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Independent Assessment Summary Report: Winnersh Triangle Park and Ride

A Final Report by Hatch Regeneris Consulting
March 2019

Thames Valley Berkshire Local Enterprise Partnership

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Executive Summary

- i. This technical note provides an independent assessment of the Winnersh Triangle Park and Ride (WTP&R) Scheme Business Case submission to the Thames Valley Berkshire Local Enterprise Partnership (TVB LEP).

Scheme Summary

- ii. The business case submission sets out the case for investment in a series of improvements to the existing Winnersh Triangle Park & Ride facilities. This includes:
 - Development of a circa 130-space single deck car park over the existing Winnersh Triangle surface car park site;
 - Improvements to the station building interior by revamping the passenger waiting area and ticketing office; and
 - Improvements to the pedestrian amenities in the station forecourt area by moving dropped kerbs and tactile paving to a better location, as well as improving access between the park and ride bus shelter and footbridge

Review Findings

Conclusions

- iii. The overall scheme aligns well with local, TVB LEP, and national strategic priorities to encourage sustainable travel, reduce congestion, and support growth. It has been demonstrated that there are specific constraints at the existing Winnersh Triangle P&R site, in terms of the standard of passenger facilities and the car parking spaces available.
- iv. The analytical modelling demonstrates both demand for the proposed additional car parking provision and the overall positive impact that removing these trips from the highway network will bring. Some of the disaggregate model outputs do, however, require further explanation in order to understand the impacts of the scheme upon all road users.
- v. The analysis also demonstrates the positive impact that the additional works to the station buildings and surrounds will have in terms of the improving the quality of the travel experience for passengers and encouraging higher overall rail patronage.
- vi. The overall economic case demonstrates the scheme will deliver very high value for money, although there are limited tests to demonstrate how sensitive the results are to any changes in external circumstances.
- vii. The financial case appears reasonably robust, with a quantified risk budget included. Given the way in which the costs have been forecast, and that a competitive contract tendering process is still to be completed, there is the potential for the costs to vary, either up or down. In the event that costs were to rise, confirmation has been sought from WBC that they have a procedure in place to address any cost overruns to ensure the project is delivered.
- viii. The commercial and management cases are generally considered to be robust but could be enhanced in some areas. This includes providing specific evidence that the design and build contracting approach for the decked car park represents the best procurement option

for this element of the scheme, as well as a greater understanding of the approach SWR will take to the internal station works. Additional reference to the management processes for the internal station works to be delivered by SWR are also required.

Recommendations

- ix. Whilst the overall case for funding appears strong, it is our conclusion that the evidence presented within the business case does not currently permit an unconditional approval of the scheme.

Conditions for Approval

- x. We recommend that the following series of conditions are applied before the scheme is taken forward:
 - 1) **Either:** Provide clear evidence to justify the different journey time and vehicle operating cost impacts across all user classes
Or: Provide updated VISUM model and TUBA Model outputs that demonstrate both positive and consistent impacts across all user classes.
 - 2) Provide benefits sensitivity test outputs for a low growth and reduced P&R occupancy scenario that demonstrate the scheme will continue to represent high value for money from investment under these circumstances
 - 3) Provide additional evidence to support the commercial case to demonstrate the optimum procurement approaches will be adopted by both WBC and SWR.
 - 4) Provide confirmation of SWR management arrangements for delivering the internal station works
 - 5) That the scheme retains high or better value for money once these conditions have been met

1. Introduction

- 1.1 This report provides an independent assessment of the Full Business Case (FBC) submitted by Wokingham Borough Council (WBC) for the delivery of the Winnersh Triangle Park and Ride (WTP&R) scheme.
- 1.2 The report considers the evidence presented and whether it represents a robust case for the investment of Thames Valley Berkshire Local Enterprise Partnership (TVB LEP) growth deal funds.
- 1.3 The independent assessment has applied criteria from TVB LEP assurance framework and the requirements for transport scheme business cases set out within the Department for Transport (DfT) WebTAG.

Submitted Information

- 1.4 The independent assessment process for the WTP&R submission has been conducted on the following set of documentation submitted by WBC and their consultant team (WSP):
 - Options Assessment Report (September 2015)
 - Appraisal Specification Report (18th December 2018)
 - Full Business Case (21st February 2019)
- 1.5 In addition to these formal documents, Hatch Regeneris have engaged with WBC and their consultants between November 2018 and February 2019 to discuss the requirements of the final business case submission and comment upon the acceptability of the proposed appraisal approach and input assumptions and parameters.

