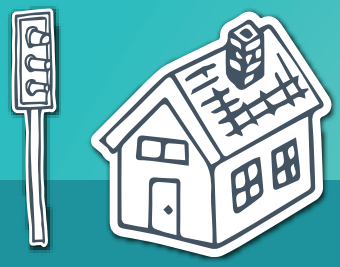


Eastleigh Borough Local Plan 2016-2036

Eastleigh Borough Local Plan 2016-2036

Statement of Common Ground on General Rail Issues between Eastleigh Borough Council and Network Rail

October 2019

EASTLEIGH BOROUGH COUNCIL

Introduction

1. This Statement of Common Ground (SoCG) is an agreed statement between Eastleigh Borough Council and Network Rail. It is not binding on either party, but sets out an agreed position on rail issues of relevance to the examination of the Eastleigh Borough Local Plan 2016-2036.

Rail Investment Strategy

2. The current rail investment strategy for the area that includes Eastleigh Borough is contained in the following documents:

- The Wessex Route Study, published in August 2015. This document details the investment strategy for meeting future growth and demand on the railways in the period to 2043 https://cdn.networkrail.co.uk/wp-content/uploads/2016/12/Wessex-Route-Study-Aug-2015.pdf

- The Wessex Route Strategic Plan, published in March 2019. This document details the investment strategy for operations, maintenance and renewals in Control Period 6 (CP6); the period 2019 to 2024 https://cdn.networkrail.co.uk/wp-content/uploads/2019/06/Route-Strategic-Plan-Wessex.pdf

3. The Wessex Route Study identifies several infrastructure interventions that are proposed, subject to funding, to enable the operation of a train service that meets future demand for Main Line rail services:

- Woking Area Capacity Enhancement – this is a scheme that is in development which will unlock the capacity constraint through Woking to enable the operation of additional services required for future demand provision;
- Digital Railway Technology – this relates to the implementation of digital signalling technology to operate and control train services more efficiently and effectively as well as to enable the operation of additional services required for future demand provision; and
- Crossrail 2 – this is a proposed scheme to provide a cross London link between SW and NE London. Through the implementation of additional track infrastructure this scheme enables the operation of additional services required for future demand provision

4. The Wessex Route Study also identifies the potential need for other infrastructure interventions that may be required to accommodate the train services unlocked by the three schemes identified above; these include:

- Basingstoke Area Capacity Enhancement – as additional services begin to be operated a solution may be required to unlock a capacity constraint through Basingstoke Junction; and
- Southampton Central Platform Capacity – it is likely that as additional services begin to operate there will be the need for platform capacity at Southampton Central to accommodate them. It should be noted that this would involve a complete

remodelling of Southampton Central Station and the replacement of existing buildings, and would involve a considerable capital cost. This is currently a long term, unfunded and uncertain proposal.

5. The Eastleigh rail chord would be a new route through a junction to allow trains from Hedge End and Allington to head directly south to Southampton without having to reverse at Eastleigh. This concept is not included as a scheme in the Wessex Route Study over the long term to 2043, but was identified in the London & South East Route Utilisation Strategy, published in 2011.

6. Network Rail has adopted a new long term planning process called Continuous Modular Strategic Planning (CMSP). This process allows Network Rail to work more closely with local stakeholders on specific, more focussed strategic questions than was possible through the Wessex Route Study. Network Rail, working with stakeholders, will take forward individual modules looking at specific strategic questions every year.

7. One such CMSP module, due to be published in March 2020, is focussed on connectivity across the Solent area, including Eastleigh. It is the intention of this study to identify how best to encourage modal shift on to rail and improve local service provision across the Solent. Eastleigh Borough Council are key members of the Working Group associated with this CMSP module.

Eastleigh Local Plan

8. The Local Plan provides for 14,580 new dwellings and 144,050 sq m of employment across the Borough between 2016 and 2036. The one major new development site allocation which does not yet have planning permission is the Strategic Growth Option (SGO) to the north of Bishopstoke and Fair Oak.

9. The extra development in the Borough is likely to generate extra patronage at rail stations in the Borough. In the case of the SGO, this would primarily arise at Eastleigh and Southampton Parkway stations. It is anticipated that this extra patronage can be accommodated on the existing network.

10. There are a range of development sites allocated adjacent to railway lines within the Borough, and Network Rail has not raised any objection to these through the Local Plan process.

New Rail Station at Allington

11. The key factors in considering whether or not a new rail station could be provided at Allington are set out in Network Rail's document "Investment in Stations" (2017) (Appendix 1).

12. A new rail station would require approval from both Network Rail and the relevant train operating company.

Investment

13. A railway station at Allington would require two platforms of sufficient length to accommodate up to 12-car trains; and a mobility compliant means of access across the

railway line to both platforms. Based on general experience, the capital cost of the station is likely to be in the region of £8 - £9 million. This figure is subject to change dependent on any further development of any new station proposal.

14. The capital cost of a new railway station is usually provided by the developer or the public sector; Network Rail are not typically funded for new stations.

15. A positive business case and evidence of strategic fit (impact on network capacity and timetable operation) would need to be made for Network Rail to approve the implementation of a new station and for the on-going operational costs for the rail industry. This would, in part, be based on the level of net additional patronage generated by the new station.

16. The business case would need to:

- Demonstrate that the an increase in patronage could not be achieved more cost effectively by investing in an existing station, in this case Hedge End rail station 2.5 kilometres to the east; and
- Take account of the lost patronage at existing stations as a result of increased journey times and existing passengers diverting to the new station.

17. This would need to be demonstrated by a full feasibility study and cost benefit analysis.

18. A new rail station would generate the most extra patronage if it were surrounded on '360 degrees' by new development, with a particular focus on the population within the first 800 metres of the new station (a convenient walking distance).

19. Whilst a full business case and feasibility study would be required to provide more certainty, at this stage it is considered unlikely that the case for investment in a new rail station at Allington could be made based on a new development:

- To the south of the railway line of approximately 3,000 dwellings and 22,500 sq m of employment (SGO E)
- To the north of the railway line of approximately 2,750 – 3,350 dwellings and 21,000 sq m of employment (SGO D) and 1,500 dwellings (West of Horton Heath);

20. It is unlikely / unclear whether the case could be made based on a new development either side of the railway of approximately 5,750 dwellings (SGO D and E combined) and 1,500 dwellings (West of Horton Heath).

<u>Operational</u>

21. A new station would need to fit into the operation of the wider network and future rail strategy (Wessex Route Study and CMSP modules). A new station stop increases the journey times of trains, which can have 'knock on' effects on the wider network.

22. Network Rail, at the request of Eastleigh Borough Council, have undertaken an assessment of the network capacity / timetabling issues related to the provision of a new station at Allington. These are the Eastleigh Area Connectivity Report and Presentation (TRA011) and are supplemented by an update for the peak period (Appendix 2). This analysis is based on the current network. The improvements listed in the Wessex Route Study would increase the network capacity. The increased network capacity would be

allocated in accordance with strategic demands across the network, and this is likely to result in the additional capacity being taken by 'main line' trains from Bournemouth / Southampton or from Portsmouth into London. Therefore it cannot be assumed it would release extra capacity for additional services from the Hedge End route.

23. In summary, these studies indicate that:

(1) There is capacity on the wider network for:

- The existing hourly service from Portsmouth and Fareham to Eastleigh, Winchester, Basingstoke and London to stop at a new Allington Station in the off peak and peak periods. This is based on high level assumptions and would require further timetabling and economic analysis. It also assumes that the spare capacity on the wider network is taken up by the effect of the new Allington station, and not by other service changes.

- Theoretically at least, for an additional stopping service between Portsmouth Harbour and Eastleigh, depending on the timing of the paths on the two single track sections between Fareham and Eastleigh, and further assessment of the capacity at Portsmouth Harbour.

(2) There is no capacity on the existing network to provide, even in the off peak period:

- An additional service every hour from Portsmouth Harbour and Fareham to Eastleigh, Winchester, Basingstoke and London, due to the speed differentials of services between Eastleigh and Shawford and Clapham Junction and London.

- A new hourly service from Portsmouth and Fareham via Allington and Eastleigh to Southampton, even if this was a fast service between Eastleigh and Southampton Central (stopping only at Southampton Parkway). This is primarily due to capacity constraints at Eastleigh and Southampton Central rail stations with the paths available. It would also leave no spare capacity at Portsmouth Harbour for further services.

24. The necessary capacity for these off peak services could (theoretically at least) be created by a complete recast of the whole network timetable and running at minimum margins (with implications for performance). In the case of the service to Southampton, the capacity could alternatively be created by the provision of new platforms at Eastleigh and Southampton Central. Further analysis of the capacity on the Eastleigh – Fareham single line sections and Portsmouth Harbour would be required. In any case there would not be the capacity for such services to stop at the new Allington station due to the constraints of the two single line sections between Eastleigh and Fareham.

Conclusion

25. Eastleigh Borough Council and Network Rail will work together to improve rail services in the Eastleigh area as appropriate in line with the Wessex Route Study, and any changes as set out in the CMSP process.

26. However, it is unlikely that strategic growth options D or E would result in the provision of a new rail station to serve them. If they did, it would only be likely to result in the provision of an hourly service to Portsmouth, Fareham, Eastleigh Winchester, Basingstoke and London (and provided this capacity wasn't taken by other service changes). It would be unlikely to result in a service to Southampton.

Appendices:

Appendix 1 – Investment in Stations: A guide for promoters and developers (June 2017)

Appendix 2 – Allington Lane Report: Capacity Analysis – System Operator (August 2019)

Appendix 1

Investment in Stations

A guide for promoters and developers

June 2017

Network RUS

Contents

01: Introduction

Stations are a vital component of the passenger railway network. A well located and designed station provides for demand for rail travel by allowing passengers safe and easy access to the services they require. Stations offer facilities for finding up to the minute information, buying tickets, sheltering from the elements and interchanging to the next leg of a passenger journey. Successful stations add to the passenger experience and support the economic, social and environmental benefits of rail.

Accrington eco-station redevelopment (Funded by: Lancashire County Council, Hyndburn Borough Council, National Stations Improvement Programme and European Regional Development Funding)

Network Rail and franchised Train Operating Companies (TOCs) operate over 2,500 stations on the rail network in Great Britain. Passenger usage of the railways is currently experiencing strong growth. Passenger numbers have increased by 59 percent in the last ten years and Network Rail's Market Studies foresee thirty years of continuous passenger growth. This presents a challenge to some stations. Many were built over 100 years ago and were designed for different types and numbers of users and different patterns of travel and settlement than are found today. In such cases, investment may be necessary to ensure that stations are able to continue to meet the demands of the railway and the travelling public, today and in the future.

A number of ring fenced funds for enhancing stations have been made available to the industry over its current five year funding period (to 2019). However, the railway industry also welcomes and actively encourages carefully considered investment in stations from interested third parties.

The Investment in Stations Guidance is for use by any organisation which is interested in investing in station facilities. Such promoters would typically include local authorities, private developers, regional bodies and community rail partnerships. The guidance aims to ensure that such investment returns the maximum benefit to the investor and to passengers and other station users.

New Stations: A Guide for Promoters was originally published by the Strategic Rail Authority (SRA) in 2004. Following significant changes in the structure of the rail industry and the winding up of the SRA, Network Rail published a revised document Investment in Stations: A guide for promoters and developers in 2008. An update was published in 2011 to accompany the Network RUS: Stations published in the same year. This 2017 version retains the core guidance offered in the 2011 edition. Updates have been made to structure and content based on feedback from stakeholders:

- The document has been updated to take account of changes to legislation, policy and standards
- Greater emphasis is placed on the requirement that schemes be value for money, fit with industry plans, have an affordable whole life cost, and minimise disruption to the operational railway
- The document has been restructured to guide promoters clearly through key considerations for the initial development of a scheme

The 'Expanding the Railways' document from the Campaign for Better Transport (http://www.bettertransport.org.uk) offers an introduction to the type of measures which are explored in more depth in this document.

1.1 Document aims and objectives

This document has three objectives. Firstly, it guides promoters on how to engage with the rail industry and who to contact for assistance in developing a proposal for station investment. Secondly, it provides a planning framework which promoters of investment in a station can adopt in developing their proposal, including key questions for promoters to consider in the early stages. Thirdly, it provides background information on rail industry structure, policy, processes and standards to aid promoters in developing a proposal which is relevant and well informed.

The guidance consists of:

- A summary of relevant considerations for selecting investment in a station as a suitable option to achieve a local transport objective
- Identification of the different options for investment in a station and guidance on when they might be appropriate
- Information about the rail industry's business case appraisal process for new schemes and the evidence required to support a robust proposal

The section on background information includes:

- A brief synopsis of current industry structure relevant to station investment
- Discussion of local planning regulations likely to be of relevance
- A description of the industry processes and standards needing to be complied with when investing in stations

New Cross Gate Station, Access for All fund

1.2 Summary of guidance

Chapter 2 gives general guidance on how investment in station facilities can be considered as an option to achieve specific transport objectives. Chapters 3, 4 and 5 consider the options for investment in stations and when each is appropriate.

The key considerations discussed are as follows:

- An option selection process should be carried out in order to establish that the option selected is the most effective means of achieving the promoter's objectives.
- Engagement with both the local train operating company (TOC) or companies, the Station Facility Owner (SFO) and Network Rail is vital as they can advise the promoter as to the potential operational and financial viability of a proposal for station investment at an early stage.
- Enhancement of existing station facilities should generally be the first option considered for station investment as it is likely to minimise disruption and adverse operational impacts on the railway. Consideration should be given to relocating an existing station or the opening of a new station where enhancement does not meet the scheme's objectives or there are additional benefits associated with these options. However, station relocation or the addition of a new station to the network is likely to cause disruption and will only be possible where operational constraints allow.
- The timescale for construction of a new station is generally, on average, two years from start to finish. Significant time before this is required to develop and approve a proposal.
- Any proposed investment needs to demonstrate a positive impact for passengers and the existing railway network. For example, a new station needs to serve a new market and provide links to origins and destinations which would be desirable to potential passengers without substantial disadvantages such as longer journey times for existing passengers. This positive impact should be demonstrated in a WebTag compliant business case.
- Investment proposals must consider government objectives for the relevant route and the Long Term Planning Process (LTPP) which is the rail industry's plan to 2043. Proposals which have impacts conflicting with industry strategy are unlikely to secure industry support.
- Proposed investment should consider other recent and planned investments in stations and the rail network. A programme of planned investment may provide a good or even a one-off opportunity for coordinated third party investment in station facilities. Conversely, the relocation of a station which has recently seen substantial investment or the opening of a new station on a section of line that has had journey time improvements is unlikely to offer benefit to the railway.
- When station investment is partially or wholly funded by the Department for Transport (DfT) or Transport Scotland (TS) from a ring fenced fund, or is under a commercial framework to administer DfT or TS funding, the investment should be targeted to meet the conditions of that funding. These may include revenue return to the DfT or TS, generation of new revenue streams, passenger satisfaction improvement measurement through passenger survey Key Performance Indicators (KPIs) or other specific objectives.

1.3 Summary of background information

The background information provided in chapters 6 and 7 covers:

- The structure of the rail industry and how a promoter can engage with the industry to develop their proposal
- Policy and planning considerations relevant to investment in stations
- Rail industry governance and standards, and relevant legislation
- Who to contact at Network Rail

02: Developing a proposal

This chapter presents a structured approach to be followed by promoters preparing a proposal for investment in a station.

Coleshill Parkway new station (Funded by: Laing Rail, DfT through LTP, Warwickshire County Council and North Warwickshire District Council)

2.1 Option methodology

Promoters of investment in stations should identify the specific objectives of their scheme. Such objectives might include:

- Increasing the connectedness of a community by providing new travel options
- Providing transport links to a new or growing community, a commercial centre or a public facility
- Encouraging local economic development
- Increasing usage of a station
- Increasing passenger satisfaction at a station
- Increasing revenue generating opportunities at a station

In order to show how the above objectives will be achieved by investing in a station the proposal will need to:

- Identify the nature of the local transport challenges being faced
- Determine the different transport options that could be adopted
- Understand the existing and future market for rail travel
- Demonstrate why a rail based enhancement is most appropriate as part of a package of enhancements or on its own
- Evaluate which of the potential options for rail investment is appropriate; consideration should be given to rolling stock and timetabling solutions which for some objectives may offer better value for money than investment in a station
- Consider the impact of the proposed option on the operation of the railway
- Consider how the proposed option fits with industry strategy and objectives

2.1.1 Understanding demand

Understanding the local demand for rail travel is fundamental in developing an appropriate investment option. Network Rail, in consultation with rail industry stakeholders as part of the Long Term Planning Process (LTPP), published a series of Market Studies in 2013 which forecast demand in four market sectors up to 2043.

While the Market Studies consider the market as a whole, at a local level the market for rail travel will typically be influenced by factors including local population density and work patterns, train service provision and the accessibility of a station. A proposal for investment in a station facility should consider both the Market Study forecasts and local factors to understand the size and nature of the future market for rail travel at a station and develop an option for investment which addresses the needs of this market.

