

Case Study: Thameslink Programme Staging

London Bridge Station Redevelopment

Recommendations for future projects around the staging of changes to services

The key challenges

Network Rail is required to plan work delivery within a regulated environment. Our customers, the train and freight operators, have contractual rights to operate their services and any changes to these to enable work to be delivered can be made only through negotiation and agreement.

The negotiating process is also contractual; governed by the regulatory Network Code (this case study does not detail the Network Code in detail, reference should be made instead to the Network Access Unit).

Network Rail is required to detail and justify any access proposals that are disruptive to an operator and therefore must have a detailed plan constructed in advance, over which to negotiate. Having negotiated the access there is an ongoing requirement to add further work detail while still keeping the overall plan robust and stable. This all requires compliance with key timescales from work-bank construction right up to the delivery time.

The Thameslink Programme therefore needed to define its work-bank several years ahead of when it was intended to start. Large, disruptive interventions would be required to facilitate the bold infrastructure changes that were needed to improve connectivity north to south in the longer term.

Thameslink Programme method and recommendations for future projects

Ultimately; through the iterations of construction development, at the completion of each stage and the commencement of the next, required a **timetable change** (TT) to be agreed that enabled the operation to move as the programme progressed. This required a detailed level of planning a long way out from the work as reflected in Figure 1 'Plan Development and Assurance Process' shown below:

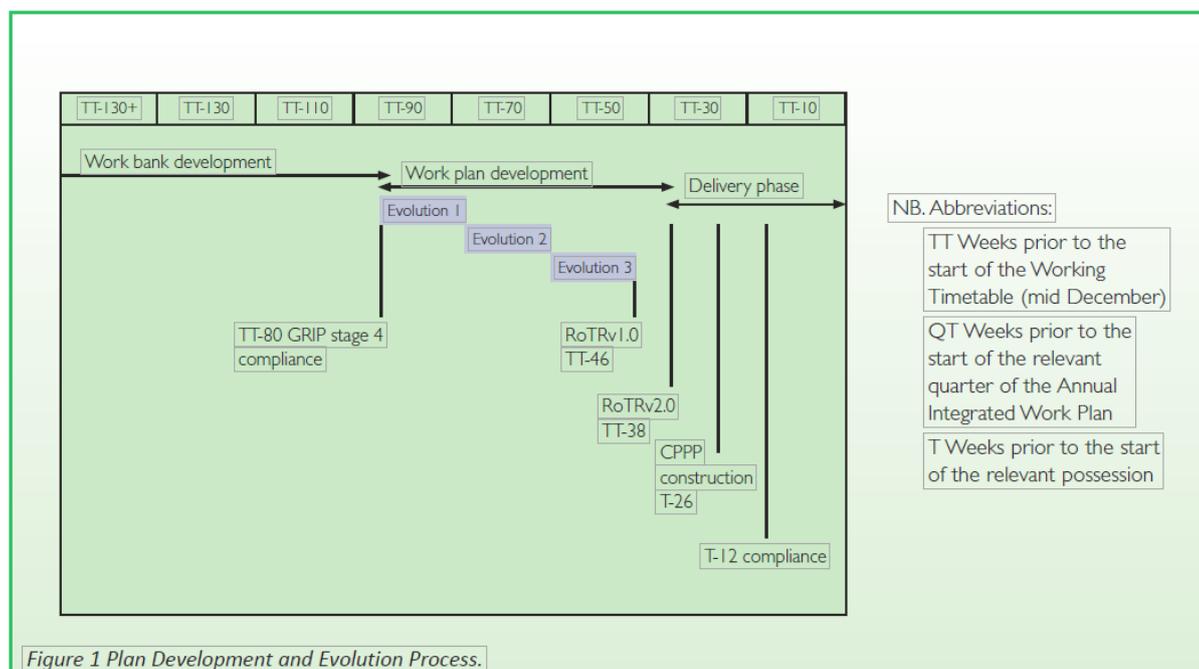


Figure 2 below illustrates how this process was integrated by Thameslink Programme's planning teams with the requirements of the Governance for Rail Infrastructure Projects processes (GRIP). It can clearly be seen how each project within the programme had to fully understand their access requirements prior to single option

development and detailed design such that the early planning of access and discussions with the operators could be initiated.