Report Structure

- 1.6 This Independent Assessors Report responds to the formal submission of documentation, as well as the informal engagement process with WBC and their consultants, to provide a review of information provided, assess its suitability and robustness against TVB LEPs assurance requirements, and provide recommendations in relation to the approval of LEP funding for the proposed scheme.
- 1.7 The report is structured as follows:
 - **Section 2:** Option Assessment Report – provides commentary upon the OAR and the process by which a preferred scheme option has been identified
 - **Section 3:** Appraisal Specification Report – presents a high-level review of the ASR and the acceptability of the proposed appraisal approach to be adopted
 - **Section 4:** Full Business Case Submission – presents a summary of the scheme elements included within the business case submission, alongside the details presented within each of the five ‘cases’ (Strategic, Economic, Financial, Commercial, Management). It also sets out the recommendations to the LEP Local Transport Body relating to the suitability of the scheme for funding.

2. Option Assessment Report

Overview

- 2.1 An Options Assessment Report (OAR), dated September 2015, has been reviewed. This sets out the background to the scheme, the study objectives, the strategic context, and the current and potential future use of Winnersh Triangle Station. It summarises a set of identified issues that need to be addressed and establishes the implications of 'not changing'.
- 2.2 A set of four strategic transport objectives are then established that relate to the need to provide sustainable transport choices that are accessible to all, and offer a realistic alternative to private car trips. It also establishes the importance of supporting local economic development in Wokingham.
- 2.3 The OAR then develops and appraises four options for enhancing sustainable transport provision at Winnersh Triangle Station:
- **Do Minimum:** Name change to include Parkway; and extended ticket office opening hours
 - **Do Minimum + car park extension:** Name change to include Parkway; extended ticket office opening hours; and car park expansion (i.e. decked).
 - **Do Minimum + new station buildings/lifts to platform:** Name change to include Parkway; construction of accessible toilets; construction of new station building; and lifts to platforms.
 - **Full Station Redevelopment:** Name change to include Parkway; construction of accessible toilets; construction of new station building; lifts to platforms; and expanded car park (i.e. decked).
- 2.4 Each scheme option is appraised against:
- The established **Strategic Transport Objectives:**
 - Promoting economic development in Wokingham to support the production of jobs in the local area.
 - Ensuring sustainable transport is accessible for all types of users.
 - Enabling a variety of transport choices for the public.
 - Promoting sustainable transport as an alternative to the car.
 - The key **LEP Economic Objectives:**
 - Unlocking housing development.
 - Enhancing urban connectivity.
 - Encouraging vibrant town centres.
 - Positioning TVB for a digital future.
 - Foundations for future growth – housing, transport, utilities.
 - Enhancing the strategic growth network.

- 2.5 The Do Minimum option was considered not to be a suitable option as it did not meet strategic transport or SEP objectives. The remaining three options were then assessed against a set of **deliverability and feasibility criteria**:
- Infrastructure Feasibility
 - Operational Feasibility
 - Property / Land Take Requirements
 - Environmental Impact (Local)
 - Complexity of Delivery
 - Stakeholder acceptance / support
 - Costs
 - Benefits
 - Affordability
- 2.6 The OAR concludes that the **'Full Station Redevelopment'** scores the highest in terms of performance against Strategic Transport Objectives and LEP Economic Objectives and it scores joint highest in terms of deliverability and feasibility. On this basis it was identified as the preferred scheme option, albeit that the conclusion also notes that the **'Do Minimum and car park expansion'** option scores as well as in terms of deliverability and feasibility.

Review

- 2.7 The OAR represents a well set out document, providing a detailed understanding of the underlying issues at Winnersh Triangle Station, as well as the surrounding highway network, and how there is a need to support future employment and housing growth in the area.
- 2.8 The option generation process is restricted to enhancements to Winnersh Triangle Station itself, as opposed to any alternative transport options that could be provided within the corridor. It is accepted, however, that WBC has a broader local transport strategy that incorporates a number of Park & Ride and Mass Rapid Transit schemes and so the focus of this scheme is on the specific opportunities presented at the station.
- 2.9 The options presented are relatively strategic in nature, which is considered acceptable for an initial OAR, but means that subsequent scheme development work still needs to consider potential alternative specifications. For example, the options to include an expanded car park do not consider the potential optimal size of the car park provision.
- 2.10 The OAR concludes that the 'Full Station Development' should be taken forward to the full business case. This is primarily upon its ability to deliver against the strategic transport objectives and LEP Economic Objectives. It is ranked 1st on 'affordability', which seems a little counterintuitive, as it is the most expensive option, albeit the option with the new station building and lifts will also include the majority of the same costs.
- 2.11 The FBC will clearly need to demonstrate that all aspects of the 'Full Station Development' represent high value for money.