A proposal may seek to increase demand by encouraging a modal switch to rail. This might be achieved by ensuring that a station provides services to desirable destinations, is accessible, has sufficient capacity, and has facilities that passengers desire and which encourage them to travel by rail.

2.1.2 Understanding capacity

Having established that demand for the proposed option exists, the promoter should assess the impact of the proposal on existing and planned rail services and stations, giving consideration to any capacity constraints identified on the route by the LTPP. Capacity constraints elsewhere on the network may restrict the generation of new demand at a station. If, for example, services on the affected route are severely congested then capacity improvements at a single station are unlikely to achieve significant benefit.

2.1.3 Alignment with rail industry strategy

The rail industry LTPP is the thirty year strategy for the rail network in Great Britain. It is comprised of three different elements which together define the future capability of the rail network. Market Studies forecast future rail demand and develop conditional outputs for future rail services, based on stakeholders' views of how rail services can support delivery of the market's strategic goals. Route Studies, which replace the established geographical Route Utilisation Strategies (RUSs), develop options for future services and for development of the rail network, based on the conditional outputs and demand forecasts from the market studies, and assess those options against funders' appraisal criteria in each of Network Rail's devolved Routes. Route Studies inform the development and delivery of timetables, infrastructure maintenance and renewals for the network. Cross Boundary analysis considers options for services that run across multiple routes to ensure that consistent

Oxford Parkway Station; Funded by Chiltern Railways and Network Rail

assumptions are made about these services.

A proposal for investment in stations should ensure that its objectives fit with the LTPP's strategy for the route. For example, a proposal introducing additional station calls on a route where journey time savings are identified as a priority is unlikely to be successful. Promoters should contact Network Rail's Strategic Planners for details on LTPP strategy (see chapter 8); all published documents are available on the Network Rail website.

2.2 Investment in stations options

If investment in station facilities is determined to be the best means of achieving the promoter's objectives, it can take the form of three options which should be considered in the following order:

1. Improvement of an existing station facility
2. Relocation of an existing station facility
3. New station opening.

This section summarises these investment options and the circumstances in which they are likely to be appropriate. Detailed guidance on considerations relevant to each option is provided in chapters 3, 4 and 5.

2.2.1 Investment in an existing station

The first investment option that should be considered is the promotion or enhancement of existing station facilities. In many cases this will be the least expensive option for the promoter and will have the lowest impact on the operational railway. Such investment could add to the capacity of a station to meet demand or enhance its attractiveness to passengers in order to increase station usage. It could involve measures to increase the accessibility of the existing stations through improvements to bus interchanges, car parking, signage or pedestrian access.

2.2.2 Relocation of an existing station

Consideration should be given to the relocation of an existing station when enhancement of a station does not meet the promoter's objectives or relocation can be shown to offer better value for money. Stations may be relocated to new sites where they can more conveniently serve the local population and provide better access to the rail network by offering more frequent and diverse services. The new location might be suited to serve a new development that is likely to generate significant new demand on the railway. Relocation also avoids duplication of facilities. This option will have an impact on the operational railway which will need to be assessed, but if existing train services have their calling points shifted to the new location this impact is likely to be minimised.

2.2.3 Development of a new station

A proposal for a new station would be considered when neither of the other options is able to meet the promoter's objectives, or the opening of a new station can be shown to offer better value for money. A new station may allow the rail network to attract new passengers, for example by serving a new development or out of town park and ride facility but the creation of a new station stop for existing services may have a negative operational impact on the railway, potentially increasing journey times for existing passengers. A new station proposal will therefore have to show clear benefits in providing for existing and future demand and offering new and desirable journey opportunities. A Train Operating Company (TOC) must support the provision of services to the new station and early engagement with TOCs is essential to any proposal. Development of a new station might include reopening a facility which had previously been closed, where this would meet the conditions described.

2.3 Developing a business case for investment

As with all transport infrastructure investment, enhancements to the rail network will only be considered when a business case demonstrates that the proposed investment offers value for money and meets affordability criteria. Business cases must follow the Department for Transport's (DfT) 5-case model and be WebTag compliant or follow Transport Scotland's (TS) STAG principles for Scottish schemes. Network Rail can advise on the development of a business case at a level of detail appropriate to the proposed scheme. Key factors for the promoter to consider in the development of a business case include:

- The benefits that the scheme will provide, for example increasing revenue by attracting new passengers to the railway;

Rochester Station – a relocated station funded by Network Rail

- Any negative impacts of the scheme upon existing passengers and freight operators, both on the railway network and on other local transport infrastructure;
- The whole life cost of the scheme, including any ongoing subsidy that might be required, and potential funding sources. It is important to ascertain how this would fit into railway industry funding cycles and other infrastructure investment cycles (both rail industry and local transport investment streams).

Without a positive business case a scheme will not be taken forward for consideration by railway industry stakeholders. The railway industry encourages promoters to have early discussions with the contacts identified in chapter 8 to establish the likely viability of proposals and for guidance in preparing a business case.

2.4 Consultation with the rail industry

It is vital that rail industry bodies are consulted as early as possible in the development of a proposal for investment in a station. Network Rail and the relevant TOC(s) will be able to gauge the potential viability of a scheme from the outset. They can also provide specific local advice and guidance on operational considerations which must be taken into account in order to develop a successful proposal, and information on any enhancements or changes to service patterns already planned at the station. More information on rail industry structure is included in chapter 6 and details of who to contact at Network Rail can be found in chapter 8.

The diagram below sets out the early steps promoters should take in developing a proposal for a new station.

1. Promoter to secure TOC agreement that a new station would be commercially viable
2. Promoter to secure Network Rail agreement that a new station would be operationally and technically viable
3. Promoter to approach DfT, providing evidence to support a decision on whether franchise services can call at the new station.

03: Investing in an existing station

This chapter provides guidance for developing a proposal to invest in an existing station.

3.1 Introduction

Investment in an existing station is likely to be the least expensive investment of the three options available to scheme promoters and the least disruptive to the operation of the railway. Promoters are encouraged to consider this option first.

When investing in an existing station, the nature of the intervention applied will depend upon the specific objectives of the investment. A summary of the key issues the promoter should consider when developing a proposal for investment in an existing station is included in Table 3.1. Any proposed scheme must demonstrate that it offers value for money and fits with the Government's objectives and rail industry's plans.

There are a range of possible options to enhance an existing station depending on the objectives of the investment.

To improve the safety of a station and its desirability as a place to be, lower-cost or cosmetic initiatives such as improved lighting and signage, redecoration, replacement of platform furniture or refurbishment of toilets might be appropriate. Creation of retail or refreshment facilities may also be an option. More substantial improvements are likely to be required to increase accessibility and capacity. These might involve the installation of ramps or lifts to fulfil Equality Act requirements (which may attract 'match-funding' from other sources), or the creation of new entrances, exits and spaces within the station, or improvements to cycle and car parking or interchange facilities.

There are recent examples where a major enhancement to an existing station has been delivered through third party funding and joint ventures with developers. The redevelopment of Epsom station in 2013 with new housing and a hotel is one example of such a scheme.

Epsom station redevelopment (Funded by: Network Rail and Kier Property)

Table 3.1 Key issues for consideration when investing in existing stations

Issue	Key considerations
1. Objectives	
What is the nature of the demand, or the transport problem, which the investment is seeking to address?	Investment in a station might be aimed at: • Accommodating increased demand at the station • Supporting shorter journey times or reliability improvements on the route • Encouraging a greater level of usage of the station • Encouraging a shift towards more sustainable transport modes through improving public transport service facilities and connectivity to/from the station or providing additional facilities for cyclists • Addressing the needs of particular groups of rail users at a station e.g. by improving accessibility • Improving passenger information at the station • Addressing secondary impacts of journeys made from the station e.g. reducing the impact of station user parking in the local neighbourhood. The proposed investment must be appropriate to the scheme's stated objectives.

Burnley Manchester Road - redeveloped station (funded by Burnley Council, Lancashire County Council and European Regional Development fund)

Lea Bridge Station – a new station (Funded by: Waltham Forest Council and the New Stations Fund)

Table 3.1 Key issues for consideration when investing in existing stations

Issue	Key considerations
1. Objectives	
Is the purpose of the investment to increase capacity at the station?	If so, options may include: • Improvements to available car parking facilities • Improvements to pick up and drop off access at the station • Improvements to station buildings or platform areas • Improvements to help the interchange of pedestrians, buses, cycles and taxis • Improvements to accessing the station from the wider environment • Network Rail's Network Route Utilisation Strategy (RUS): Stations published in 2011 has made extensive consideration of station capacity issues and solutions; the document is available on the Network Rail website
What are the Government's objectives for the route?	• Can the proposal contribute to the Government's objectives and is there funding available to do so? • Do the objectives of the investment conflict with Government objectives and route plans? If this is the case the proposal is unlikely to gain industry support.
2. Implementation	
Who owns and operates the station?	• In most cases Network Rail will be the freeholder of the station • Normally the leaseholder and operator of the station (the Station Facility Owner, or SFO) will be one of the Train Operating Companies (TOCs) which serve the station • Consideration should be given to the interface between the SFO as the operator of the station, and Network Rail as the Infrastructure Manager of the operational railway, including responsibility for operational, maintenance and renewal costs following the enhancement.
Are enhancement works likely to impact on the operational railway?	• Enhancements will be easier (hence cheaper) to plan and deliver if they do not disrupt the operational railway • Alterations to car parks, concourse facilities and sometimes platform based facilities are less likely to disrupt train operation. Structural alterations to platforms and overbridges or crossings are more likely to have an impact on the operational railway • Where there is (or might be) an impact on the operational railway, asset protection arrangements will need to be agreed with Network Rail.

Ormskirk station redevelopment. This project was funded by: Lancashire County Council, Merseytravel, Railway Heritage Trust, West Lancashire Borough Council, Northwest Regional Development Agency (NWDA) and National Stations Improvement Programme

Table 3.1 Key issues for consideration when investing in existing stations

Issue	Key considerations
2. Implementation	
Are enhancement works likely to impact on the access to/from the station?	• Larger scale enhancements to access to/from the station such as interchange re-design will significantly impact upon accessibility during the construction phase • Consideration will need to be given to the provision of temporary access routes and facilities to minimise disruption • Where there are impacts on adjacent land not owned by Network Rail, Outside Party asset protection agreements may be required.
What is the process for bringing previously redundant station buildings back into use by the local community and not-for-profit organisations?	• The initial point of contact will be the local TOC to establish the ownership of the building(s) that the promoter wishes to bring back into use for community purposes. Specific guidance on this issue has been developed by the Association of Community Rail Partnerships (ACORP) in their 2014 'Station Adoption: A guide for the local community' document available at: https://acorp.uk.com/wp-content/uploads/2015/10/Acorp-Station-Adoption-2014.pdf • Further guidance can also be found within section 4.4.2.2 of the Network Rail Alternative Solutions RUS (July 2013).
3.Guidance/best practice	
What sort of design guidance is available for station enhancements?	• Network Rail's Station Design Principles is the source for best practice guidance in designing new stations and station enhancements. It is available here: https://www.networkrail.co.uk/Guide_to_Station_Planning_and_Design.pdf • In addition, Network Rail's Inclusive Design Strategy for 2015-2019 'Spaces and Places for Everyone' sets out our strategy to make the railway more accessible and inclusive, and is available here: https://www.networkrail.co.uk/who-we-are/diversity-and-inclusion/everyone-strategy/inclusive-design/
With which parties are agreements required to deliver enhancements and, where applicable, ensure ongoing operation?	• This will vary on a case-by-case basis. As a minimum, Network Rail will require that asset protection processes are followed to ensure that existing infrastructure is not damaged or disturbed and that ongoing network operations can also continue where possible.
What guidance is available on commercial agreements that may need to be put in place?	• Network Rail has a number of commercial frameworks for station investment incorporating guiding principles and setting out appropriate governance. Details are available from Network Rail's Corporate Commercial department which can be contacted through Network Rail's Strategic Planners listed in chapter 8.

04: Replacement or relocation of an existing station

This chapter provides guidance for developing a proposal to replace or relocate an existing station.

Relocated Drumgelloch station (Funded by: Transport Scotland)

4.1 Introduction

When changes in the market for rail travel mean that investment in existing station facilities cannot effectively achieve the promoter's objectives, the rail industry recommends that consideration is next given to the replacement or relocation of an existing station. Much of the UK's railway network was designed in the 19th century and shifts in settlement patterns and changes in town centre land uses over time mean that some existing stations may not now be situated on the most appropriate sites in our towns and cities. The relocation of a station might therefore allow it to meet today's demand for rail travel, offer improved journey and interchange opportunities, and attract new passengers

The industry welcomes suggestions that propose relocation of existing facilities where a better-located replacement station can be built, ideally as part of a new development.

Relocation of a station should aim to make the station more accessible to the local community and offer better access to the rail network with increased journey opportunities. While opening a new station could result in additional station calls affecting journey times and the operational workings of the railway, the closure of an existing station mitigates these impacts if train services calling at the closed facility are able to transfer their stops to the new station.

As for all options for investment in stations, it must clearly be demonstrated how the replacement or relocation of a station would achieve the promoter's objectives, that the scheme offers value for money and that it fits with government objectives and rail industry plans. A summary of the key issues the promoter must consider when developing a proposal replacing or relocating an existing station is included in Table 4.1.

Table 4.1 Key issues for consideration when proposing replacement or relocation of an existing station

Issue	Key considerations
How would relocation of a station improve its ability to meet demand for rail travel?	• What new destinations or catchment areas would a relocated station be able to serve? • What is the net increase in demand achieved by relocating the station? • Is the demand the relocation is targeting genuinely not provided for at present? Relocations should avoid duplicating facilities.
Would the current catchment area for the existing station be disadvantaged by a relocation scheme?	• Current data on footfall at the existing station proposed for relocation • Location and access routes of population served by existing station to the proposed new site • Consideration of the Public Transport Accessibility levels of the new station relative to the station proposed to be replaced.
What is the process for closing an existing station and which organisations can propose such a closure?	• The Department for Transport (DfT) published the 'Railway Closures Guidance' in October 2006. The document is available by following the link at: https://www.gov.uk/government/publications/railway-closures-guidance . The publication sets out how railway closure proposals should be assessed and processed • A station closure can be proposed by the Secretary of State for Transport, Scottish Ministers, the National Assembly for Wales, the English Passenger Transport Authorities or the Mayor of London. A train operator or the network operator can also propose a closure though the relevant national authority must approve. The Office of Rail and Road (ORR) is responsible for ratifying all full closure proposals • Key consultees in the station closures process are Network Rail, the relevant Train Operating Company (TOC) or Freight Operating Company (FOC) affected by the closure, DfT or Transport Scotland, Transport Focus and/or London TravelWatch – the passenger watchdog bodies.

05: Planning a new station

This chapter provides guidance for developing a proposal to open a new station.

Buckshaw Parkway - new station (Funded by: Lancashire County Council, Chorley Council and Network Rail)

5.1 Introduction

If the promoter's objectives cannot feasibly be met either by investing in or relocating an existing station, a completely new station may be the solution. New stations can help the rail network attract new passengers who did not previously have good access to rail services. However, as such an option is likely to represent a large investment with a potentially disruptive impact on the operational railway, it is important that a series of key issues are considered at the outset of planning for a new station. Engagement with these issues will help to ensure that the proposal is robust and consistent with the industry's planning framework. The key issues to be considered fall broadly into three areas:

Economic and financial:

- Demonstration of the benefits of a new station contributing to a positive business case for the proposed scheme
- Understanding the cost of building and operating the new station and how this would be funded
- Understanding the necessary commercial interaction with the rail industry

Operational and performance:

- Ensuring a proposal aligns with Government objectives and rail industry plans
- Assessing whether the solution proposed fits with other services and infrastructure constraints on the chosen route

Design concept:

- Reviewing the basic suitability of the site proposed
- Understanding present rail industry standards for new stations

Table 5.1 highlights general questions which should be considered.

5.2 Economic and financial

The development of a positive business case is essential to the success of a new station proposal. In order to develop a business case the promoter must understand the costs and the impacts of the scheme. This in its turn requires consideration of a number of commercial issues which are likely to influence the whole life cost of the scheme.

Table 5.2 sets out a checklist of the commercial and economic issues and key considerations.

Table 5.1 Key issues for consideration when proposing a new station

Issue	Key considerations
What are the benefits associated with the opening of a new station?	These might include: • Increased revenue from higher passenger numbers • Benefits of encouraging a modal shift to rail • Benefits of providing greater accessibility to communities Promoters must ensure that the benefits recorded relate to new markets captured by the investment rather than, for example, re-counting passengers who already travel by rail
What are the negative impacts that might be associated with a new station?	• The extended journey time associated with additional station stops can impact negatively on revenue. This will counter the revenue benefits gained from new passengers attracted to the new station. This should be assessed in the business case and economic appraisal that must be undertaken for the proposal. • A new station may lead to revenue abstraction from Train Operating Companies (TOCs) operating from nearby stations due to existing passengers being diverted to the new facility. This is unlikely to be an issue if the same TOC serving the new station exclusively serves other nearby stations.

