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Network Rail

Oxford Corridor Phase 2 Capacity Improvement Scheme

Environmental Impact Assessment – Environmental Statement: Chapter 3 – Scheme Development and Alternatives Considered

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3. SCHEME DEVELOPMENT AND ALTERNATIVES CONSIDERED

3.1 Introduction

3.1.1 An Environmental Statement is required to outline the alternatives considered by the applicant of the Scheme. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, Schedule 4, Part 2, states that an Environmental Statement should contain:

"*A description of the reasonable alternatives…studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects*."

3.1.2 Network Rail projects for enhancing the national rail network follow a process called the 'Governance for Railway Investment Projects' (GRIP). At each stage of the GRIP process, design, cost, sustainability and environmental issues have been material considerations in the decision-making process.

3.1.3 This chapter sets out the main alternatives considered during the development of the Scheme. This includes:

- a "do nothing" option;
- strategic options; and
- design options.

3.1.4 This chapter explains the environmental considerations that have been taken into account during the development of the Scheme, and how the potential environmental effects of the Scheme have been altered by these decisions. All technical terms used in this chapter are explained within Appendix 1.5 – Glossary and Acronyms.

<u>Development of the Scheme</u>

3.1.5 Various studies have been undertaken since 2010 to determine the best option to improve capacity and capability through the "Oxford Corridor". These are detailed in Table 3.1.

Table 3.1: Development of the Scheme

Year	Study/Major milestone	Summary of formal decision
2010	Great Western Route Utilisation Strategy (Network Rail, 2010a)	The strategy highlighted the need for additional infrastructure, such as a dynamic loop and renewal of signalling, which would enable an increased number of passenger and freight services. It noted

Year	Study/Major milestone	Summary of formal decision
		that these, and other improvements, along with redevelopment of the Oxford Station area could generate significant improvements for the future capacity and performance of the corridor.
2011	Initial Industry Plan – England and Wales – Proposals for Control Period 5 and beyond (Network Rail et al, 2011)	The plan identified a package of enhancements along the Oxford Corridor, delivering benefits to both passenger and freight services as one of its "*once in a generation opportunities"* for Control Period 5.
2014	CP5 Oxford Corridor Phase 2 – Feasibility Report (Network Rail, 2014)	The report looked at the feasibility of a number of improvements in the Oxford Corridor. It was recommended that more detailed options be explored further in the next GRIP stage.
2014	Oxford Corridor CP5 – Phase 2 Option Selection Report (THJV, 2014)	The report demonstrates that the implementation of Phase 2 works is possible, and proposed a preferred option for each of the following elements of the Scheme; • lineside corridor works; • Botley Road Bridge; • Sheepwash Bridge; • relocation of third party property; • the western entrance; and • the Island Platform 4 & 5. However, it noted that further design and investigation would be completed during further design development.

3.2 "Do Nothing" Option

3.2.1 A "do nothing" option means that the Scheme, or any alternative would not be developed, and this would be the benchmark against which the effects of implementing the Scheme can be measured. A comparison of the advantages and disadvantages of the Scheme going forward with the "do nothing" option provides the basis for considering the effects of the Scheme.

3.2.2 A 'do nothing' option was not considered to be a suitable alternative, as this would not allow for the anticipated growth requirements in both freight and passenger services (Network Rail, 2010a). Inability to accommodate this growth would be expected to lead to a move away from rail transportation and a subsequent increase in use of road transport as a result. The main impacts of such a move away from the railway would be increased road congestion, increased release of greenhouse gases and decreased air quality.

3.3 Strategic Options

3.3.1 Strategic options are the wider rail network options, including outside of the Oxford Corridor. They are options to deliver the freight and passenger capacity upgrades deemed necessary to provide for projected future requirements.

3.3.2 The route through Oxford is a strategic route from the south coast to the Midlands and the North. It is an important route for freight but also for passenger traffic. Passenger services already exist here and also in the future additional services could come to the station as part of the East West Rail services. The Scheme is part of a wider Oxford strategic route upgrade.

3.3.3 Two alternative strategic options for the diversion of services where existing services operate (rather than upgrade the existing infrastructure), which have been rejected were:

- Southampton to the West Coast Main Line via London. This route was discounted as less suitable because the West Coast Main Line is an already highly used section of the rail network. Any upgrades here would likely be of a greater scale; or

- South coast to the Great Western Main Line, via Reading or Didcot and then north via Swindon. This route was discounted because the gauge of the track onwards from Swindon, and sections of tunnel (e.g. in Sapperton) are not suitable for container trains. The engineering requirements for, and environmental effects of, the upgrades required to make the route suitable would likely be significant.

3.3.4 The route through Oxford was deemed to be the most suitable route to upgrade the existing station infrastructure to provide additional capacity at the station and to improve the operational efficiency of the station. This would be by constructing an additional through platform for both the existing and projected future requirements.

3.4 Design Options

3.4.1 Once the strategic option to route an upgrade through Oxford was selected, a south facing bay platform scheme was re-considered as an earlier project had developed this option in 2009/2010. Alternative options along this route were also proposed and considered. These options are presented here.

<u>South Facing Bay Platform</u>

3.4.2 Network Rail had previously looked at the construction of a south facing bay platform which had the benefit of a planning consent through a prior approval

(10/01414/CONSLT) approved by the City Council in October 2010. This alternative to the Scheme would have provided a south facing bay platform on the western side of Becket Street station car park and an additional terminating platform (for trains coming from towards Didcot). However, it would have done nothing to give increased capacity to trains passing through the station and onwards to the Midlands. This would have increased capacity and performance by freeing the down platform (existing Platform 4) from train clearing activities. It would also remove the requirement for these trains to turn around in the down-carriage sidings and then cross all running lines to return to the up platform (Network Rail, 2010b) if trains were then running back to London via Didcot.