OAR Additional Information

- 2.12 The original OAR was developed in 2015 and in discussion with the Applicant it is understood that, since that time, a range of design options have been considered that have concluded the construction of new station buildings and, in particularly, step-free access to the platforms is prohibitively expensive to deliver at this time.
- 2.13 It is also understood that South Western Railway (SWR) are unable to commit to increased periods of staffing at the station, at this time.
- 2.14 The refined preferred scheme option therefore reflects a hybrid version of the 'Do Minimum + car park extension' and the 'Full Station Development' options and includes an extended (decked) car park, with improvements to the station buildings (passenger waiting areas and ticket office), and improved pedestrian and cyclist amenities outside the station.

Comments upon OAR Additional Information

- 2.15 Whilst the process by which the revisions to the scheme option have been explained, there is no formal update to the OAR process. It is recognised that the revisions have been primarily enforced through current funding availability and that there are still longer-term options to provide step-free access at the Winnersh Triangle Station'.
- 2.16 In the absence of further scheme optioneering work within the OAR, it will be imperative that the FBC is able to demonstrate that the promoted scheme represents the option for addressing the identified objectives and will represent high/very high value for money from investment.

3. Appraisal Specification Report

Overview

- 3.1 A meeting was held with WBC and their consultants (WSP), in November 2018, to discuss the broad approach to developing the business case.
- 3.2 The Appraisal Specification Report (ASR) was subsequently submitted for assessment in December 2019 and reviewed by Hatch Regeneris. It provided:
- An overview of the scheme, its objectives, its location, and then describes the key issues and implications of a ‘do-nothing’ scenario;
 - A description of the options considered [*discussed further within the OAR in Section 2 of this report*] and the principal risks and mitigation requirements;
 - The proposed approach to modelling, including the scenarios to be appraised, a description of the Wokingham Strategic Transport Model 3 (WSTM3) to be used to assess the removal of vehicle trips from the highway network, an overview of the Logit Model used to forecast Park & Ride Mode Share;
 - The proposed approach to the appraisal, including calculating Transport User Benefits from P&R users and decongestion benefits for road users, revenue impacts, benefits from the station improvements, reliability improvements, wider economic impacts, social & distributional impacts, and environmental impacts; and
 - An Appraisal Summary Table summarising the appraisal elements included within the assessment.

Review

- 3.3 The initial discussions with the Applicant in November 2018 identified the focus of the appraisal would be to determine the benefits associated with the removal of car trips from the highway network to instead use the P&R facilities. This approach requires both the ability to forecast the number of person trips that will switch from currently driving to instead travelling by P&R, as well as to then understand the impact this has upon other road users.
- 3.4 The Applicant identified two mechanisms for conducting the assessment:
- The volume of trips that will be removed from the highway network will be assessed using a Logit Model.
 - The benefits associated with removing car trips from the highway network will be assessed using a strategic highway model.

Logit Model

- 3.5 The Logit Model will focus upon vehicle trips that currently pass near to the WTP&R site that are travelling into Reading and seek to predict the proportion of them who would choose to use the P&R site instead. Given that there is already a P&R operation from the WTP&R site, this premise only makes sense if the car park at WTP&R is either currently operating at capacity, or will do as a result of future growth, thus restricting the number of vehicles that are able to use the site. The information provided within the ASR supports this premise.
- 3.6 The Logit Model to be used will be based upon the model developed by WBC for Thames Valley P&R Site. It will provide an assessment of generalised cost of travelling into Reading

by private car and by the P&R site, taking into account in-vehicle journey times (including congestion), access times, wait times, and egress times, as well as applying a mode constant to car trips of 10 minutes and a Λ of 0.04 calibrated from data from the East Reading MRT. The Logit Model will focus on commuting and business trips.