Table 5.2 Key issues for consideration when proposing a new station (commercial and economic)	
Issue	Key considerations
Is the new station likely to be affordable?	• The size of a new station and the extent of the facilities provided will have a major influence on the cost of the scheme. A proposal for a new station must demonstrate that the proposed facility would achieve the promoter's objectives with an affordable whole life cost. • Operational costs, including the maintenance of new facilities, should be considered in the assessment of affordability. • Each site will need to be considered on its own merits before a cost indication can be given. Network Rail's Strategic Planning teams (see chapter 8) will be able to give some indication of likely costs at a relatively early stage in the development of a project.
Has a train service operator been identified?	• A TOC will be required to operate services, and needs to be engaged from the start. Ultimately their franchise agreement will need to be varied and agreement reached on any net impact on TOC costs and which party covers any shortfall. A relevant franchising authority will also need to be engaged at the outset. • At project inception stage it is not realistic to expect a detailed understanding of figures, but a promoter should have considered whether serving the new station could add substantially to TOC operating costs, for example if increased mileage is required or longer trains.
Has a Station Facility Owner (SFO) been identified?	• The facilities at a new station and the associated staffing levels can be important drivers of cost. A TOC would usually be the Station Facility Owner (SFO). Estimates of the net cost of operating the station need to be considered alongside the build cost as early as possible in order for the promoter to judge the potential whole life cost of the development. • Some stations may need to be staffed, and these operational costs should also be considered. Ticket offices may be occupied full or part time. Dispatch or other railway staff may also be required.

Conon Bridge - new station with an innovative short platfrom (Funded by: Highland Council, HiTRANS, Network Rail and First ScotRail)

5.3 Operational and performance

Operational and performance issues need to be considered at the inception stage of the project and early engagement with Network Rail and TOCs is recommended to establish scheme feasibility. It is important that a proposal for a new station is developed with cognisance of the current and planned service pattern on the route and of existing infrastructure constraints.

As part of the rail industry's Long Term Planning Process (LTPP), Network Rail is facilitating the development of a series of Route Studies, the first of which was published in 2014. These studies assess the specific rail based impacts of predicted demand by key rail corridor or area and suggest investment choices for funders where necessary to meet that demand. The Route Studies also set the strategy for service frequencies and train lengths. They are key documents for promoters to consult when developing a proposal for a new station. Published Route Studies and a programme of their development are available on the Network Rail website. For those routes which do not yet have a published Route Study, the geographical Route Utilisation Strategies (RUSs) form the established industry guidance. Engagement with Network Rail is advisable in these cases as they may be able to provide an early view of forthcoming Route Study recommendations.

Having established whether there is a fit with the industry planning framework, a promoter will also need to form an early view as to the appropriate service pattern at the new station. This would include the practicality of stopping all or just some of the existing services at the new station, or of introducing new services to serve the facility. The views of the relevant franchising authority should be sought.

Table 5.3 sets out a checklist of issues and key considerations concerning operations and performance.

Mitcham Eastfields - new station (Funded by: Network Rail)

Table 5.3 Key issues for consideration when proposing a new station (operations and performance)

Issue	Key considerations
Is the new station proposal consistent with the vision for the route set out in the relevant Route Study?	• If the Route Study identifies the route section as a capacity constraint and/or a performance risk it may not be possible to stop existing services at a new station and it is unlikely to be possible to run additional services • If the Route Study identifies services already exceeding maximum capacity at peak times, it is unlikely that a plan to stop existing services at the station will be practical.
Is the railway used exclusively by one type of service, or a mixture (e.g. stopping, express, freight etc)?	• It will be easier to accommodate calls at the station if all services are currently stopping trains rather than all express, or a mixture • If the proposed site is on a high speed line between major conurbations it is unlikely that it will be possible to insert stops into express service schedules.
In terms of destinations, timing and stopping pattern, do existing services passing the site 'fit' with the anticipated patterns of travel from the new station?	• If they do not, provision of new services/alterations to existing service origins and destinations will need to be considered, which is likely to be expensive.
Location of signalling equipment including signals at proposed site.	• The requirement to locate additional signals or in some cases move existing signals is likely to add substantially to the cost and time taken to complete the project. Network Rail will be able to advise on the likely infrastructure requirements of a new station proposal.

Bicester Village Station; Funded by Chiltern Railways and Network Rail

5.4 Design concept

In order to gain a high level understanding of the likely cost of the project, the promoter should develop some basic features of the station's design. Network Rail has produced a Station Design Strategy which should be referred to as the first point of guidance for station design on the regulated network. Table 5.4 sets out a non-exhaustive list of restrictions that may have a major impact on new station developments and which promoters of new stations should consider at an early stage. More details of applicable industry standards is included in section 7.5.3.

Table 5.4 Key issues for consideration when proposing a new station (design concept)	
Issue	Key considerations
Platform length	• Platforms of new stations should (in the vast majority of cases) be at least the length of the longest train currently or planned to serve the station.
Are track gradients acceptable at the location of the proposed station?	• Railway Group Standard GIGN7616 states that wherever possible, platforms shall be located adjacent to track with an average gradient not steeper than 1 in 500. • The Infrastructure TSI as set out in Commission Regulation (EU) No. 1299/2014 should be consulted for platform length requirements. • It may be possible to locate platforms on a steeper gradient, but not if trains are planned to reverse or terminate at the station. If proposals are put forward for new platforms on a gradient steeper than 1 in 500, consideration will need to be given to the need for additional arrangements to ensure safety. • Steep gradients can make stopping and starting trains difficult especially in areas affected by heavy leaf fall.
Is the railway straight or curved at the location of the proposed station?	• Railway Group Standard GIGN7616 requires new station platforms to be straight where possible. • The Infrastructure TSI as set out in Commission Regulation (EU) No. 1299/2014 should be consulted for platform length requirements. • Curved platforms can cause problems in implementation of the requirements of the Equality Act 2010 owing to gaps between the train and platform. • In addition, curved platforms make sighting of train doors by crew difficult. Platforms on horizontal curves with radii of less than 1000m may be permitted if due consideration has been made of stepping distances and visibility issues.
How many new footbridges will the station require?	• New barrow crossings between platforms are highly unlikely to be approved on safety grounds, therefore a footbridge is likely to be required as a minimum unless an underpass is an alternative option • Location of a new station close to an existing overbridge/underpass will save substantial costs, although this is not applicable next to existing level crossings (Network Rail policy is to reduce the number of level crossings over time, wherever possible). A new footbridge of a modular design will offer savings over a bespoke designed structure. • Network Rail's Strategic Planning teams (see chapter 8) will be able to give some indication of likely costs at a relatively early stage in the development of a project.
Is the railway in a cutting/ on an embankment/ difficult to access?	• Construction costs may be affected by passenger accessibility issues; in particular meeting Equality Act (2010) implementation requirements (i.e. step-free access to all areas) is more difficult in these locations.
Is road access available to the site/is adequate land available for parking?	• Road access will be essential both during construction and once the station is operational. • As a minimum, a pick up and drop-off point for 3 or 4 vehicles will be necessary. • The number of parking spaces provided will be closely linked to the promoter's and the rail industry's views of the market the station will serve. Clearly a new station in a suburban or non urban area on a commuter route into a key conurbation is likely to require significant parking. Conversely a relatively central urban station or one serving a shopping centre or airport may require only minimal parking facilities. The location and number of designated accessible parking spaces will also need to be considered.
Existing buried and exposed services	• Provision of service infrastructure (water, drainage, electricity, communications) can be a major cost if they do not currently exist at the proposed site. The requirements to provide services should be considered in assessing the suitability of a site. • Where services do exist they may be an obstacle to the proposal for a new station. Surveys should be carried out early in the design process to identify any services which require relocation.

06: Working with the rail industry

This chapter details how developers and promoters can engage with the industry to progress their proposal for investment and to address the considerations and requirements described in chapter 5. It explains the structure of the industry and the process of project management followed by Network Rail for all railway enhancements

St Neots following a completion of an Access for All scheme (Funded by: Huntingdonshire District Council, Access for All and Network Rail)

6.1 Early stages

Early engagement with the rail industry is indispensible to ensure that proposals for station enhancements or new stations can be developed successfully. Network Rail's route-based Strategic Planning teams act as the first point of contact for promoters; contact details for each of these teams are included in chapter 8 of this document.

Proposals should be developed in accordance with the guidance presented in chapters 2 - 5. Where Network Rail is involved in the proposed enhancement, Network Rail's Strategic Planning teams will work with developers and local authorities on the scheme throughout the feasibility processes and planning stages. When the proposal has been developed and funding secured, ownership of the project will transfer within Network Rail to the relevant Network Rail Route Enhancement Manager (REM) for the area concerned. The REM will allocate a sponsor to the project. The sponsor will be the promoter's single point of contact and will be responsible for the project, following the Network Rail standard project management process.

6.2 Project management

Governance for Railway Investment Projects

For most station investments, Network Rail's Governance for Railway Investment Projects (GRIP) must be followed to monitor and project manage investment in the rail network. GRIP has been developed to minimise and mitigate the risks associated with delivering enhancement projects on an operational railway and covers the project process from inception to post-implementation realisation of benefits. Network Rail's licence obligations require it to be confident that when schemes are completed, they can be operated and maintained safely, reliably, efficiently and cost effectively. The GRIP process ensures that projects are delivered in such a way as to support these obligations and is used on all enhancements made to the network and to stations, including third-party funded works.

The GRIP process is split into eight defined parts of the project lifecycle.

1. Output definition;
2. Pre-feasibility;
3. Option selection;
4. Single option development;
5. Detailed design;
6. Constructing, testing & commissioning;
7. Scheme hand-back; and
8. Project close-out.

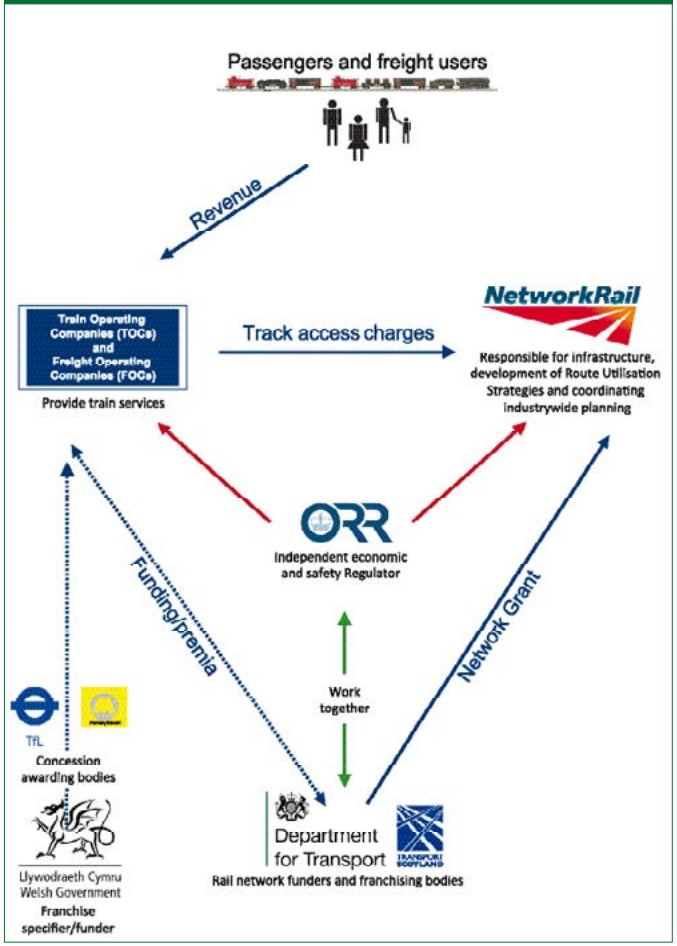
Network Rail can assist promoters in ensuring that their proposal is developed to take account of GRIP requirements. More information about GRIP is available on the Network Rail website: http://www.networkrail.co.uk/aspx/4171.aspx.

Where stations are held on a long full repairing lease by the train operator franchisee, and the proposed changes or improvements fall within the scope of development rights of the franchisee, it may be the franchisee's investment processes and design approvals for station assets that apply.

6.3 Industry structure

The rail industry is made up of a number of different entities and the industry's planning framework has undergone a number of changes in recent years. This section clarifies the accountabilities of the different organisations and the relationships between them, and identifies particular policies of relevance to promoters of investment in stations. Industry structure is illustrated in Figure 6.1

Figure 6.1 Rail industry structure



Network Rail

Network Rail is the owner of rail infrastructure in Great Britain including track, bridges, tunnels and the freehold of most stations. It is accountable for the operation, maintenance and renewal of network assets and plays a key role in rail industry planning including leadership of the development of the Long Term Planning Process (LTPP). Proposals for most station improvements and for all new stations need to be approved by Network Rail.

Network Rail's role as coordinator of industry planning enables it to be a gateway into the planning process for promoters. It will ensure that all the relevant industry parties are consulted at the appropriate stage of a proposal's development. Where appropriate, Network Rail is prepared to be responsible for some formal processes that need to be undertaken when altering the facilities available to station or network users. This may include 'Station Change' or 'Network Change' procedures. Network Rail was reclassified as a public sector body on 1 September 2014 following a statistical change by the Office for National Statistics announced in December 2013.

Department for Transport

The Department for Transport (DfT) has overarching responsibility for rail strategy and is the franchising authority for passenger rail services provided by franchised TOCs in England. The DfT's Rail Group has responsibility for working with the rail industry to deliver the UK Government's objectives for rail.

The DfT published the White Paper 'Delivering a Sustainable Railway' in 2007 in which it identified priorities including continued improvements to the safety and reliability of passenger and freight services, consideration of wider environmental issues, improved customer service and the provision of increased capacity to serve growing demand. The White Paper did not include proposals to invest in widespread re-openings of lines or stations.

Any additional station in England and Wales that might be approved by Network Rail will also need to be authorised by the DfT, if a franchised TOC is anticipated to serve it. Similarly, if third party proposals include a change in the specified service of a franchised operator (e.g. station stopping patterns or new station calls) the DfT will be required to approve the proposals. The DfT will need to be aware of any investment that would have an impact on the long term finances of a franchisee. The DfT will also require any proposal to have a sufficiently robust business case that follows its 'Webtag' process.

Office of Rail and Road

The Office of Rail and Road (ORR) is the independent economic and safety regulator for the whole rail network in Great Britain.

The ORR issues and modifies licences to operate trains and stations. It also approves and may amend contracts for access to track, stations and light maintenance depots. Each Train Operating Company (TOC) requires a contract to enable its trains to call at any station of which it is not the Station Facility Owner (SFO) – this is referred to as an access agreement. The ORR must approve any new or amended station access agreements.

The ORR will generally be concerned to ensure that the contracts establish clear and appropriate obligations, remedies and incentives on the parties. ORR has published a suite of template station access contracts for this purpose.

Any material physical change to existing station facilities requires a 'Station Change', which has the effect of changing the terms of a station access agreement. As such it will require ORR approval.

The provision of new stations and major works to existing stations requiring the application of Technical Specifications for Interoperability (TSI) require an Authorisation from the ORR under The Railways (Interoperability) Regulations 2011.

Network Rail and the Department for Transport's Memorandum of Understanding

In response to Dame Colette Bowe's review of the planning of Network Rail's enhancements recommendations in November 2015, the DfT and Network Rail issued a Memorandum of Understanding (MoU). This MoU jointly commits to new working practices and governance, ensuring that both organisations can better deliver improvements for rail customers. In particular, it sets out commitments to 'building new levels of trust, openness and transparency, and working to solve problems collaboratively, while maintaining a robust level of constructive challenges between organisations to drive up efficiency of railway improvement programmes'.

Most relevant to Investment in Stations, a number of changes have

been established as part of the MoU, these include:

- Clarification of the Department's role as funder and client on the Government's behalf for infrastructure investment, and Network Rail's role as the system operator and principal delivery partner
- A revised governance structure to support improved decision making for programmes and for the management of the portfolio
- Formal, joint, investment decisions that are made progressively throughout the enhancement lifecycle
- Joint responsibility for continuous improvement, value for money, and efficiency.

Transport Scotland

Transport Scotland is the national transport agency for Scotland responsible for the rail network's long term development, strategic decisions about future investment and funding and specifying where resources are targeted by Network Rail on infrastructure maintenance and investment in Scotland. It is also the franchising authority and funding body of passenger rail services provided wholly within Scotland, and of the Anglo-Scottish sleeper services. The Scottish planning framework and the objectives of Transport Scotland are supported by seven statutory regional transport partnerships.

These regional bodies set rail investment of a local or regional nature in a strategic regional context.

In Scotland, proposals for investment should follow the process set out in the Scottish Transport Appraisal Guidance (STAG). This is an evidence-based and objective-led multi-modal framework approach, to be used to identify appropriate transport options to address transport problems. STAG does not prioritise between options but is used as a policy tool to inform decision making when Scottish Government (including Transport Scotland) funding or support is required. Promoters should also consult Scottish Planning Policy 17 and Planning Advice Note 75. It is important to engage with Transport Scotland as early as possible to allow a station investment proposal to be assessed as an option through the STAG process.