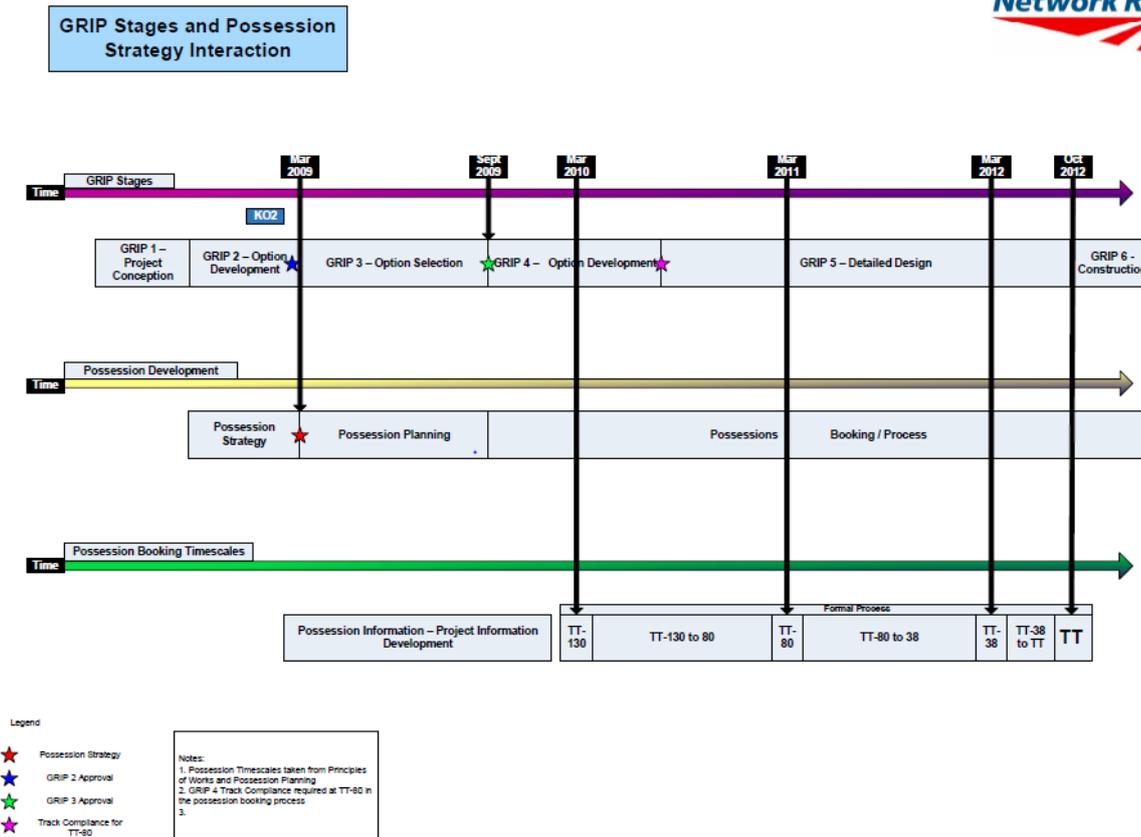


Figure 2: GRIP Stages and Possession Strategy Interaction

The process of developing the possession strategy for infrastructure access would lead to a detailed staging plan to tie together the various elements of the programme and to identify the critical path and interdependencies each delivery project had to maintain the overall programme and ultimately the timetable changes required.

The London Bridge Combined Staging Diagrams shown in Figure 3 below, became the backbone of the programme in terms of its key milestones and all the projects were aligned to this. Railway Systems run through the centre of the schematic, showing the key blockades and possessions, the major railway engineering and the control changes required as construction progressed.

The other projects (London Bridge Station Redevelopment, Bermondsey Dive Under, Structural Strengthening Programme) either 'give' or 'get' an element of infrastructure to / from the central Railway Systems project. These are shown towards the sides as blocks running parallel to the central Railway Systems project, with arrows denoting the programme dependencies and linkages as blocks.

One of the key successes of the Thameslink Programme was in the development of this key staging strategy which fundamentally did not change throughout the whole programme. This was testament to the effort that was invested during the early stages of planning, the need for *early* and *comprehensive* understanding of the scope of work and access requirements well in advance of construction commencement.