- 3.7 In general, the proposed Logit Model approach is considered to be an appropriate method for forecasting modal shift from car to P&R. It will be important that any capacity constraints within the P&R car park are taken into consideration.

Strategic Highway Model

- 3.8 The impact of removing the car trips from the highway model will be assessed using the Wokingham Strategic Transport Model 4 (WSTM4). This has been created within the VISUM modelling software package. It is calibrated and validated to a base year of 2015, with forecast years of 2021, 2026 and 2036.
- 3.9 The model will assess the reduction in journey times for other road users when commuters and business travellers have switched to using the P&R site.
- 3.10 The proposed approach is considered acceptable, but it will be important to consider the time periods during which the trips are likely to switch from car to P&R and whether they all occur during peak periods of congestion, in both the AM and PM peak periods.

Appraisal Approach

- 3.11 The approach outlined to assess the benefits in road decongestion resulting from mode shift from private car trips to P&R use appears broadly acceptable, although care will need to be taken in the detailed assumptions applied.
- 3.12 The approach appears not to be directly capturing the benefits derived by those travellers who actually switch from car to P&R (and who presumably benefit from a reduction in the overall generalised journey cost of their trip), although some benefits in terms of reduced Vehicle Operating Costs (VOCs) may be captured. It will be important to ensure that these savings are representative, given that P&R users will be subject to P&R charges/fares instead of paying VOCs.
- 3.13 Forecast reductions in carbon emissions, from reduced car journeys, will be captured in monetary terms, but any potential accident reduction benefits will only be qualitatively assessed, and so is likely to represent a conservative estimate of potential benefits.
- 3.14 The additional car parking revenue will be captured as part of the assessment but, as with the VOCs, it will be important to ensure that the impacts of car parking charges upon P&R users is adequately captured within the appraisal.
- 3.15 Benefits from the station improvements will be captured by applying unit monetary values derived through market research work presented within TfL's Business Case Development Manual and the Rail Industry's Passenger Demand Handbook. This is considered to be a standard approach.
- 3.16 Assessments of reliability, wider impacts, social/distributional impacts, and environmental, impacts will be conducted qualitatively but this is considered to be consistent with WebTAG requirements for a scheme of this type and magnitude. There will, however, need to be clear evidence in the FBC that more detailed quantitative assessments of any individual impacts are not required.

4. Full Business Case

Overview

- 4.1 The full business case submission sets out the case for investment in a series of improvements to the existing Winnersh Triangle Park & Ride (WTP&R) facilities. This includes:
- Development of a circa 130-space single deck car park over the existing Winnersh Triangle surface car park site;
 - Improvements to the station building interior by revamping the passenger waiting area and ticketing office; and
 - Improvements to the pedestrian amenities in the station forecourt area by moving dropped kerbs and tactile paving to a better location, as well as improving access between the park and ride bus shelter and footbridge
- 4.2 The current site has around 390 spaces, so the proposed scheme will represent an increase of around a third in the available parking spaces.
- 4.3 As well as being a P&R site, Winnersh Triangle Station also serves the adjacent Winnersh Triangle Business Park and so is a destination point for rail trips. The station currently has no customer toilets available and no customer information screens. Staffing is also limited.

Key Input Assumption and Parameters

- 4.4 The overarching business case is based upon a range of key assumptions, as follows:
- Scheme opening year will be 2021 with benefits being accrued, in full, from the year of opening.
 - The new car park deck has a minimum life expectancy of 30 years, whilst the benefits from the station improvements are assumed to last for at least 15 years
 - Traffic decongestion benefits are only assessed during the AM and PM peak hours of travel (08:00 to 09:00, and 17:00 to 18:00)
 - The profile of new P&R Users will match the current profile in terms of: 70% full fare bus P&R users; full fare 20% Rail P&R users; 10% bus concessionaires
 - Reading buses will continue to operate the current 15-minute frequency into Reading City Centre (Minster Street) and would increase bus capacities/frequencies, if required.
 - 13,000 new homes will be delivered by 2026 within the WBC area, including 4,450 units in the vicinity of Winnersh, North and South Wokingham.
- 4.5 There is also a commitment from South Western Railway to increase the frequency of their trains serving Winnersh Triangle Station from half-hourly up to every 15 minutes, although this is not explicitly referenced as an input parameter within the business case analysis.