Welsh Government

The Welsh Government is currently co-signatory to the Wales and Borders franchise operated by Arriva Trains Wales with the Secretary of State, and is responsible for the financial and performance management of passenger services covered by the agreement and any enhancements to it. The next Wales & Borders franchise, due to begin in 2018, will be fully devolved to Welsh Government. The Welsh Government also has powers to fund rail infrastructure enhancements in Wales over and above those required by the DfT. If proposals affect the services provided by the Wales & Borders franchise operator the Welsh Government will need to be involved in the approvals process. Most new transport schemes in Wales will be appraised using Welsh Transport Appraisal Guidance, which evaluates the economic, social and environmental benefits of a proposal.

Transport for London and Passenger Transport Executives

Transport for London (TfL) is the specifier and funder of passenger services on the North and West London Lines, the suburban lines from London Euston to Watford Junction, the Gospel Oak to Barking Line and the East London Line services from Highbury and Islington to New Cross, West Croydon, Crystal Palace and Clapham Junction. TfL also fulfils this role for the new Crossrail franchise, which is already in operation as TfL Rail between London Liverpool Street and Shenfield.

Following the DfT announcement in July 2007, the Mayor of London also has statutory powers to fund enhancements to some rail stations and service groups at limited points close to (but outside of) the Greater London boundary, where railway geography makes appropriate sense (e.g. routes as far as Shenfield and Dartford, amongst others). TfL may wish to be involved in any changes made to services or stations in these areas.

In the six former metropolitan county areas of England, Passenger Transport Executives (PTEs) or Combined Transport Authorities have an interest in the rail services that operate in their respective areas (and in limited cases, outside their defined areas). Some local rail services are directly supported from PTE funds through the TOC franchise agreement. On Merseyside, statutory responsibility for the services operating on the local network predominantly within the PTE boundary (i.e. Merseyrail Electrics) has been devolved to the PTE.

In these areas, PTEs will often express an interest in any enhancement proposals as part of integrated transport initiatives or local policies, irrespective of whether they directly support services on the route.

Local Authorities

English Local Transport Authorities (LTAs) set the transport investment priorities for their areas. These are developed in Local Transport Plans (LTPs) or Local Implementation Plans produced with Transport for London in the London Boroughs. Local planning authorities (district/borough/city councils and unitary councils) are required to produce Local Delivery Frameworks which include details of proposals for large housing or mixed-use developments and explore relevant transport solutions. Promoters should consult these documents and work closely with the LTA and local planning authorities to develop a proposal which fits with local transport objectives and which may be able to benefit from local transport funds.

Subnational Transport bodies

The recent creation of regional transport organisations such as Transport for the North (TfN) and Midlands Connect will mean that such organisations will have an interest the enhancement and development of stations in their areas.

The legal powers and duties of subnational transport bodies include advising transport ministers on investment priorities in their own areas and on strategic transport schemes to boost growth. They have statutory status which gives them security for the long term.

Local Enterprise Partnerships

Local Enterprise Partnerships (LEPs) are locally-owned partnerships between local authorities and businesses. They play a key role in determining local economic priorities and undertaking activities to drive economic growth and the creation of local jobs.

As of March 2016, £7.3 billion worth of Growth Deal funding has

been allocated to LEPs. LEPs have also been allocated money from the Growing Places Fund to be spent on infrastructure and have been given responsibility for delivering part of the EU Structural and Investment Funds for 2014-2020.

Their responsibilities include working with Government to set out key investment priorities, including transport infrastructure and supporting or coordinating project delivery.

They thus can have the ability to fund or otherwise support transport projects which contribute to their objectives; such as station enhancement, redevelopment or new stations.

Franchised Train Operating Companies

Franchised TOCs operate passenger train services to a specified Service Level Commitment (which is set by the franchising authority). They act as Station Facility Owners (SFO) at specified stations on their route.

Where a TOC is the SFO, it leases the station buildings and land (but not the track) from Network Rail for the duration of its franchise. It is responsible for general upkeep, cleaning, security and maintenance of the station and car park areas if applicable (with the car parking revenues falling to the TOC). It also provides ticket sales facilities, operates gatelines where installed and provides advice and assistance to passengers.

As the day to day operators of stations, TOCs have invaluable knowledge about the needs of their customers and the issues that need to be addressed. They are a key party to any changes that are proposed and should be involved in any proposal from an early stage.

Open access operators

Other, non-franchised, TOCs operate as 'open access' operators, where services are run on a free-standing commercial basis. These companies are licensed by ORR but do not have a franchise or Service Level Commitment agreement with the DfT; they neither receive subsidy, nor are they currently SFO at any station. However, such a company may wish to negotiate calls at any new station if it deems it commercially viable.

A list of open access operators is published on the National Rail Enquiries website at: http://www.nationalrail.co.uk/tocs_maps/tocs/TrainOperators.aspx

Any company can apply to run non-franchised train services as an 'open access' operator, through agreements with Network Rail and the ORR.

07: Financial, contractual and legislative issues

This chapter sets out an overview of the financial, contractual and legislative considerations that are relevant to enhancing an existing station or delivering a new station onto the national rail network. These include the most appropriate options for procurement and construction and any amendments required to the existing contractual obligations of rail industry bodies. Early dialogue with industry parties is essential as they can assist promoters in working through these requirements and in some cases take the lead to ensure that certain requirements are met.

Birkenhead station following completion (Funded by: European Regional Development fund, DfT, and Mersytravel)

7.1 Network Rail approvals processes

Any development of or change to Network Rail's property requires a number of approvals from Network Rail and may also need approval from the Office of Rail and Road (ORR) and the Train Operating Companies (TOCs) who have contractual and regulatory arrangements with Network Rail.

Amongst the design approvals required are the following:

- Technical design approvals: typically Forms 001, 002 and 004 which need to be completed as the design develops. The approval process is usually managed by the appointed Project Manager's engineer;
- Landlord's approvals: typically these include approval for third party works and impacts on Network Rail property. The landlord's consent process is normally managed by the relevant Buildings Engineer;
- Change procedure: where a formal change is required to the agreement with any TOC for access and occupancy arrangements within station premises; and
- Closure: Where part of a contracted facility is reduced or removed as part of a works proposal it will need to be agreed formally with the ORR, the Department for Transport (DfT) and the affected TOC.

Network Rail's investment process (GRIP) requires specific approvals and hand back procedures to be put in place at a number of stages in the project development phases and a full understanding of these will be established at the outset of any particular project. The GRIP process is explained in more detail in chapter 6.

Where stations are held on a long full repairing lease by the train operator franchisee, and the proposed changes or improvements fall within the scope of development rights of the franchisee, it will be the franchisee's investment processes and design approvals for station assets that apply.

7.2 Investment in existing stations

7.2.1 Network Rail approach

Network Rail has significant experience in facilitating enhancements at stations and elsewhere on the rail network. The company's route-based teams can provide feedback and advice on the development of a project. They can help developers with all stages and approaches to enhancement of stations, from asset protection through to complete project delivery. Depending on the size of the scheme, and on the responsibility and development rights of the train operating franchisee, the TOC may be the most appropriate party to take forward enhancement proposals, and in these instances Network Rail's Strategic Planners will refer enquiries to the appropriate personnel within the TOC.

Detailed information about Network Rail's role in assisting customers and stakeholders can be found in the 'Doing business with us' section of the Network Rail website: http://www.networkrail.co.uk/aspx/1544.aspx

This includes Network Rail's Investing in the Network document which provides further information about:

- The investment process itself, including:
  - how projects are identified, prioritised and progressed
  - project development and implementation
  - Network Rail's project management approach
- The applicable contractual process, including contact arrangements

As a result of extensive stakeholder consultation, and in keeping with the regulatory requirements, Network Rail has developed a number of template agreements for the range of services it provides. The company is continuously reviewing and improving these template agreements with the aim of providing promoters with transparency on payments to Network Rail and on the company's obligations and accountability.

West Hampstead station following completion of a National Stations Improvement Programme project: waiting room and customer service facility.

The overall aim of this exercise is to make it easier for promoters to do business with Network Rail. The template agreements can be found on the Network Rail website:

https://www.networkrail.co.uk/industry-commercial-partners/third-party-investors/template-agreements/

7.2.2 Office of Rail and Road Investment Policy Framework

The ORR has a regulatory role in facilitating efficient and effective network investment. ORR has published a number of relevant documents and these can be found on its website:

http://www.rail-reg.gov.uk/server/show/nav.190

The most important document is entitled 'Investment Framework Consolidated Policy & Guidelines' (October 2010), and covers the following topics:

- the process for investment
- what the different parties to an investment are obliged to do
- financing options
- how costs should be recovered through charges
- the remedies available when problems arise.

It should be noted that following the reclassification of Network Rail as a public sector body and the consequent changes to its financing agreements 'Investment Framework Consolidated Policy & Guidelines' (October 2010) requires review. It is anticipated this will take place in 2017. In addition, ORR has provided policy guidance on the regulatory treatment of changes to station access charges due to investments at stations. This is fundamental to the charging approach for enhancements at stations, including the relative split of responsibilities between Network Rail and other parties.

7.2.3 Shared value

In accordance with ORR guidelines set out in its Investment Policy Framework, Network Rail recognises that in some cases the requirement to deliver new or enhanced stations can be a key factor in the grant of planning consent for significant development projects. Use of Network Rail assets in this way can create significant additional commercial value.

Where such value exists, Network Rail accepts that the provision of the enhancement can be of value to Network Rail, and in such cases it is prepared to credit this value against the commercial value that use of Network Rail's land and assets has created and in which, having regard to the ORR guidelines, Network Rail would expect to participate.

Where the project value created is greater than the value of the enhancement, Network Rail would expect to receive a share of this additional value, which it may then use for the purposes of maintaining and improving the railway. This would be calculated in line with the ORR guidelines referred to in section 7.2.2.

7.3 Operating new stations

The operation of a new station on the national rail network will require the following relationships or arrangements to be put in place:

- contractual commitment from the train operators to call at the station and provide access to revenue and ticketing arrangements
- incorporation into the safety regime provided by the Railways and Other Guided Transport Systems (Safety) Regulations 2006 ('ROGS')
- inclusion of the station within regulated access arrangements, permitting its use by other train operators
- a licensed Station Facility Owner (SFO) to operate the station
- in most cases, the creation of a property interest in the station that will give the operator the right to manage the station, and, as station facility owner, to deal with station access arrangements for other users (in most cases this will be a lease or underlease)
- the overall position regarding the responsibilities of ownership should be addressed
- each of these is considered in more detail below.

Winchester station following completion of an Access for All project

Contractual commitment from the train operators

Train operators have a key role to play in assisting the development of the railway. The provision of a station is an expensive undertaking and in order to achieve transportation benefits it is necessary to ensure a long term commitment from the train operator and also the DfT, Transport Scotland or the Welsh Assembly Government as appropriate to operate the associated service. In Greater London and the Merseyside Passenger Transport Executive areas the involvement or support of Transport for London (TfL) or Merseytravel respectively will be necessary. This can be achieved by incorporating the proposed station into the franchise agreement (or if appropriate the rail concession through which services are provided) if funding from the promoter can be made available or if the project is commercially viable. It is essential that the relevant train operator is engaged at the earliest stage as the proposal develops.

The agreement of the DfT or Transport Scotland will be required to ensure that the station has a long term future, and to ensure that the requirements for current and future train services to stop at the station are included within current and future franchise agreements.

Promoters should also note that the addition of a station call to the timetable is subject to a rail industry-led timetable development process. The station needs to be incorporated into the national timetable, passenger information media and the fares structure. The timetable is developed through a pan-industry arrangement where train operators or the DfT bring forward proposed amendments to the timetable. Unless the DfT or Transport Scotland are the sponsor of the proposed project, the promoter will need to engage a train operator to act as sponsor to take forward the proposed timetable change.

The Railways Act 2005 makes provision for new services or station calls to be designated as "experimental services". This designation allows a service to be withdrawn without the extensive consultation process usually required and can apply for up to five years. When a new service is being introduced, designation as experimental may lessen the commercial risk for all parties by allowing the service to be easily withdrawn should it not prove viable. Network Rail is able to provide more detail on this mechanism through the contacts listed in chapter 8 in the first instance.

Safety regime

As mentioned in section 7.2, in order for a new station to become usable as part of the national rail network, its operator must comply with the conditions of the ROGS by obtaining a safety authorisation from the ORR, the railway safety authority in Great Britain. Successful application of ROGS is required before the station can be operated by a licensed operator. Guidance on the application of ROGS can be found at: http://orr.gov.uk/__data/assets/pdf_file/0020/2567/rogs-guidance.pdf

Major work to existing stations and the construction of any new station must also comply with the Common Safety Method for Risk Evaluation and Assessment (CSM Regs). Guidance on the application of the CSM Regs can be found at http://orr.gov.uk/what-and-how-we-regulate/health-and-safety/regulation-and-certification/european-railway-safety-legislation/common-safety-methods

Huddersfield Station following completion of a National Stations Improvement Programme project

Inclusion of the station within regulated access arrangements

Access to the rail network is a regulated activity and the creation or modification of any agreements for access arising from such new station proposals will need to be endorsed by the ORR. This applies in relation to any track access agreement between Network Rail and a train operator who is to call at the station, relating to the relevant line of route. There will also be a need to ensure that station access agreements are set up between the new station operator, assuming that the operator will have a property interest so as to become the Station Facility Owner, and any TOC who is to call at the station. The ORR provides guidance on these issues and promoters will be signposted to the appropriate point of contact.

A licensed Station Facility Owner

The operator of any station (the SFO) is, unless exempted, required to hold a licence. To be licensed, the operator must apply to ORR, whose guidance in relation to licence applications can be found on its website:

http://orr.gov.uk/what-and-how-we-regulate/licensing/licensing-railway-operators

Some station licence conditions e.g. in relation to persons with reduced mobility or complaints procedures involve DfT or ORR approval, as also do ticketing arrangements under passenger train licences; and related guidance may be sought from the DfT. It should be noted that station operators are required to hold public liability insurance to the value of £155 million.

Property interest

To become a station operator, a party is required to become responsible for the management of the station. This will normally be as a result of enjoying a property interest in the station entitling that party to possession and control.

Where the land on which the station is constructed is owned by Network Rail (and whatever is the proposed footprint for a new station, the proximity of platforms to the line will be such that at least some of the land may be expected to fall within Network Rail's current ownership), it will be necessary to enter into a lease, usually directly between Network Rail and the prospective station operator. In some cases, funding arrangements for new stations have resulted in the development of more complex, bespoke leasing structures.

If the station is not operated under an existing licence holder's station licence it should be noted that the work required to satisfy the various licence conditions may add to the total cost of the overall scheme.

Responsibilities of ownership

A new station proposal must be accompanied by a robust assessment of its costs, both capital costs associated with construction and ongoing operating costs including those for maintenance, repairs and renewals of buildings and systems. The long term impacts of a station proposal on rail industry finances, even where a station is provided free to the industry, will need to be carefully considered. The commercial case must demonstrate to the satisfaction of the the relevant franchising authority, e.g. DfT or Transport Scotland and Network Rail that appropriate provisions have been made for the ongoing operation and renewal of the proposal.

Where Network Rail is to be responsible for repair and possibly eventual renewal of the facility funding for this needs to be secured; this may be through a regulated Long Term Charge, or equivalent, to be paid by train operators leasing or using the station. Account needs to be taken of this in the initial cost calculations. The National Station Access Conditions currently provide guidance stating who is responsible for maintenance and repair of the component parts of a station.

7.4 Financial and contractual issues

7.4.1 Ownership of new stations

The typical arrangement for a new station is for Network Rail to be the long term owner of any new or replacement station, normally with a train operator taking on the responsibility of the SFO under the regulated regime. This is currently the standard basis for the majority of the existing 2,500 stations on the network.

Whilst Network Rail is expected to remain the freeholder for most stations, the responsibilities of the train operator as SFO are likely to increase under the Government's plans to pass the long term management and development of a number of franchised stations to operators. This will make the franchisee SFO the lead railway industry party for many changes and improvements to stations. Network Rail acknowledges that each new station proposal will

Ilkeston Station under construction in early 2017 (Funded by: New Stations Fund, Derbyshire County Council, and Erewash Borough Council)

have its own unique characteristics and there may be good reasons to explore alternative ownership models where there are distinct industry benefits.

Conditions of station use by train operators are regulated by the ORR which requires that access agreements between SFOs and train operators using the station incorporate regulated Station Access Conditions. Station leases also incorporate the same station access conditions. These conditions set out the industry agreed matrix of responsibility for such matters as maintenance, repair and renewal as well as such facilities as the provision of train information. They set out a wide range of other railway operational arrangements including the rights exercisable by TOCs entitled to use the station and other third parties and include dispute and claims processes in relation to the non-availability of passenger or other facilities. They also provide express provisions for third parties to promote station investment.