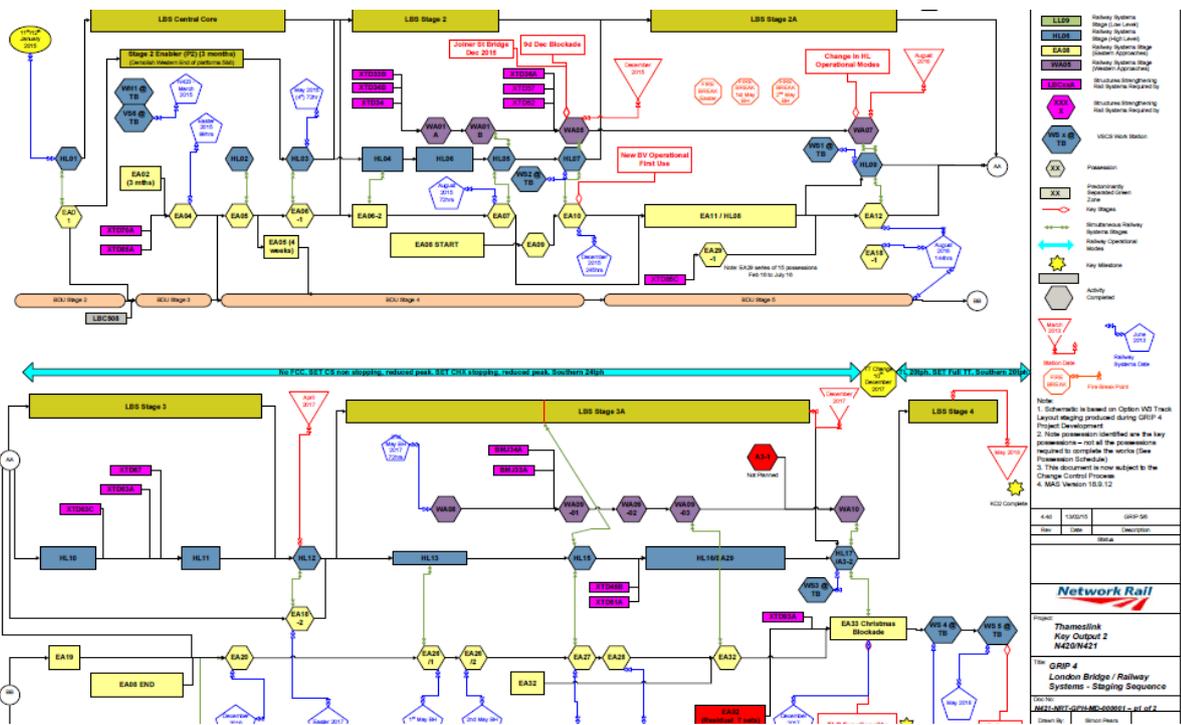


Figure 3: London Bridge – Combined Staging Sequence

Once this key strategy was locked down, then the other partner projects in the programme could develop their own detailed staging plans as shown in the examples below (see Figure 4) for London Bridge Station Redevelopment.

A partnership was developed between delivery partners and programme interfaces were governed through a series of meetings but ultimately through the 'Delivery Partners Forum' where directors would meet to ensure that progress was being maintained. (See Project Governance).