3.4.3 This option was not taken forward due to government austerity measures as at the time it was deemed high cost and poor value for money. Notwithstanding this, had that project gone ahead this would have limited further opportunities for additional platform through capacity to the eastern side of the station.

Oxford Corridor Phase 2 Feasibility

3.4.4 The Network Rail Group Strategy commissioned a study known as CP5 Oxford Corridor Phase 2 – Feasibility Report (Network Rail, 2014). This looked at the feasibility of several proposed improvements in the Oxford Corridor area which included:

- An Island platform to replace the current single Platform 2 on the “Down Side”. Two track options were considered, and both were carried forward.
    - Option 1 extended the section of four track railway south of Botley Road 160m further south and allowed for likely greater speeds on to the proposed new track; and
    - Option 2 provided similar results to Option 1 without extending the section of four track railway further south but would likely result in a slower operational speed on the proposed new track.
- Widening and deepening the road carriageway through Botley Road Bridge. Botley Road provides one of the few locations where a road crosses the railway in Oxford. This option was taken forwards to the next stage. At this stage, the widening of Botley Road from two to three lanes was considered.
- Osney Lane Footbridge modification as a result of widening of Botley Road Bridge. This option was taken forwards to the next stage.
- East West Rail Phase 2 double junction, remodelling at Oxford North Junction. This was not taken forwards as part of the current Scheme.

Scheme Development

3.4.5 Optioneering has been carried out throughout the design of the Scheme. Optioneering is a process by which options for parts of the Scheme are proposed and selected based on several factors such as cost, programme, and environmental considerations. Options that have been considered are described in Table 3.2 along with any environmental reasons for rejection. However, the environmental considerations may not have been the only or main reason for an option being rejected as ultimately if the option does not provide the operational capacity and improved efficiency to the railway it would not be taken forward.

Table 3.2: Alternative options considered

Option Considered	Environmental Reason for Rejection / Optioneering Proposal
Track alignment to extend further south to serve Platform 5 south of Osney Lane Footbridge, between Osney Lane and Becket Street station car park.	This option would have required land take from the Osney Cemetery, which is outside of Network Rail control, within the Osney Conservation Area and within an area of Archaeological interest. The compulsory acquisition of a cemetery would be unlikely and unpopular.
Track alignment to extend further north to serve Platform 5.	This option would have required acquisition and likely permanent demolition of properties between Abbey Road and Roger Dudman Way.
Diversion of Roger Dudman Way to Walton Well Road to allow road vehicles to access the northern half of Roger Dudman Way without crossing Sheepwash Bridge, to provide much more space for the Platform 5 track arrangement.	Initial informal discussions with Oxford City Council suggested the Walton Well Road connection would be objected to as a permanent solution so the option was dropped.
Permanent removal of Co-operative Childcare premises.	This would have caused disruption to the Co-operative Childcare business and inconvenience to users of the facility. The alternative option now proposed is a temporary relocation during construction and then reinstatement when the Scheme is completed. Retention of the Co-operative Childcare building also fits with Oxford City Council's masterplan proposals.
More extensive realignment of the Botley Road southwards.	The new alignment of Botley Road would have caused increased demolition including loss of the Westgate Hotel. Also, it may have required alteration to the road crossing over the River Thames. This option was therefore rejected.
Retention of Roger Dudman Way connection to Botley Road.	The existing 5-way junction is quite complex, and Oxford City/Oxfordshire County Councils advised it has been subject to a number of accidents in the recent past (particularly for cyclists). Retaining the connection between Roger Dudman Way and Botley Road was seen as a lost opportunity to improve the area for safety. The current Scheme proposes

Option Considered	Environmental Reason for Rejection / Optioneering Proposal
	that Roger Dudman Way would be connected directly into Cripley Road to the north of its junction with Botley Road.
Creation of a 3-lane highway through Botley Road Bridge.as originally specified by Oxford City and Oxfordshire County Councils	This design did not align with current transport policy to reduce vehicles into the city. It may also have limited the ability to provide footpath and cycleways on both sides of the road. The newly specified 2-lane width reduces the need for more major construction works and limits the amount of motorised traffic able to access this part of Oxford city.
Removal of 9139 track crossover.	This would have reduced routing flexibility for trains to move in and out of Platforms 4 and 5. Platform 4 north end track arrangement has instead been optimised improving flexibility of use and ultimately efficiency of the station.
Platform 5 track piled retaining wall.	A piled arrangement would have required complex piling platforms to be constructed, which at the south end would have been particularly large and would have restricted Botley Road traffic. Pre-cast units are now proposed which make constructability easier and quicker. This would limit the time that residents and road users would be exposed to noisy and dusty activities in this area.
Original height of the footbridge clearance at 5.7m	This option would have required the mobility ramp to have been extended, possibly needing to incorporate an extra turn. The current Scheme includes a departure to 5.3m clearance to maintain the existing footbridge ramp.

3.4.6 The options chosen form the Scheme as described within Chapter 2 – Description of the Scheme and that is the subject of the current EIA and Environmental Statement.

References

Network Rail. (2010a). *Great Western Route Utilisation Strategy*.

Network Rail. (2010b). Oxford Railway Station. Proposed bay platform, canopy and platform buildings with enhanced station facilities.

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