7.4.2 Funding opportunities for investment in stations

Investment in existing stations

In England and Wales

Network Rail encourages 3rd party investment in station facilities where this is an appropriate option. Over the current railway industry five year funding cycle (2014-2019) there are a number of railway industry funds relating to station investment to which 3rd party investment could be linked:

- National Stations Improvement Programme (NSIP) – a fund to improve the passenger experience at stations including better passenger information. £73.5m has been allocated to station infrastructure improvement. The programme sets out to achieve a noticeable improvement to the passenger perception of stations by focusing on high footfall, low passenger satisfaction stations.
- Access for All (AfA) – a fund which targets an increase in accessible stations across the network improving accessibility at train stations nationwide by installing lifts and ramps. The programme has aligned with other station investment programmes, such as renewals and NSIP.
- Network Rail Discretionary Fund (NRDF) – while not a specific station fund this is a fund for small schemes for which funding is not available elsewhere and that have a positive whole-industry business case. It is primarily aimed at schemes that will result in an increase in the capacity or capability of the network.
- In recent years there has been specific funding provided by the Department for Transport to support the provision of new stations in England and Wales. During 2015 and 2016, a number of new stations have been opened on the network supported by Government 'New Stations' funding. Examples of such stations are Lea Bridge in east London and Pye Corner, near Newport in South Wales. An additional round of funding for new stations was made available for applications during 2016 with the successful applications due to be announced in mid-2017. No further such funding is proposed for new stations at this time.

In Scotland

- Scottish Station Fund (SSF) - a fund to improve and enhance station facilities as well as consider proposals for new stations.
- Scottish Network Improvement Fund (SNIF) - a fund to enable minor schemes which can be linked with planned renewals or stand alone schemes which have a whole industry business case. The fund is aimed at improving journey times, connectivity and resilience.

Relocated or new stations

New stations can be promoted and financed directly by commercial developers. In most cases such new stations would be part of a much more significant commercial development where a new station is required to meet planning requirements or where enhanced transport facilities enable the developer to enhance the value of the commercial development.

The most common arrangement for third party funding is to come direct from a local authority or other funding body such as a Local Enterprise Partnership. Network Rail might be involved to a lesser or greater extent in the delivery of the station depending upon the circumstances.

A number of new stations have been delivered and financed by Network Rail. In such circumstances funds for the project have been provided by Network Rail in return for a stream of regulated charges paid by the TOC. Where financial support from the DfT is required it is often paid to the TOC in the form of increased subsidy or reduced premium payments.

York station following completion of the National Stations Improvement Programme project

7.4.3 Planning authorities

Additional funding for investment in railway facilities can be obtained through the planning process as a direct or indirect consequence of development proposals. These are particularly important where large scale and significant developments are proposed which will have a material impact on either the footfall at stations or on the operation of the railway itself. In such circumstances the rail industry would expect the local planning authority to secure funding towards mitigation or improvements from the developer, via the current "planning obligations" mechanism (Section 106 Agreements), Community Infrastructure Levy (CIL) or equivalent. Government guidance also enables local authorities to pool such contributions from a number of development projects to invest in infrastructure improvements, particularly where a number of schemes will jointly benefit from new or enhanced station facilities, or the need for mitigation arises from the effects of additional development in the surrounding area.

At a national level, planning guidance on transport infrastructure differs across England, Wales and Scotland. In England this is provided by the National Planning Policy Framework; in Wales it is provided by the Planning (Wales) Act 2015. Scotland's primary guidance is the National Planning Framework 3, identifying 14 key national developments projects some with rail infrastructure implications (http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Framework).

In Scotland, Section 75 of the Town & Country Planning (Scotland) Act 1997 is similar to Section 106 in England and Wales. One particular difference, however, is that a Section 75 "agreement" is a negotiated contract (in England this may be the case, but developers can also offer a unilateral obligation, i.e. they can state that if planning permission is granted, they will provide a particular facility or service and that is taken into account in the decision). In all cases (i.e. England, Wales and Scotland) the agreement needs to be signed (i.e. for the obligation to be binding) before planning permission can be formally granted. It should also be noted that CIL does not apply in Scotland.

Network Rail, as a Statutory Undertaker, has certain permitted development rights across England, Wales and Scotland (although under separate legislation) to undertake certain works without further planning permission. This can include alterations and further modifications to existing station buildings.

It is also relevant where certain design controls may not apply.

There is no such exemption under Listed Building legislation, where any works impacting on such buildings normally require separate consent prior to commencement. Many existing stations are Listed Buildings, or are within Conservation Areas. If enhancement proposals seek to repair, conserve or restore such buildings, grants may also be available from the Railway Heritage Trust: http://www.railwayheritagetrust.co.uk/

Construction of new stations (i.e. in locations where there was previously no station at all, as opposed to alterations to existing stations covered in the paragraph above) is not usually possible under permitted development rights. In such cases either a planning consent, Development Consent Order following the Nationally Significant Infrastructure Projects process, or a Transport and Works Act (TWA) Order or a Transport and Works Act Scotland (TAWS) Order, may be needed (https://infrastructure.planninginspectorate.gov.uk).

In all cases each proposal must be assessed on its merits to ensure the correct approach is taken as various thresholds and differences apply depending on the type of proposed development and whether it is in England, Wales or Scotland. Where permitted development is being used, early consultation with the relevant local authority is critical and in certain instances the 'prior approval' of such works from the local planning authority may also be required before construction can commence. Even though works may be permitted development, the local authority is still able to exert an influence over the design and location of the proposed works.

Interpretation of the various planning acts and related legislation is a specialised field and matters relating to town planning should always be referred through the Strategic Planners to the National Town Planning team at Network Rail for guidance on the use of this legislation including when permitted development rights are to be used. In certain cases specialist legal advice may also be required. Project budget and timing implications should therefore be checked with Network Rail's internal Town Planning team at an early stage in the GRIP process for an idea of the likely complexity of each case and to identify related cost/timing risks.

Peterborough station following completion of a National Stations Improvement Programme project

7.5 Legislation, controls & approvals

7.5.1 Applicable controls

Designers should be aware that in addition to nationally applicable legislation in Scotland, England and Wales, additional provisions and procedures apply specifically to the railway industry.

As Statutory Undertaker certain types of legislation do not apply or are not relevant. Prior to the commencement of any design commission or any contract works, guidance should be sought from the relevant property department at Network Rail to understand these. Contact should be made through a Strategic Planning point of contact who can assist a promoter through the pre-feasibility process.

7.5.2 Design and approvals

The overall design of the proposed station will need to satisfy a number of tests. It should:

- Provide suitable capacity and facilities to achieve the promoter's objectives. This may include provision for future growth which can be achieved passively through appropriate design and location of facilities
- Comply with relevant European and National standards to ensure the construction, operation, maintenance and renewal of the facility can be achieved safely and straightforwardly
- Have regard to any heritage requirements
- Satisfy Network Rail's emerging design standards, or train operator standards where appropriate (when stations are held on a long full repair lease)

Given the high public profile of stations, developers are encouraged to incorporate sustainable design principles from the very start of any project. This means considering not only the function of the station – for example the incorporation of renewable energy features such as solar or wind power – but also the sustainability of materials used in construction. For example, the incorporation of locally-sourced or recycled material can have a significant impact on the overall environmental impact of the building. Getting the design right not only results in a high performance building, it also benefits rail's overall sustainability performance and can act as a beacon of good practice within local communities.

The approval process can take two differing routes depending on Network Rail's role in the overall development and delivery of the facility. If Network Rail is commissioned using forms of contracts in the suite approved by the ORR, it will work towards enabling designs to be compliant with standards and that the chosen design, developed in full collaboration with the promoter and the TOC, is capable of being built.

Network Rail will then oversee construction and hand over to the selected operator.

If the promoter wishes to design and deliver an enhancement or new station itself, then Network Rail will take an Asset Protection (ASPRO) role (again contracted between the promoter and Network Rail using forms of contract in the suite approved by the ORR) and Network Rail would approve plans through a two tier process. This is a standard process, but Network Rail strongly recommends early dialogue to agree that the proposal in principle works before preparation begins on the more detailed work submissions, as this avoids unnecessary activity, delay and ultimately costs.

It is recognised that promoters may not, understandably, appreciate the detailed technical and legislative issues that may have to be taken into account for each location – track curvature, signal sighting, proximity of track and other rail infrastructure – that can have a material effect on the concept and should be factored in at an early stage. Similarly, there may be issues of other railway schemes in existence or in contemplation that may have bearing on the promoter's aspirations. Network Rail is well placed as network custodian to offer guidance on these points. In this instance, costs arising to Network Rail from implementing asset protection measures are charged back to the developer through a mechanism detailed in the asset protection contract.

7.5.3 Industry standards

The rail industry has safety, technical and procedural standards that apply only to Railway Infrastructure, including stations. It is a legal requirement that all parties comply with these standards to the extent that their approved Safety Management System refers to and depends upon them.

These standards must be considered when developing station schemes, in addition to those processes that relate to station access contracts and leases.

Bathgate - new station (Funded by: Transport Scotland)

There are several types of standards:

Railway Group Standards

Network Rail's Safety Management System is based on compliance with Railway Group Standards (RGSs), which are produced, managed and maintained by the Rail Safety and Standards Board (RSSB) on behalf of "Railway Group Members" i.e. Network Rail, the TOCs and those Freight Operating Companies (FOCs) operating on the national rail network. RGSs have been devised to provide a framework for system safety and safe interworking across the rail industry, by providing clear, concise and cost effective standards, which encourage compliance and consistency without hindering innovation. Further information can be found at: www.rgsonline.co.uk/default.aspx

Technical Specifications for Interoperability

Technical Specifications for Interoperability (TSIs) are European standards that are applicable to the UK rail network and are published by the European Union Agency for Railways (EUAR). They specify certain characteristics required in order to meet the Essential Requirements specified in each TSI.

The TSIs applicable to stations are the Persons with Reduced Mobility (PRM) TSI and the Infrastructure (INF) TSI. Current and planned TSIs can be found at https://www.gov.uk/government/collections/background-to-rail-interoperability

Network Rail company standards

Network Rail develops, publishes and maintains its own technical standards by which it mandates, through requirements and processes, its staff and contractors to uphold the commitments it has made in its Safety Management System. These Network Rail company standards are subordinate to Railway Group Standards and Technical Specifications for Interoperability, and are published in 3 levels. Level 1 standards generally set objectives and goals, Level 2 standards set systems and controls – effectively "what to do", and Level 3 standards address delivery.

Accessibility standards

Under Section 71B of the Railways Act 1993 the Secretary of State maintains a Code of Practice to protect the interests of disabled people travelling by rail. All passenger train station operators are encouraged to use the document, and those who are licensed must follow its standards.

The latest version of the code can be viewed on the DfT's website:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/425977/design-standards-accessible-stations.pdf

Office of Rail and Road and Health and Safety Executive guidance

There are a number of sets of guidance published by the various safety regulators.

The enforcement of railway system safety is the responsibility of the ORR, and the responsibility for Health and Safety other than that related to railway safety (and which includes any parts of the railway under possession) is the responsibility of the Health and Safety Executive.

Guidance related to the minimum safety requirements to be taken into account in developing alterations to infrastructure (which includes stations) was formerly published by the Her Majesty's Railway Inspectorate (HMRI) and has been taken over by the ORR.

In addition, under the provisions of the Railways and Other Guided Transportation Systems (Safety) Regulations 2006 (ROGS), the duty holder for that station (Network Rail if a managed station, the TOC if leased) is required to appoint a "competent person" to assess the safety risks arising from any change to the station. Network Rail has published Level 2 standards (NR/L2/RSE/100 Issue 3 and NR/L2/RSE/100/02 Issue 3) which need to be referred to in relation to infrastructure change projects at Network Rail managed stations. If the station is leased, the TOC who is the duty holder under ROGS for that station will need to be consulted, and their arrangements applied.

7.5.4 Fire legislation

National legislation applies and this contains specific reference to sub-surface stations. Whilst this was primarily drafted to apply to underground stations, it nonetheless applies to a number of Network Rail's stations, particularly those beneath major developments. Advice should always be taken from Network Rail's Fire Safety Engineer.

08: Network Rail contacts

Network Rail contacts

The initial point of contact at Network Rail for developers and local authority officers who are considering investment in the rail network are the Strategic Planning teams as shown:

Scotland

Tel: 0141 555 4020

LNE & East Midlands

Tel: 01904 383 184

LNW

Tel: 0330 854 0064

Western

Tel: 01793 389 614

Wales

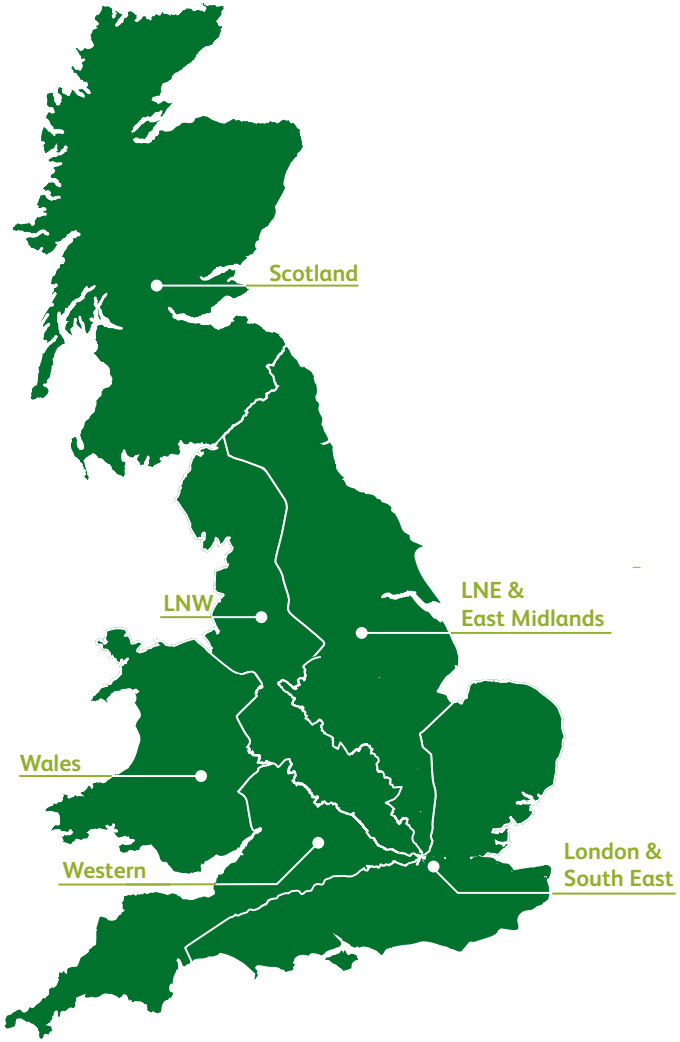
Tel: 07919 528 492

London & South East

Tel: 020 3357 7931

Department for Transport contact

newstations@dft.gsi.gov.uk



Network Rail
1 Eversholt Street
London
NW1 2DN

www.networkrail.co.uk

Appendix 2

Allington Lane Report

Capacity Analysis – System Operator

23rd August 2019

Author:

Lucinda Jones

Document Owner:

Cat Priestman

System Operator Planning a better network for you

Overview

What we did?
This analysis looked whether an additional stop at a proposed station, Allington Lane, could be inserted into a number of services within a three-hour period between 06:00 and 09:00 within the May 2019 timetable.

What we found?

- 11 services were Identified between 06:00 and 09:00 for servicing the new station
- Only 1 service could not support an additional stop at Allington Lane
- 2 of the services could support the additional stop but would require minor retiming of other services to accommodate the stop
- 8 of the services could support the additional stop without disrupting other services
- The single-track section between Botley and Fareham didn't affect any of the timings with the trains analysed

What were the assumptions?

- The geographic scope of the analysis was primarily focused between Eastleigh station, Fareham, Cosham and Portsmouth Harbour
- V4.0 of the 2019 Timetable Planning Rules and Engineering Access Statement were used
- All stops at Allington Lane were assumed to add 2 minutes on to the total journey time between the timing points Hedge End and Eastleigh South Junction
    - This 2 minute includes the estimated dwell, time needed for the service to decelerate and accelerate
- The source timetable was the May 2019 timetable

What are the risks?

- In order to accommodate the stop in these services, other timings, such as dwells and pathing allowance, were cut back. This adds a performance risk, with more services running on or closer to minimum margins, should a delay occur, the timetable will have more difficulty recovering.
- The stop at Allington Lane was assumed to add 2 minutes onto the total journey time. Should further analysis prove this false and indicate that the journey time would increase by more than 2 minutes, this analysis will need to be revisited to identify whether the stop can still be accommodated.