04/01/16 to 03/07/16

Rev 06

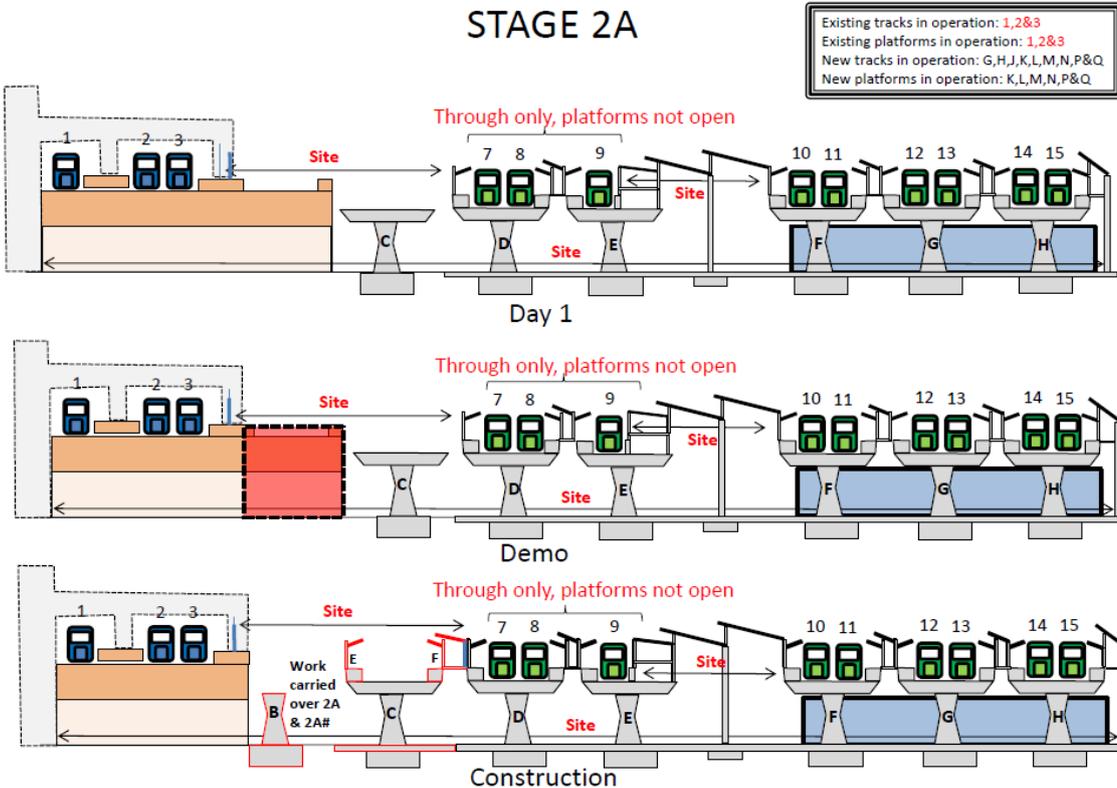
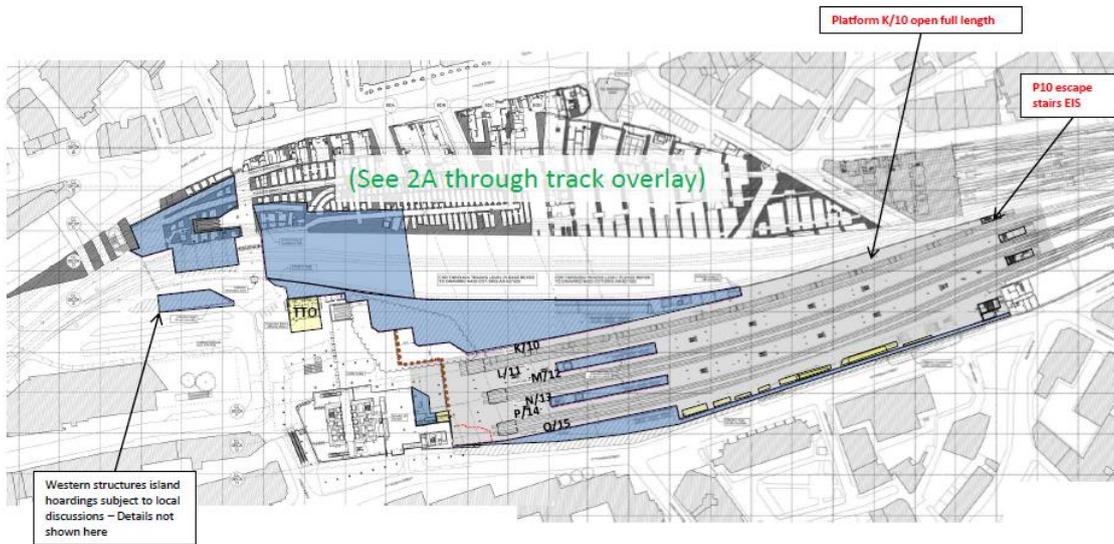


Figure 4: London Bridge Station Redevelopment – Cross Section at Stage 2A (Rev 6)

LBSR - STAGE 2A
04/01/2016 to 28/08/2016
PLATFORM TERMINATING LEVEL

Existing tracks in operation: 1,2&3
Existing platforms in operation: 1,2&3
New tracks in operation: G,H,J,K,L,M,N,P&Q
New platforms in operation: K,L,M,N,P&Q



Rev 7

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Figure 5: London Bridge Station Redevelopment – Plan at Stage 2A

Author

Case Study produced by Will Nurse, Network Rail, February 2019.

Further information

For more information on this Learning Legacy case study please email contact@thameslinkprogramme.co.uk