Independent Assessor Comment

- 4.6 The scheme opening year is compliant with LGF3 requirements and the appraisal periods for the car park decking and station improvement are considered to be consistent with these types of infrastructure projects. The accrual of full benefits from the year of opening is considered to be optimistic and is reliant upon their being constrained demand for car

parking provision at the P&R site equivalent to the proposed release of additional car parking spaces.

- 4.7 The assessment of traffic decongestion benefits during only peak hours of travel is considered to be a robust approach for assessing the impacts, since this is when the highest levels of congestion occur. It will, however, be important to robustly demonstrate the proportion of additional P&R trips that will take place specifically during these time periods.
- 4.8 In the absence of any separate market testing analysis, the assumption that future P&R users will follow the same profile as current users is considered to be acceptable, albeit the implications for any variance may wish to be tested.
- 4.9 The assumption that Reading Buses will continue to operate the current frequency of bus services to and from the station, and may increase the capacity if required, is considered to be acceptable, given the letters of support provide by Reading Buses. It would be useful to demonstrate the impact the additional P&R trips may have upon peak period bus loadings and any implications for the requirement for additional bus capacity.
- 4.10 Given the delivery of 13,000 homes, including 4,450 in the vicinity of Winnersh and Wokingham, is within the adopted Local Plan, it is considered acceptable for this to form part of the assessment of future growth.

Strategic Case

- 4.11 The Strategic Case describes the background to the scheme and the area, and then provides an overview of the key **policy context** for the scheme, referencing national, regional and local transport policy. Four key **problems are identified** that the scheme will aim to address, and each is discussed in detail, in short to:
- Congestion – along the A3290 into Reading
 - Housing growth – 13,000 new homes to be delivered by 2036 across the WBC area, 4,450 within the local catchment of WTP&R
 - Passenger growth – forecast 0.6% annual growth in rail patronage
 - Inadequate station facilities – waiting facilities dated and poorly heated, limited customer information screens, limited staffing hours
- 4.12 The **impact of not changing** is presented in terms of the increase in highway congestion resulting from housing growth and the lost opportunity to establish Winnersh Triangle P&R as a key transport interchange, with poor facilities and constrained demand.
- 4.13 Four **scheme objectives** are presented based around ensuring sustainable transport is accessible to all, enabling a variety of transport options for the public, promoting sustainable travel as an alternative to private car, and promoting economic development.
- 4.14 The **indirect impacts** of the scheme are also discussed, in terms of climate change (reduced private car mileage); health (reduced emissions and reduced driver stress); accessibility (access to central Reading); and safety (reduced chance of vehicle accidents).
- 4.15 The **strategic outcomes** are presented within a logic chain showing how the outputs lead to direct impacts, indirect impacts, achievement of specified objectives, and strategic outcomes.
- 4.16 The **measures for success** are set out in relation to each scheme objective and include an assessment of bus and train patronage, journey times and journey time reliability, employment levels, and housing delivered.

- 4.17 It is stated that no **constraints** have been identified for the scheme, whilst the only **inter-dependencies** are stated as relating to securing planning approval, as well as the LGF funding.
- 4.18 A list of **stakeholders** who have already been consulted is presented, alongside their key messages relating to the scheme.
- 4.19 The **options assessment process** is presented, reiterating the outcomes of the 2015 OAR, but then stating that the preferred option identified by the OAR, the 'Full Station Redevelopment' option, has since been deemed prohibitively expensive and subject to engineering challenges, particularly in relation to the provision of step-free access to the station platforms. This has resulted in the scaling down of the scheme to focus primarily upon provision of the decked car park, with smaller-scale works to the existing station buildings and station forecourt. It is noted that the full works remain part of WBC's long-term aspirations for the station.
- 4.20 The final **scope** of the scheme is then set out in detail, with scheme drawings for the car parking deck provided. It has been confirmed that the scheme will not result in increased levels of staffing at the station.