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Catherine Priestman	Signature	30/08/19 Date
Project Manager – Capacity Analysis (Document Owner)		
Ryan Blake-Morris	Ryan Blake-Morris Signature	30/08/2019 Date
Senior Network Analyst – Capacity Analysis		
Jonathan Cowe	Jonathan J. Cowe Signature	27/08/2019 Date
Strategic Planner Wessex – Network Rail		

Distribution List	
Name	**Company**
Joe Gerhard	Network Rail
John Thumwood	Network Rail
Mark Sleet	Network Rail
Robert Blake	Network Rail

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References				
Ref.	**Document Name**	**Document Ref. No.**	**Date**	**Rev**
1.	Timetable Planning Rules	Wessex	13/07/18	V4.0

Abbreviations	
Acronym	**Meaning**
EMU	Electric multiple unit
P-P	Pass to Pass (a type of Sectional Running Time)
P-S	Pass to Stop (a type of Sectional Running Time)
S-S	Stop to Stop (a type of Sectional Running Time)
S-P	Stop to Pass (a type of Sectional Running Time)
SRT	Sectional Running Time
Tph	Train(s) per hour
TPR	Timetable Planning Rules

Contents

Part A: **Executive Summary**

Eastleigh Borough Council is looking at how to make best use of the rail capacity in the Eastleigh area by encouraging modal shift from road to rail. In addition, they are exploring the potential for a rail connection to a new housing development, proposed at Allington Lane which is between Eastleigh and Hedge End.

A new station at Allington Lane would be able to provide an additional stop on the existing Portsmouth Harbour to London Waterloo via Eastleigh service. To accommodate this additional stop, changes would need to be made to the timings of the existing services and there would be an increase in the overall journey time by around 2 minutes as estimated in previous analysis.

Across a three-hour period between 06:00 and 09:00 on a Wednesday, this analysis looked at:

- Could a new Station proposed near Allington Lane, between Eastleigh and Hedge End, be accommodated in any of the current services?

Preliminary analysis shows a new station at Allington Lane could provide an additional stop on the existing peak Portsmouth Harbour to London Waterloo via Eastleigh services in both directions. To accommodate this additional stop, changes would need to be made to the timings of the existing services and some of the surrounding services. It is also important to note one of the assumptions for this analysis was that the timings between London Waterloo and Eastleigh must remain the same as the current May 19 timetable for services in both directions.

The table below is a summary of all the services analysed and if any additional services need to be amended to accommodate the additional stop at Allington Lane as well as the estimated time of departure from Allington Lane.

Headcode	Service	Can Allington Lane be supported?	Indicative Allington Lane departure	Amendment to different services?
1T18CA	05:43 Portsmouth Harbour to London Waterloo	YES	06:35:30	NO
2T03CA	06:01 Eastleigh to Portsmouth Harbour	YES	06:04:00	NO
2T05CA	06:18 Winchester to Portsmouth Harbour	NO	N/A	N/A
2T09CA	06:19 Woking to Portsmouth Harbour	YES	07:30:30	NO
1T20CA	06:23 Portsmouth Harbour to London Waterloo	YES	07:06:00	NO
2T13CA	06:42 London Waterloo to Portsmouth Harbour	YES	08:34:30	YES - 2 SERVICES
1T22CA	05:50 Portsmouth Harbour to London Waterloo	YES	07:33:00	NO
2T07CA	07:02 Eastleigh to Portsmouth Harbour	YES	07:02:00	NO
1T24CA	07:26 Portsmouth Harbour to London Waterloo	YES	08:07:30	NO
1T26CA	07:55 Portsmouth Harbour to London Waterloo	YES	08:36:30	YES - 2 SERVICES
1T30CA	08:59 Portsmouth Harbour to London Waterloo	YES	09:42:00	NO

Table 1: A summary of analysis

Part B: Introduction

B.01 Background

Eastleigh Borough Council want to know how to make best use of the rail capacity in the area to encourage modal shift from road to rail, and to investigate the potential for a rail connection to a new housing development.

A previous study was carried out by the Capacity Analysis team at Network Rail looking at the connectivity in the Eastleigh area. This project demonstrated that a new station at Allington Lane would be able to support an additional stop within the existing services between Portsmouth Harbour - London Waterloo via Eastleigh, within the assumptions of the report. This original study looked at an off-peak period; Eastleigh Borough Council would now like to explore this option within the peak period.

B.02 Aims and Objectives

The main question answered from this analysis is:

1. Would the existing Portsmouth Harbour – Eastleigh – London Waterloo service be able to stop at a new proposed station Allington Lane during morning peak times?

The purpose of this study was not to produce a fully validated concept train plan, but rather, to highlight whether the proposed station call can be inserted into the current services without causing major conflicts with other services.

B.03 Geographic Scope

B.03.01 Route Analysed

The geographic scope for this analysis was Portsmouth Harbour to London Waterloo as shown in Figure 1.

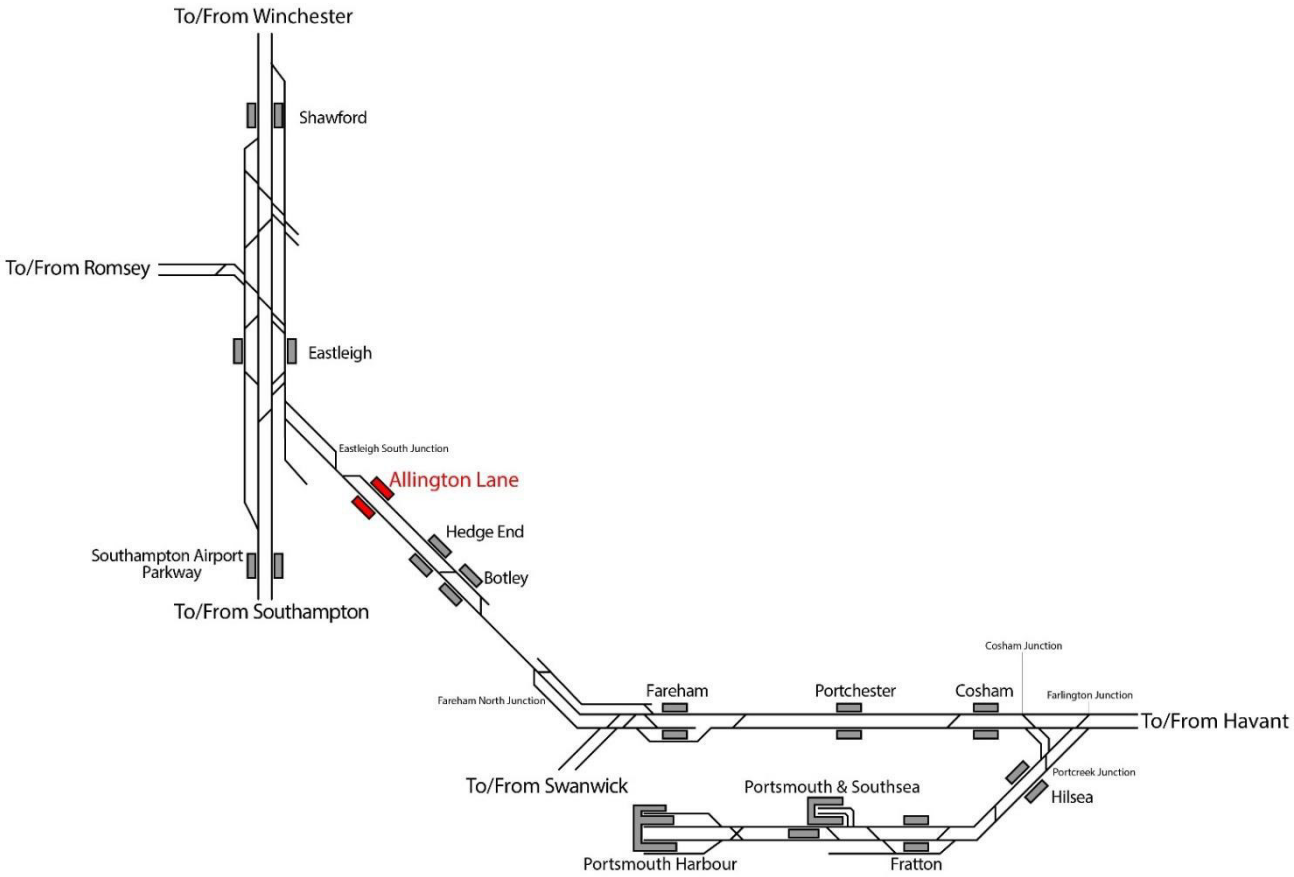

Figure 1: Route analysed

B.03.02 Proposed new station site

The site for the proposed new station is Allington Lane which is at approximately 75 miles and 30 chains as shown in Figure 2.

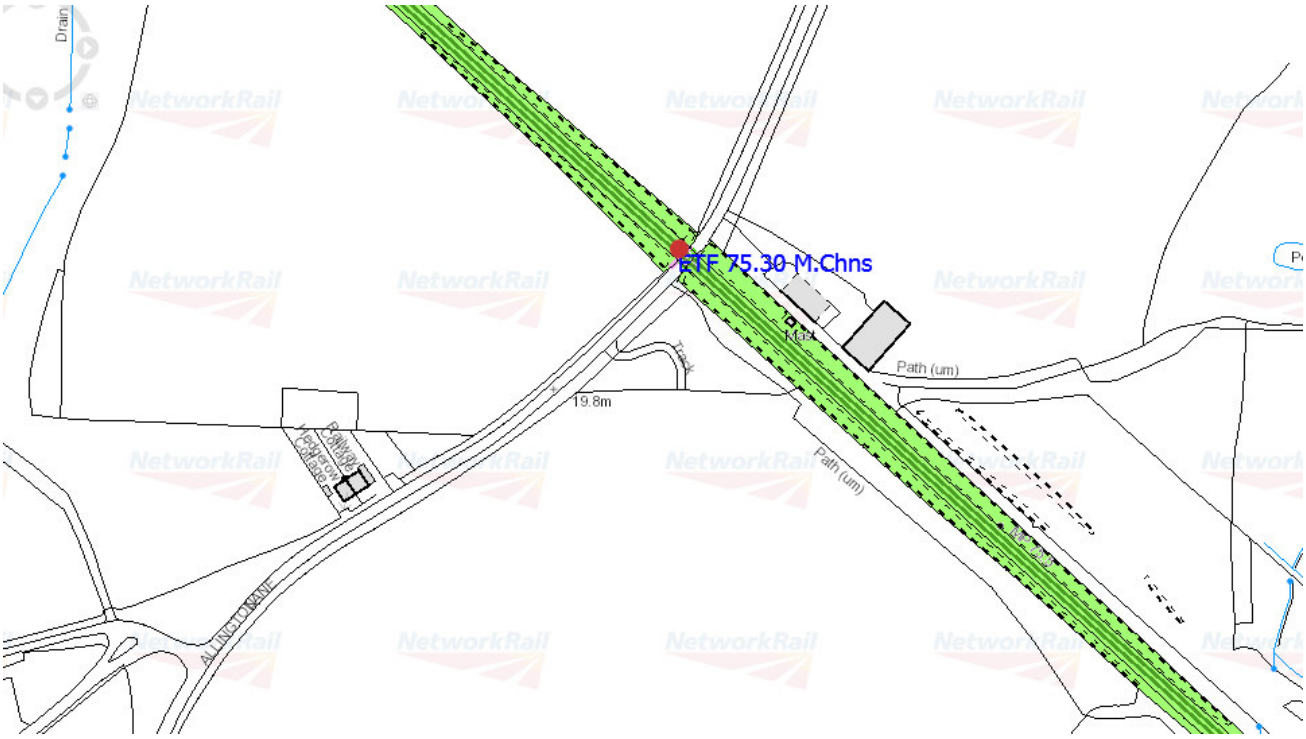

Figure 2: Proposed new Allington Lane station location

Part C: **Findings**

C.01 Could a new station proposed near Allington Lane, between Eastleigh and Hedge End, be accommodated in any of these services?

In the May 19 timetable 11 services were identified to provide a stop at Allington Lane within the 3-hour peak window from 06:00 to 09:00. 6 ran from Portsmouth Harbour to London Waterloo and 5 ran from various origins to Portsmouth Harbour. The preliminary analysis for this report showed that 10 of the 11 services could accommodate the additional stop at Allington Lane.

The previous analysis that was carried out estimated that an additional stop at Allington Lane would increase the overall journey time by around 2 minutes. As these are high level assumptions given that there are no detailed station proposals, further analysis would be needed if this was to progress to determine the Timetable Planning Rules (TPRs).

C.02 Portsmouth to London Waterloo Services (up direction)

This analysis showed all 6 of the services from Portsmouth Harbour to London Waterloo could be adjusted to include an additional stop at Allington Lane with minimal disruption to their own paths and other services from Eastleigh to London Waterloo.

Services 1T18CA, 1T20CA, 1T22CA, 1T24CA and 1T30CA could all accommodate the additional stop at Allington Lane without adjusting surrounding services. This was achieved by reducing dwell times and adjusting services to depart earlier from Portsmouth Harbour.

1T26CA had its departure brought forward by 2 minutes to accommodate the additional stop. This then had a knock-on effect with 2 of its surrounding services: 2S05BS (07:57 Portsmouth and Southsea to Littlehampton) and 1J04CS (05:54 London Victoria to Southampton Central).

Having looked at the path of 2S05BS, it was possible to delay its departure from Portsmouth Harbour by 3 minutes. This was done by reducing the pathing approaching Farlington Junction. There is enough headway either side of the service to accommodate this adjustment however it is important to consider that less pathing means there is less resilience to delay. 2S05BS is back on its original path at Emsworth and subsequent timings are the same and there is no impact to performance past Emsworth.

For 1J04CS, the dwell at Barnham was reduced by 1 minute. These collective changes would then accommodate the additional stop on 1T26CA. Further information on this can be found in the Appendix.

C.03 London Waterloo to Portsmouth Service (down direction)

The analysis showed 4 out of the 5 services running towards Portsmouth Harbour were able to accommodate the additional stop. Of these, 3 did not require adjustments to any of their surrounding services: 2T03CA, 2T09CA and 2T07CA.

2T03CA had its departure from Eastleigh brought forward by 1 minute and the dwell at Portsmouth and Southsea was reduced by 1 minute.

2T09CA was able to accommodate the additional stop by adjusting the pre-existing pathing approaching Basingstoke. A s outlined in the remit, it was possible to look at timings outside those between Eastleigh and Portsmouth Harbour if needed.

Currently, 2T09CA has 3 minutes pathing approaching Basingstoke. If this was reduced to 1 minute, the additional stop at Allington Lane could be accommodated and the train is back on its original path at Hedge End.

2T07CA was able to accommodate the additional stop by adjusting its departure time at Eastleigh to be 2 minutes earlier. If its departure is adjusted from 07:02 to 07:00 the service can facilitate the Allington Lane stop with the arrival time at Portsmouth Harbour remaining the same.

2T13CA can accommodate the Allington Lane stop if the arrival at Portsmouth Harbour is timed later. This can be achieved by reducing dwells at 2 stations: Portsmouth and Southsea from 2 minutes to 1.5 minutes and Cosham from 1.5 minutes to 1 minute. However, in arriving at Portsmouth Harbour later than originally planned, 2 additional services would need to be adjusted - 2P13CA (07:15 London Waterloo to Portsmouth Harbour via Guildford) and 1F12DB (09:23 Portsmouth Harbour to Cardiff Central). The arrival of 2P13CA would need to be adjusted by 30 seconds to make it headway compliant with 2T13CA. The departure of 1F12DB would also need to be adjusted by a minimum of 30 seconds to remain compliant with the new path of 2P13CA.

2T05CA was the only service unable to accommodate the additional stop at Allington Lane. Any adjustments to this service caused conflicts with surrounding services. Several options were analysed, and each produced further conflicts with other services.

Reducing the dwell time and adjusting the departure of 2T05CA resulted in a headway conflict with 5E18CD (06:02 ECS movement from Northam Carriage Servicing Depot to Havant). When looking to see if the path of 5E18CD could be adjusted, the analysis showed that any adjustments resulted in conflicts with 7O52BA (02:38 Merehead Quarry to Chichester Reception) and 1G18CA (06:43 Portsmouth Harbour to London Waterloo via Guildford). Therefore, to accommodate Allington Lane, too many services would need to be edited.

Further explanations for all these services can be found in the Appendix.

Headcode	Traction	Service	Changes required	Does it work?
1T18CA	450	05:43 Portsmouth Harbour to London Waterloo	• Pathing removed approaching Eastleigh and added to Eastleigh South Junction to replicate dwell at Allington Lane	YES
2T03CA	450	06:01 Eastleigh to Portsmouth Harbour	• Departs from Eastleigh 1 minute earlier and dwell at Portsmouth and Southsea reduced by 1 minute	YES
2T05CA	450	06:18 Winchester to Portsmouth Harbour	• Unable to accommodate Allington Lane stop • Numerous changes would be required to all surrounding services	NO
2T09CA	450	06:19 Woking to Portsmouth Harbour	• Pathing approaching Basingstoke reduced by 2 minutes	YES
1T20CA	450	06:23 Portsmouth Harbour to London Waterloo	• Departs from Portsmouth Harbour 2 minutes earlier	YES
2T13CA	450	06:42 London Waterloo to Portsmouth Harbour	• Arrival at Portsmouth Harbour timed later by 1 minute • Arrival of 2P13CA timed later by 30 seconds • Departure of 1F12DB timed later by 1 minute, dwell at Portsmouth and Southsea and pathing between Fareham and St. Denys both reduced by 30 seconds	YES
1T22CA	450	06:50 Portsmouth Harbour to London Waterloo	• Departs from Portsmouth Harbour 1 minute earlier and dwell at Eastleigh reduced by 1 minute	YES

Headcode	Traction	Service	Changes required	Does it work?
2T07CA	450	07:02 Eastleigh to Portsmouth Harbour	• Departs from Eastleigh 2 minutes earlier	YES
1T24CA	450	07:26 Portsmouth Harbour to London Waterloo	• Departs from Portsmouth Harbour 2 minutes earlier	YES
1T26CA	450	07:55 Portsmouth Harbour to London Waterloo	• Departs from Portsmouth Harbour 2 minutes earlier • 2S05BS departure from Portsmouth Harbour timed later by 3 minutes • Dwell at Barnham for 1J04CS reduced by 1 minute	YES
1T30CA	450	08:59 Portsmouth Harbour to London Waterloo	• Reduced dwell at Portsmouth and Southsea by 1 minute and pathing approaching Eastleigh South Junction increased to replicate dwell at Allington Lane	YES

Table 2: Changes to existing services to accommodate new station at Allington Lane

Part D: **Conclusion**

D.01 Could a new station proposed near Allington Lane, between Eastleigh and Hedge End, be accommodated in any of these services?

