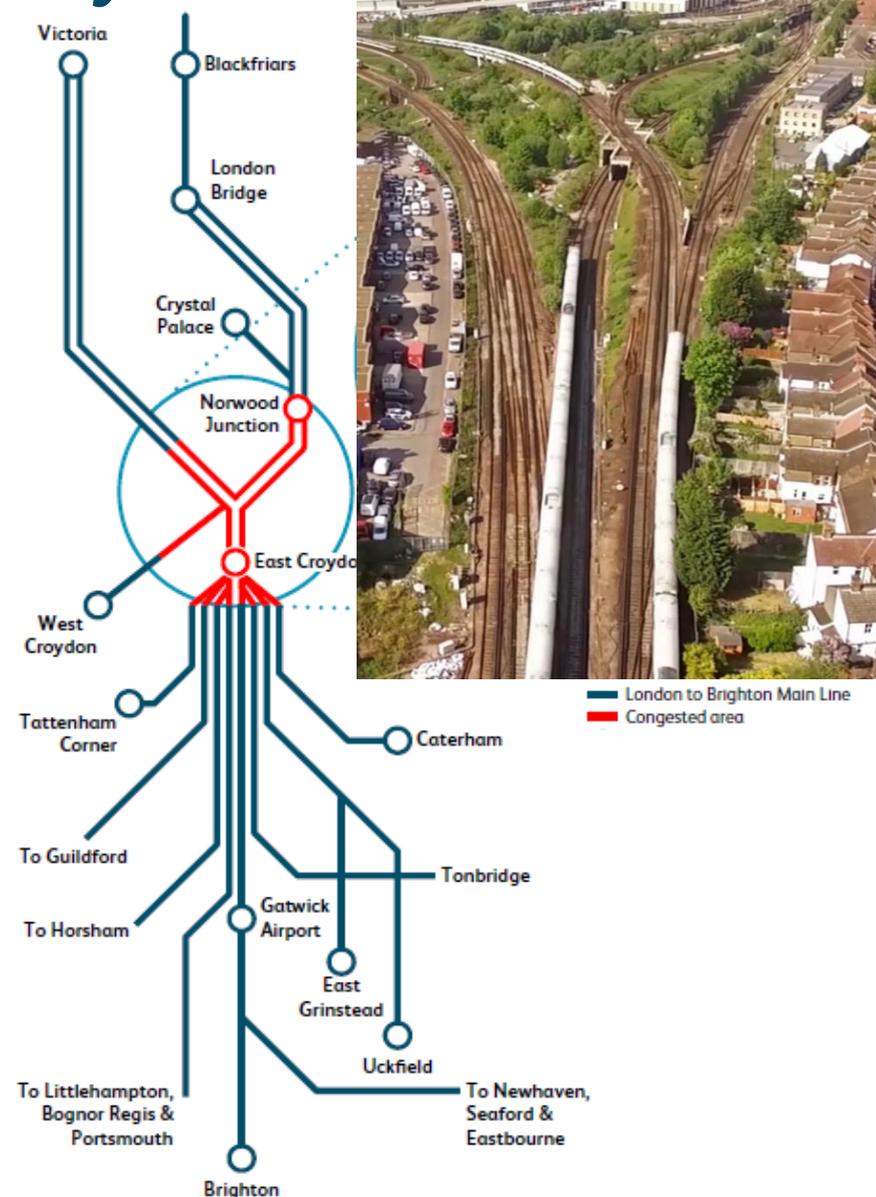
Performance on the BML is impacted by **low capacity junctions** in the Selhurst triangle and **insufficient platforms** at East Croydon

This is one of the most severe constraints on the UK network; a train **every 45 seconds**

Our proposals for **grade separation** and a **station upgrade** would fix the bottleneck

Local consultation has now commenced

All **funding options** are being explored



- Network Rail has developed a proposal for an additional platform at Reigate, together with associated power supply upgrade works
- This would enable the running of a Reigate to Thameslink service
- Changes to the station car park would be required, for which there are multiple options
- The scheme has strong local support but is not currently funded

North Downs Line 3 Trains Per Hour



GWR / Network Rail Working Group established – May 2018 – meeting every 4 weeks to align focus to achieve 3tph North Downs Line at the earliest timetable change possible.

Summary

There are four workstreams (Redhill Platform 0 having been completed):

- Wessex Level Crossings
- South East Level Crossings
- Wessex performance modelling
- South East performance modelling

All four workstreams are required to be completed to provide safe capacity for 3tph.

Wessex Route Level Crossing works

There are four level crossings that require works to reduce the safety risk impact of the 3tph service change and by March 2019, it is expected that the following will be achieved:

- Darby Green - Miniature Stop Lights for users, GRIP 4 design. Funding required for delivery
- East Shalford - Miniature Stop Lights for users, GRIP 4 design. Funding required for delivery
- Harveys - Closure via diversion over existing accommodation bridge. Legal closure progressed with application to Surrey County Council. There are also minor works to the existing bridge (Ambarrow) to bring it back into use. Funded.
- Shere Heath - Closure and replacement with a bridleway bridge. Legal closure progressed with application to Surrey County Council. Surveys and GRIP 4 for bridge foundations will also be complete. Funding required for delivery of bridleway bridge.

South East Route Level Crossing works

The level crossing interventions for the SE Route are as follows and are expected to complete by March 2019:

- Reigate – yellow box enforcement area, platform end gates
- Church & Dowdes FPS – extension to wood decking, remove step up and straighten skew
- Buckland & Brockham AHBs – upgrade audible alarms and Red Light Safety Enhancement (RLSE)
- Betchworth – yellow box enforcement area and lower road speed/ rumble strips
- Coombe Lane UWC – release vehicle rights
- Big Bullsdown – level out steps, demolish PWay hut and install wing fencing
- Little Bullsdown – improve access on approach to crossing
- Milton Court – vegetation clearance

South East and Wessex Performance Modelling work

The aim of the performance modelling is to determine how robustly these additional paths can be accommodated with respect to the infrastructure and timetable changes occurring in the area.

- South East Performance Modelling work is complete and shows no significant change to the current level of performance. The additional Reading – Gatwick service performs well
- Wessex performance modelling will be undertaken shortly and will be completed by March 2019.

Upon completion of the two pieces of modelling work, they will be integrated for a holistic view of North Downs Line timetable capacity

GWR proposal for class 769 'Tri-Mode' trains to operate on the line, to permit cascade of class 165 & class 166's to the West of England

Thank You !