Independent Assessor Comment

- 4.21 The Strategic Case is considered to provide a clear overview of the issues, objectives, and the preferred solution for enhancing provision at the Winnersh Triangle P&R site.
- 4.22 The background context provides a useful insight into the history of the scheme and the local geographic area, whilst the policy context demonstrates alignment with national, regional and local policy priorities.
- 4.23 There is a logical presentation of the overarching problems that have been identified both at the station itself, but also along the adjacent A3290 highway corridor that runs into central Reading. Model output data is presented to substantiate the statements made. This is the same with the assessment of impacts of not changing, which present logical arguments for the potential impacts.
- 4.24 The scheme objectives are clearly set out with associated 'desired outcomes'. There is considered to be some overlap between the first three objectives, which relate to improving sustainable transport choices, making them attractive to current car users and be accessible to all. The desired outcomes link back to the identified issues, providing assurance that the appraisal process will be focused upon achieving the right outcomes.
- 4.25 The wider objectives also, generally, relate to the identified issues, although discussions around health and accidents is more implied than explicitly raised as a key issue. The strategic outcomes are well presented within a logic chain diagram and demonstrate how the physical outputs of the scheme are anticipated to provide direct and indirect impacts that lead to the individual strategic outcomes.
- 4.26 The measures for success are clearly set out and identify a range of metrics that will be used to determine success. These metrics appear reasonable but are generic in nature and there is no definition of the scale of change anticipated that would be considered successful.
- 4.27 The sections on constraints and inter-dependencies have not identified any likely issues. This appears reasonable based upon our understanding of the scheme and the evidence presented.
- 4.28 There is clear demonstration that a range of key stakeholders have already been engaged with, including the key transport bus and rail operators from the P&R site.

- 4.29 The section on ‘options considered’ replicates the work presented within the OAR; however, there is limited discussion around the change in scope that has occurred since the identification of the preferred scheme option. It is recognised that cost and engineering constraints were the key factors in scaling down the proposed projects. Ideally, the whole optioneering process would have been re-opened to re-consider the potential scheme options that could be delivered within the identified funding constraints. It is recognised, however, that the car park decking remains the key component of the overall scheme and that this was identified as a strong element within the original optioneering process.

Economic Case

- 4.30 The Economic Case outlines the approach and parameters used to assess the economic impacts, including the traffic modelling approach and P&R demand forecasting. The scheme costs are also presented, along with environmental, social and wider economic impacts.
- 4.31 The assessment utilises two core analytical approaches to forecast the **additional P&R users** that will be generated by the scheme and the subsequent **impact of removing vehicle trips** from the congested highway network leading into central Reading.
- 4.32 A **Logit Model** is used to forecast demand, utilising an assessment of generalised journey time when travelling by private car and by bus P&R into central Reading. This is used to predict the proportion of commuters, business travellers, and other travellers (e.g. leisure) who will use the P&R option instead of the private car option. These proportions are applied to flow bundles generated on the A3290 an A329 Reading Road directly adjacent to the site and reflecting current car trips into central Reading. The model predicts that over 110 trips will choose to travel by bus P&R in 2021 and that this remains broadly constant up to 2036.
- 4.33 The **Wokingham Strategic Transport Model 4 (WSTM4)** has been used to assess the impact of removing car trips from the network upon levels of congestion (journey times), vehicle operating costs (fuel / non-fuel) and carbon emissions. Reference is made to the Local Model Validation Report (LMVR) for WSTM4, although no indication of how well the model performs is described, particularly within the specific area of the A3290 and A329 Reading Road corridors. The model covers two single peak hous (8am to 9am, 5pm to 6pm), with forecast models available for 2021 and 2036. The forecast changes in journey times and journey distances from the WSTM4 model have been input into TUBA to estimate the economic impacts.
- 4.34 The TUBA outputs indicate that, overall, the scheme is forecast to **reduce journey times and vehicle operating costs** for highway users. The disaggregate outputs, however, suggest that commuters will generate significantly higher benefits than business travellers and people travelling for ‘other’ purposes.
- 4.35 The **station user impacts** assess current station demand, taken from the industry dataset MOIRA, and uses historical changes over time to predict future growth in patronage. In addition, elasticities from the rail industry Passenger Demand Forecasting Handbook (PDFH) are used to predict the impact of the station improvements upon further **uplift in passenger demand**. This predicts that an additional 5 passenger per day will travel by rail as a result of the improvements, which is translated into a monetary benefit from increased farebox revenue.
- 4.36 Attribute values from Transport for London’s Business Case Development Manual (TfL BCDM) are applied to assess the **value of station improvements** to existing station users.
- 4.37 The additional **car parking revenue** generated by the decked car park is forecast, based upon full occupancy and assuming the same profile of current users.