For the proposed station at Allington Lane, high level assumptions have been used. Therefore, further analysis would be needed if this was to progress to determine the TPRs. However, based on the preliminary analysis, the additional stop at Allington Lane could be accommodated on all 6 existing Portsmouth Harbour to London Waterloo via Eastleigh services and on 4 of the 5 services between London Waterloo and Portsmouth Harbour via Eastleigh.

This would require some changes to the timings of the existing services and increasing the end to end journey time by around 2 minutes. Whilst this is possible from a timetabling perspective, it is recommended that the Station Capacity Analysis team investigates the impact of reducing dwell times, earlier departure times and later arrival times would have on passenger movements.

When adjusting arrival and departure times, it is worth bearing in mind that if there was a delay with a preceding service, there could be a knock-on effect with the amended trains thus reducing the potential margin for delay recovery is reduced.

One of the factors to consider is the single-track section between Botley and Fareham. In this section, the headway is 6 minutes and the junction margin is 3 minutes; any adjustments made will need to ensure that these are maintained. This single-track section didn't cause any issues with the trains analysed.

Part E: **Appendix – Train adjustments**

For each service a table has been created to show the current timings and the newly adjusted timings. The originating changes are highlighted orange and subsequent adjusted timings are shown in bold.

E.01 1T18CA 05:43 Portsmouth Harbour to London Waterloo

Approaching Eastleigh, 1T18CA currently has a pathing of 3.5 minutes, this was reduced to 1.5 minutes. A further 2 minutes was added approaching Eastleigh South Junction to accommodate a dwell at Allington Lane. This allows for the departure from Portsmouth Harbour and arrival at Eastleigh to remain the same.

Timing point	Original path departure	Adjusted path departure
Portsmouth Harbour	05:43:00	05:43:00
Portsmouth and Southsea	05:48:00	05:48:00
Fratton	05:52:00	05:52:00
Hilsea	05:56:00	05:56:00
Portcreek Junction	05:57:30	05:57:30
Cosham Junction	05:59:00	05:59:00
Cosham	06:03:30	06:03:30
Portchester	06:08:00	06:08:00
Fareham	06:19:00	06:19:00
Fareham North Junction	06:20:30	06:20:30
Botley	06:28:00	06:28:00
Hedge End	06:33:00	06:33:00
Allington Lane		06:35:30
Eastleigh South Junction	06:37:00	**06:39:00**
Eastleigh	06:43:00	06:43:00

Table 3: 1T18CA adjustments

E.02 2T03CA 06:01 Eastleigh to Portsmouth Harbour

Firstly, the pathing approaching Fratton East was reduced from 2.5 minutes to 30 seconds and 2-minutes pathing was added approaching Hedge End. This resulted in a junction margin conflict between 2T03CA and 5E90CD (05:47 Northam Carriage Servicing Depot to Havant), at Cosham Junction. 2T03CA reaches the junction 1 minute before 5E90CD which is not TPR compliant as a minimum of 2 minutes are required.

The second adjustment option to consider was the departure time of 2T03CA from Eastleigh was brought forward by 1 minute from 06:01 to 06:00 which is TPR compliant. The dwell at Portsmouth and Southsea has also been reduced from 2 minutes to 1 minute; again, this is TPR compliant. 2 minutes pathing has been added approaching Hedge End to accommodate the stop at Allington Lane.

Timing point	Original path departure	Adjusted path departure
Eastleigh	06:01:00	06:00:00
Eastleigh South Junction	06:02:30	**06:01:30**
Allington Lane		06:04:00
Hedge End	06:07:00	**06:08:00**
Botley	06:11:00	**06:12:00**
Fareham North Junction	06:16:30	**06:17:30**
Fareham	06:19:30	**06:20:30**
Portchester	06:24:30	**06:25:30**
Cosham	06:29:30	**06:30:30**
Cosham Junction	06:31:00	**06:32:00**
Portcreek Junction	06:32:00	**06:33:00**
Hilsea	06:34:00	**06:35:00**
Fratton East	06:39:00	**06:40:00**

Timing point	Original path departure	Adjusted path departure
Fratton	06:41:00	**06:42:00**
Portsmouth and Southsea	06:45:30	06:45:30
Portsmouth Harbour	06:50:00	06:50:00

Table 4: 2T03CA adjustments

E.03 2T05CA 06:18 Winchester to Portsmouth Harbour

2T05CA was unable to accommodate the additional stop at Allington Lane. All the options considered resulted in a headway conflict with 5E18CD (06:02 Northam Carriage Servicing Depot to Havant).

Firstly, the dwells at Eastleigh and Portsmouth and Southsea were both reduced from 2 minutes to 1 minute which are TPR compliant. 2 minutes pathing were added approaching Hedge End to accommodate the additional stop at Allington Lane. Table 5 below shows the effect on headway with 5E18CD.

Timing point	TPR minimum headway	Time between 2T05CA and 5E18CD	Time between 2T05CA and 5E18CD if 2T05CA is adjusted
Fareham	3 minutes	3.5 minutes	2.5 minutes
Portchester	3 minutes	3.5 minutes	2.5 minutes
Cosham	3 minutes	4 minutes	3 minutes

Table 5: Headway conflict between 2T05CA and 5E18CD when 2T05CA amended

Another option considered was whether the departure of 2T05CA from Winchester could be brought forward by 1 minute and the arrival at Portsmouth Harbour could be delayed by 1 minute. These adjustments would allow for the additional stop at Allington Lane. This again resulted in a headway conflict with 5E18CD between Fareham and Cosham. This also caused a platform reoccupation conflict with 0B46CB (05:53 Southampton Eastern Docks to

Eastleigh TRSMD (Traction and Rolling Stock Maintenance Depot)), at Eastleigh, with only 1 minute from the departure of 0B46CB to the arrival of 2T05CA.

To try and resolve this, 1-minute pathing was added approaching Eastleigh South Junction and dwells at Eastleigh and Portsmouth and Southsea reduced from 2 minutes to 1.5 minutes in line with the TPRs. This resolves the platform reoccupation issue with 0B46CB. However, there is still a headway conflict with 5E18CD at Fareham, Portchester and Cosham as shown in Table 6

.

Timing point	TPR minimum headway	Time between 2T05CA and 5E18CD	Time between 2T05CA and 5E18CD if 2T05CA is adjusted
Fareham	3 minutes	3.5 minutes	2 minutes
Portchester	3 minutes	3.5 minutes	1.5 minutes
Cosham	3 minutes	4 minutes	2.5 minutes

Table 6: Headway conflict between 2T05CA and 5E18CD when 2T05CA amended

It was then necessary to see if the path of 5E18CD could be moved. The current service has 13 minutes pathing approaching Fareham. This was reduced to 7 minutes which created TPR compliant headway with 2T05CA at Fareham, Cosham and Portchester. However, this resulted in a headway conflict with 7O52BA (02:38 Merehead Quarry to Chichester Reception), as shown in Table 7. This pathing adjustment also causes a platform reoccupation conflict between 5E18CD and 1G18CA (06:43 Portsmouth Harbour to London Waterloo via Guildford) at Havant. 5E18CD arrives 1 minute after the departure of 1G18CA which is not TPR compliant; the minimum required is 2.5 minutes. This analysis suggests that too many services would need to be edited to accommodate the Allington Lane stop on this service.

Timing point	TPR minimum headway	Time between 5E18CD and 7O52BA	Time between 5E18CD and 7O52BA if 5E18CD is adjusted
Cosham Junction	3 minutes	4.5 minutes	1.5 minutes
Farlington Junction	3 minutes	4 minutes	0 minutes
Havant	2.5 minutes	4 minutes	1 minute

Table 7: Headway conflict between 2T05CA and 5E18CD when 2T05CA amended

E.04 2T09CA 06:19 Woking to Portsmouth Harbour

The path of this service had no spare capacity between Eastleigh and Portsmouth Harbour that could be utilised to enable a stop at Allington Lane. This coupled with the service being on minimum headway from Cosham onwards with the train preceding it: 2P09CA (06:15 London Waterloo to Portsmouth Harbour via Guildford), and the train following it: 2E09CA (07:15 Southampton Central to Portsmouth and Southsea).

It was therefore necessary to look at some of the preceding timing points.

2T09CA currently has 3 minutes pathing approaching Basingstoke; this was reduced to 1 minute and 2 minutes pathing added approaching Hedge End to simulate the Allington Lane stop. The train is back on its original path at Hedge End. This adjustment allows for the Allington Lane stop to be accommodated.

Timing point	Original path departure	Amended path departure
Basingstoke	07:00:00	**06:58:00**
Worting Junction	07:03:30	**07:01:30**
Micheldever	07:10:00	**07:08:00**
Wallers Ash Loop	07:14:30	**07:12:30**
Winchester	07:19:30	**07:17:30**
Shawford Junction	07:22:30	**07:20:30**

Timing point	Original path departure	Amended path departure
Eastleigh	07:28:30	**07:26:30**
Eastleigh South Junction	07:30:00	**07:28:00**
Allington Lane		07:30:30
Hedge End	07:34:30	07:34:30
Botley	07:38:30	07:38:30
Fareham North Junction	07:44:00	07:44:00
Fareham	07:47:30	07:47:30
Portchester	07:52:30	07:52:30
Cosham	07:57:30	07:57:30
Cosham Junction	07:59:00	07:59:00
Portcreek Junction	08:01:30	08:01:30
Hilsea	08:03:30	08:03:30
Fratton East	08:06:30	08:06:30
Fratton	08:08:30	08:08:30
Portsmouth and Southsea	08:14:00	08:14:00
Portsmouth Harbour	08:19:00	08:19:00

Table 8: 2T09CA adjustments

E.05 1T20CA 06:23 Portsmouth Harbour to London Waterloo

The departure of the train has been brought forward by 2 mins from 06:23 to 06:21 reducing the turnaround time from 18.5 minutes to 16.5 minutes at Portsmouth Harbour. 2 minutes pathing has been added approaching Eastleigh South Junction, again to allow a dwell at Allington Lane and the time at Eastleigh has been kept the same. The reduced turnaround time at Portsmouth Harbour is complaint with the minimum TPR turnaround requirement.

Timing point	Original path departure	Adjusted path departure
Portsmouth Harbour	06:23:00	**06:21:00**
Portsmouth and Southsea	06:28:00	**06:26:00**
Fratton	06:32:00	**06:30:00**
Hilsea	06:36:00	**06:34:00**
Portcreek Junction	06:37:30	**06:35:30**
Cosham Junction	06:39:00	**06:37:00**
Cosham	06:42:00	**06:40:00**
Portchester	06:42:30	**06:44:30**
Fareham	06:53:00	**06:51:00**
Fareham North Junction	06:54:30	**06:52:30**
Botley	07:01:00	**06:59:00**
Hedge End	07:05:30	**07:03:30**
Allington Lane		07:06:00
Eastleigh South Junction	07:09:30	07:09:30
Eastleigh	07:13:00	07:13:00

Table 9: 1T20CA adjustments

E.06 2T13CA 06:42 London Waterloo to Portsmouth Harbour

To accommodate the additional stop at Allington Lane on 2T13CA, several surrounding services needed to be adjusted.

The first scenario to consider was if the dwell at Portsmouth and Southsea could be reduced from 2 minutes to 1 minute. The dwell at Cosham could also be reduced from 1.5 minutes to 1 minute. Both these reductions are valid as per the TPRs. However, 30 seconds more are still required to ensure there is enough pathing approaching Eastleigh South Junction for an

additional stop at Allington Lane which requires at least 2 minutes. Therefore, this isn't possible.

The second option to consider was if 2T13CA could arrive 1 minute later at Portsmouth Harbour. Currently this train arrives at 09:18. If this was amended to 09:19 there would still be enough time to perform a turnaround and depart as 2E24CA (09:33 Portsmouth Harbour to Southampton Central) at its existing booked departure time of 09:33.

The dwell at Portsmouth and Southsea could be reduced from 2 minutes to 1.5 minutes and the Cosham dwell reduced from 1.5 minutes to 1 minute. The reduced dwells would 'save' 1 minute on the total journey time. This added to the additional minute with the later arrival at Portsmouth Harbour would provide the 2 minutes required for the additional stop at Allington Lane with 2 minutes pathing added approaching Hedge End to account for this.

This path would work, however, the later arrival of 2T13CA has a knock-on effect on the following service, 2P13CA (07:15 London Waterloo to Portsmouth Harbour via Guildford) creating a conflict between the 2 services.

With the change to 2T13CA, the headway at Portsmouth and Southsea is 1.5 minutes which is not TPR compliant. The arrival of 2P13CA would also need to be timed later by 30 seconds. If 30 seconds pathing were to be added approaching Fratton, the headway between 2T13CA and 2P13CA would increase to 2 minutes which, after discussion with the TPR specialist for the Wessex route, is the agreed minimum between departure of one service followed by the arrival of another.

However, the later arrival of 2P13CA would conflict with 1F12DB (09:23 Portsmouth Harbour to Cardiff Central), which currently departs at 09:23. This service would need also to be timed later by 30 seconds. As a train cannot depart on a half-minute, the departure cannot be amended to 09:23:30. 1F12DB would need to depart from Portsmouth Harbour 1 whole minute later at 09:24 and the dwell at Portsmouth and Southsea would need to be decreased from to 1.5 minutes to 1 minute (which is TPR compliant). The pathing between Fareham and St. Denys would also need to be reduced from 1 minute to 30 seconds. With these adjustments, 1F12DB returns to its original path at St. Denys and subsequent times remain the same.

Headcode	Origin	Changes required
2T13CA	London Waterloo	• Arrival timed later by 1 minute • Dwell at Cosham reduced by 30 seconds • Dwell at Portsmouth and Southsea reduced by 30 seconds
2P13CA	London Waterloo	• Arrival timed later by 30 seconds • 30 second pathing added approaching Fratton
1F12DB	Portsmouth Harbour	• Departure timed later by 1 minute • Dwell at Portsmouth and Southsea reduced by 30 seconds • Pathing approaching St. Denys reduced by 30 seconds

Table 10: 2T13CA, 2P13CA and 1F12DB adjustments

Timing point	Original path departure	Adjusted path departure
Eastleigh	08:30:30	08:30:30
Eastleigh South Junction	08:32:00	08:32:00
Allington Lane		08:34:30
Hedge End	08:36:30	**08:38:30**
Botley	08:40:30	**08:42:30**
Fareham North Junction	08:46:00	**08:48:00**
Fareham	08:49:00	**08:51:00**
Portchester	08:54:00	**08:56:00**
Cosham	08:59:30	**09:01:00**
Cosham Junction	09:01:00	**09:02:30**
Portcreek Junction	09:03:00	**09:04:30**

Timing point	Original path departure	Adjusted path departure
Hilsea	09:05:00	**09:06:30**
Fratton East	09:07:30	**09:09:00**
Fratton	09:09:30	**09:11:00**
Portsmouth and Southsea	09:14:00	**09:15:00**
Portsmouth Harbour	09:18:30	**09:19:30**

Table 11: 2T13CA adjustments

E.07 1T22CA 06:50 Portsmouth Harbour to London Waterloo

The turnaround time at Portsmouth Harbour has been reduced from 14 minutes to 13 minutes changing the departure time from 06:50 to 06:49. Again, this is compliant with the minimum turnaround time at Portsmouth Harbour. 2 minutes pathing has been added approaching Eastleigh South Junction to replicate the stop at Allington Lane and the dwell time at Eastleigh has also been reduced from 5 minutes to 4 minutes. The proposed train is at Eastleigh at the same time as the original path. This adjustment has resulted in the junction margin at Fareham North Junction being reduced from 4 minutes to the minimum requirement of 3 minutes.

N.B. the dwell at Eastleigh could be further reduced to 1.5 minutes as per the TPRs.

An alternative suggestion considered was to reduce the turnaround time at Portsmouth Harbour from 14 to 12 minutes and add 2 minutes pathing approaching Eastleigh South Junction. However, this doesn't work as the junction margin at Fareham North Junction would then not be compliant with TPRs. The required junction margin is 3 minutes but with the proposed adjustment, the margin would only be 2 minutes.

Timing point	Original path departure	Adjusted path departure
Portsmouth Harbour	06:50:00	**06:49:00**
Portsmouth and Southsea	06:55:00	**06:54:00**
Fratton	06:59:00	**06:58:00**

Timing point	Original path departure	Adjusted path departure
Hilsea	07:03:00	**07:02:00**
Portcreek Junction	07:04:30	**07:03:30**
Cosham Junction	07:06:00	**07:05:00**
Cosham	07:08:30	**07:07:30**
Portchester	07:13:00	**07:12:00**
Fareham	07:20:00	**07:19:00**
Fareham North Junction	07:21:30	**07:20:30**
Botley	07:28:00	**07:27:00**
Hedge End	07:32:30	**07:31:30**
Allington Lane		07:33:00
Eastleigh South Junction	07:36:30	**07:37:30**
Eastleigh	07:43:00	07:43:00

Table 12: 1T22CA adjustments

E.08 2T07CA 07:02 Eastleigh to Portsmouth Harbour

5T06CA, the service that becomes 2T07CA in Eastleigh, currently has a 17-minute dwell at Eastleigh. This can be reduced to 15 minutes and 2T07CA departs at 07:00, 2 minutes earlier than scheduled. 2 minutes pathing has been added approaching Hedge End to replicate the Allington Lane stop. The train would then be back in its original path from Hedge End.

Timing point	Original path departure	Amended path departure
Eastleigh	07:02:00	**07:00:00**
Eastleigh South Junction	07:03:30	**07:01:30**
Allington Lane		07:02:00
Hedge End	07:08:00	07:08:00
Botley	07:12:00	07:12:00
Fareham North Junction	07:17:30	07:17:30
Fareham	07:21:00	07:21:00
Portchester	07:26:00	07:26:00
Cosham	07:31:00	07:31:00
Cosham Junction	07:32:30	07:32:30
Portcreek Junction	07:33:30	07:33:30
Hilsea	07:35:00	07:35:00
Fratton East	07:37:30	07:37:30
Fratton	07:39:30	07:39:30
Portsmouth and Southsea	07:43:30	07:43:30
Portsmouth Harbour	07:49:00	07:49:00

Table 13: 2T07CA adjustments

E.09 1T24CA 07:26 Portsmouth Harbour to London Waterloo

As with all the other services analysed, this service is a class 450 EMU made up of 4 cars. On this basis, the minimum turnaround required is 5 minutes. The original turnaround at Portsmouth Harbour could be adjusted from 8 minutes down to 6 minutes (meaning that the train would now depart at 07:24 instead on 07:26) and 2 minutes pathing could be added approaching Eastleigh South Junction to allow for the Allington Lane dwell.

This scenario would also be possible with an 8-car train. The minimum turnaround is 6 minutes which, in addition to 2 minutes pathing added approaching Eastleigh South Junction, would accommodate the required stop. As with the 4-car train, the departure would need to be adjusted from 07:26 to 07:24 to ensure there is enough time for 2 minutes pathing approaching Eastleigh South Junction to replicate the dwell at Allington Lane.

If the train has 12 cars, the minimum turnaround time is 7 minutes. The current turnaround at Portsmouth Harbour is 8 minutes so can only be reduced by 1 minute. All other dwells are at their minimum so cannot be further reduced. The time required for the additional stop at Allington Lane is 2 minutes; consequently, there is a deficit of 1 minute, so this service would then not have the capacity for the additional stop.

Minimum Turnaround – Passenger Stock						
Stock	**1 or 2 Car**	**3 or 4 Car**	**5/6 Car**	**8 Car**	**9/10 Car**	**12 Car**
Class 150 DMU	3 Mins	3 Mins				
Class 153 DMU	3 Mins	4 Mins				
Class 158 DMU	3 Mins	4 Mins	5 Mins			
Class 159 DMU		4 Mins	5 Mins		6 Mins	
Class 165/166 DMU (GWR)	3 Mins	3 Mins	4 Mins*	5 Mins		
Class 22x DEMU		10 Mins		10 Mins		
Class 377		4 Mins	4 Mins	5 Mins	6 Mins	6 Mins
Class 442 EMU (SWR)			6 Mins		9 Mins	
Class 442 EMU (Alliance Rail)			5 Mins		7 Mins	
Class 444 EMU			6 Mins		7 Mins	
Class 450 EMU		5 Mins		6 Mins		7 Mins
Class 455/6 EMU (South Western Railway)		6 Mins	6 Mins	7 Mins	8 Mins	8 Mins
Class 455 EMU (Southern Trains)		5 Mins		6 Mins		
Class 458 EMU			6 Mins		7 Mins	
HST					7 Mins	
Class 707			6 Mins		7 Mins	

Figure 3: train class and minimum turnaround as per Wessex TPRs

Timing point	Original path departure	Adjusted path departure
Portsmouth Harbour	07:26:00	**07:24:00**
Portsmouth and Southsea	07:30:00	**07:28:00**
Fratton	07:34:00	**07:32:00**
Hilsea	07:38:00	**07:36:00**
Portcreek Junction	07:39:30	**07:37:30**

Timing point	Original path departure	Adjusted path departure
Cosham Junction	07:41:00	**07:39:00**
Cosham	07:43:30	**07:41:30**
Portchester	07:48:00	**07:46:00**
Fareham	07:54:00	**07:54:00**
Fareham North Junction	07:56:30	**07:54:30**
Botley	08:02:30	**08:00:30**
Hedge End	08:07:00	**08:05:00**
Allington Lane		08:07:30
Eastleigh South Junction	08:11:00	08:11:00
Eastleigh	08:13:30	08:13:30

Table 14: 1T24CA adjustments

E.10 1T26CA 07:55 Portsmouth Harbour to London Waterloo

For this service, simply adjusting the departure time decreased the headway with 2S05BS (07:57 Portsmouth and Southsea to Littlehampton) service and 1J04CS resulting in headways that are not TPR compliant. It was then necessary to look at if, and how, the paths of 2S05BS and 1J04CS could be amended.

Firstly, the turnaround time for 1T26CA has been reduced from 15 minutes to 13 minutes meaning the departure time at Portsmouth Harbour was amended from 07:55 to 07:53. To simulate the dwell at Allington Lane, 2 minutes pathing has been added approaching Eastleigh South Junction.

E.10.01 2S05BS – conflict with 1T26CA

As a result of amending the departure time of 1T26CA, there is a headway conflict with 2S05BS at Portsmouth and Southsea, Fratton, Hilsea and Portcreek Junction which is detailed in Figure 4 and Table 15.

Timing point	TPR minimum headway	Time between 1T26CA and 2S05BS	Time between 1T26CA and 2S05BS if 1T26CA is adjusted
Portsmouth and Southsea	2.5 minutes	3 minutes	1 minute
Fratton	2.5 minutes	2.5 minutes	0.5 minutes
Hilsea	2.5 minutes	2.5 minutes	0.5 minutes
Portcreek Junction	2.5 minutes	2.5 minutes	0 minutes

Table 15: Headway conflict between 1T26CA and 2S05BS when 1T26CA amended

It was then necessary to explore if 2S05BS could be amended to facilitate the additional stop on 1T26CA. Owing to the timings of 2S05BS, it is possible to schedule it to depart later. The service currently departs at 07:57; this could be amended to 08:00. Table 16 below shows how this would now affect the headway.

Timing point	Minimum departure to arrival	Departure to arrival if 2S05BS departs 3 minutes later
Portsmouth and Southsea	2 minutes	2 minutes
Fratton	2 minutes	2.5 minutes
Hilsea	2 minutes	3 minutes
Portcreek Junction	2 minutes	3 minutes

Table 16: Headway between 1T26CA and 2S05BS when both services amended

This would then be TPR compliant and allow 1T26CA to accommodate the additional stop without affecting surrounding services.

E.10.02 1J04CS – conflict with 1T26CA

The headway conflict between the amended path of 1T26CA and 1J04CS occurs at Cosham and Fareham as detailed in Figure 5.

1J04CS would then need to be amended to ensure there is enough headway. Currently there is 4-minute dwell at Barnham. If this were reduced to 3 minutes, 1J04CS would reach these conflict points earlier thus increasing the headway with 1T26CA.

Again, this allows the amended path of 1T26CA without affecting surrounding services.

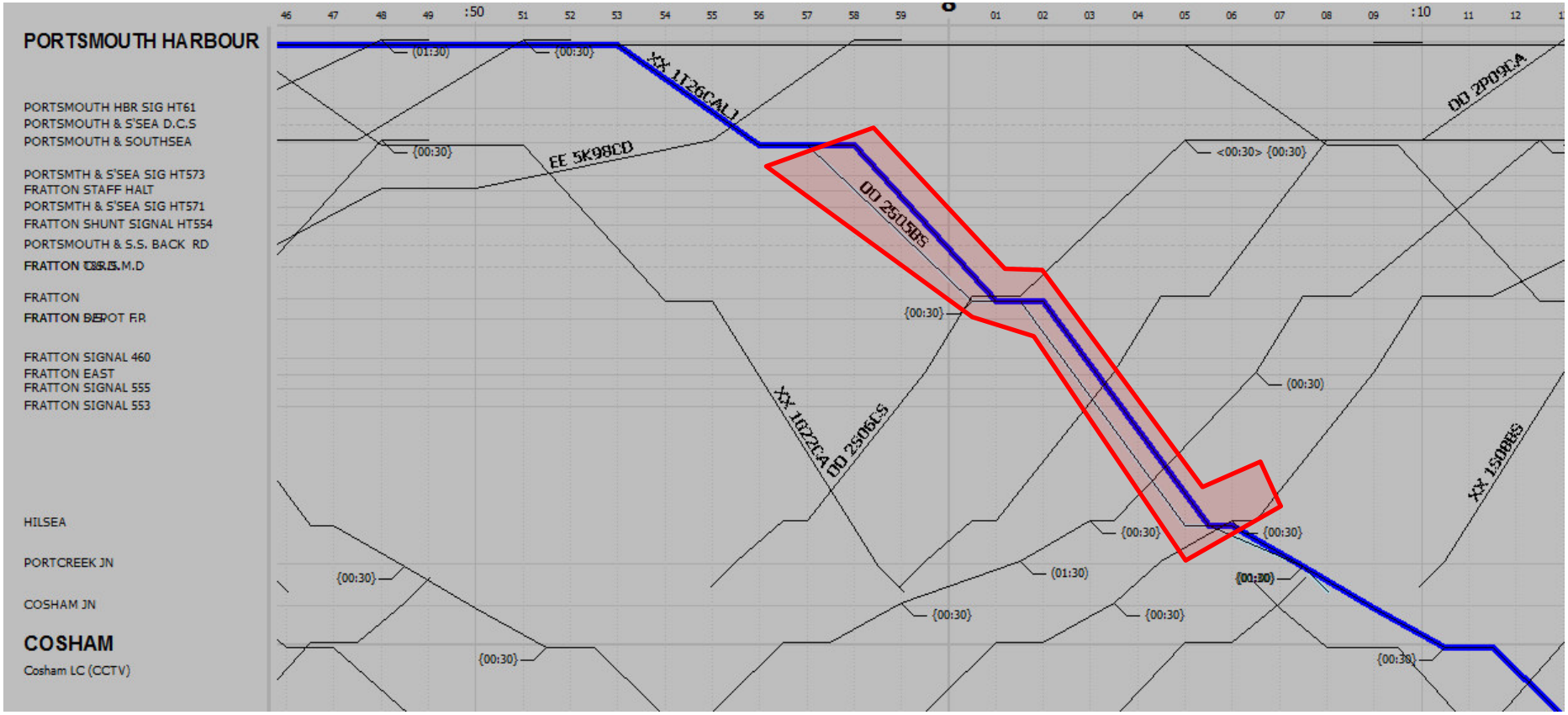

Figure 4: Headway conflict at Cosham and Fareham between 1T26CA and 1J04CS

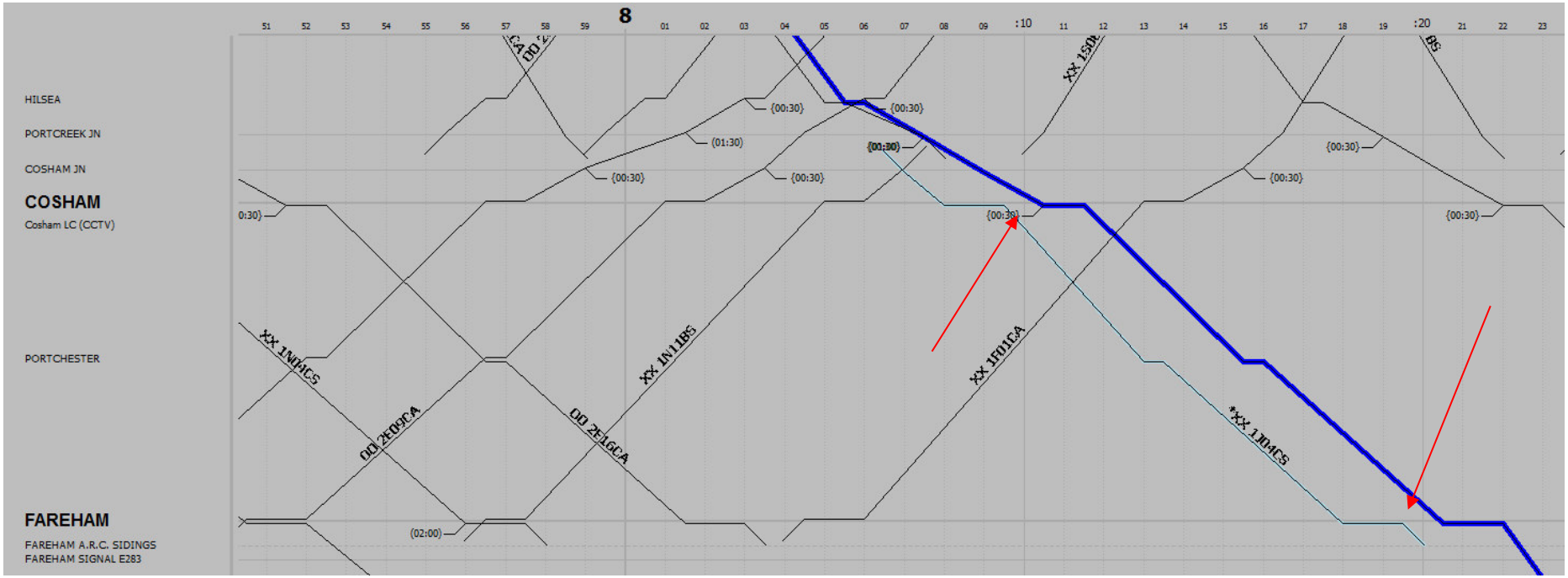

Figure 5: Headway conflict at Cosham and Fareham between 1T26CA and 1J04

Timing point	Original path departure	Amended path departure
Portsmouth Harbour	07:55:00	**07:53:00**
Portsmouth and Southsea	08:00:00	**07:58:00**
Fratton	08:04:00	**08:02:00**
Hilsea	08:08:00	**08:06:00**
Portcreek Junction	08:09:30	**08:07:30**
Cosham Junction	08:11:00	**08:09:00**
Cosham	08:13:30	**08:11:30**
Portchester	08:18:00	**08:16:00**
Fareham	08:24:00	**08:22:00**
Fareham North Junction	08:25:30	**08:23:30**
Botley	08:31:30	**08:29:30**
Hedge End	08:36:00	**08:34:00**
Allington Lane		08:36:30
Eastleigh South Junction	08:40:00	08:40:00
Eastleigh	08:43:00	08:43:00

Table 17: 1T26CA adjustments

E.11 1T30CA 08:59 Portsmouth Harbour to London Waterloo

The TPRs dictate the minimum required dwell at Portsmouth and Southsea is 1 minute. In the current timetable the dwell is 2 minutes. This was reduced to 1.5 minutes; these 30 seconds were then added to the current pathing approaching Eastleigh South Junction increasing it from 1.5 minutes to 2 minutes. This train can accommodate the additional stop at Allington Lane. The departure time and the time the train departs Eastleigh will therefore remain the same.

Timing point	Original path departure	Adjusted path departure
Portsmouth Harbour	08:59:00	08:59:00
Portsmouth and Southsea	09:04:00	**09:03:30**
Fratton	09:08:00	**09:07:30**
Hilsea	09:12:00	**09:11:30**
Portcreek Junction	09:13:30	**09:13:00**
Cosham Junction	09:15:00	**09:14:30**
Cosham	09:17:30	**09:17:00**
Portchester	09:22:00	**09:21:30**
Fareham	09:28:00	**09:27:30**
Fareham North Junction	09:29:30	**09:29:00**
Botley	09:35:30	**09:35:00**
Hedge End	09:40:00	**09:39:30**
Allington Lane		09:42:00
Eastleigh South Junction	09:45:30	09:45:30
Eastleigh	09:48:00	09:48:00

Table 18: 1T30CA adjustments

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