- 4.38 A summary of **investment and maintenance costs** is presented, including a discussion of the **quantified risk budget** applied (equivalent to 12% of investment costs) and optimism bias (applied in the Central Case assessment at a rate of 15%).
- 4.39 An assessment of **environmental impacts** is presented covering air quality, noise, landscape, historic environment, biodiversity, and water environment.
- 4.40 An assessment of **other social and economic impacts** is presented covering reliability, physical activity, accidents, security, access to services, severance, and wider impacts upon the economy.
- 4.41 Formal assessments of direct economic impacts are presented within tables of **Transport Economic Efficiency (TEE), Public Accounts (PA), and Analysis of Monetised Costs and Benefits (AMCB)**. The information presented indicates the overall scheme is forecast to deliver a monetised **Benefit Cost Ratio** of 4.4 to 1. This would represent very high value for money.
- 4.42 **Cost sensitivity testing** is presented with optimism bias set at 44% (as opposed to 15%), which demonstrates the scheme would still deliver high value for money from investment, even with these higher costs.
- 4.43 No **benefits sensitivity testing** results are provided.
- 4.44 A clear **value for money statement** is also provided setting out an overview of the scheme direct scheme benefits and costs, as well broader non-monetised scheme impacts. An **Appraisal Summary Table (AST)** has also been completed and included within the appendices.

Independent Assessor Comment

- 4.45 The overarching process for forecasting demand using the generalised cost Logit Model is considered robust. The input parameters used have been discussed with the Applicant, revised and have now been verified. The forecasts of P&R usage are, therefore, considered appropriate to use within the appraisal. For the selected 'bundles' of trips passing by the Winnersh Triangle P&R site travelling into central Reading, the model predicts between 45% and 55% of the selected trips will switch from car travel to use the P&R service. Whilst this is a relatively high proportion, it is for a relatively select group of trips travelling directly past the WTP&R site into central Reading.
- 4.46 The use of the WSTM4 model to assess the impact of reduced vehicle trips is considered an appropriate tool. Whilst no specific information is presented around the local calibration and validation of the model, reference is provided to the LMVR and so it is presumed that the model meets WebTAG requirements. It is understood the 110 vehicle trips are removed from the 'flow bundle' of trips passing directly by the Winnersh Triangle P&R site travelling into central Reading. This is considered to be an appropriate approach.
- 4.47 The direct transport benefits that are 'captured' within the FBC relate to the journey time and vehicle operating cost savings experienced by travellers continuing to use the highway network. Whilst the overall forecast impacts are positive, assessing these impacts by individual trips purposes (business/commuter/ other) indicates that the impacts are not consistent across the groups. This requires further explanation.
- 4.48 The assessment of direct impacts does not include the benefits derived by those individuals who switch to use the P&R, although some of these benefits will be captured through reduce vehicle operating costs.
- 4.49 The use of PDFH to assess the impact of improvements in station facilities upon the uplift in passenger demand is considered an acceptable standard industry approach. The

capture of the full additional farebox revenue for these passengers is considered acceptable on the premise that there are no additional rail operating costs.

- 4.50 The use attribute values from TfL's BCDM to value station improvements for existing station users is considered an acceptable standard industry approach.
- 4.51 The assessment of additional car parking revenue is considered acceptable, although it would be useful to understand the impact of lower car park occupancy levels in line with current occupancy rates (85%).
- 4.52 The investment and maintenance costs are clearly presented, although there are considered to be some uncertainties in the way the costs have been generated (see section on Financial Case below). The approach to assessing the quantified risk budget is considered robust, although the percentage value of 12% is potentially low given some of the uncertainties with the investment costs. Similarly, the application of an optimism bias of only 15% appears low, given no detailed schedule of costs is available; however, it is noted that a sensitivity has been undertaken with 44% optimism bias.
- 4.53 The assessment of environmental impacts has been undertaken qualitatively and concludes that all impacts will be neutral. This is considered appropriate given the scale of the scheme and the nature of the infrastructure enhancement that is being delivered on the existing footprint of the station and park and ride site.
- 4.54 The assessment of social impacts and wider impact has been undertaken qualitatively and concludes that the impacts across the elements will generally be slight positive (the exception being physical activity where the impact is considered neutral). All of these forecasted outcomes are considered to be appropriate.
- 4.55 The TEE, PA, and ACMB tables have all be completed, as required. Whilst the overall outcomes appear valid, some of the individual impacts upon user groups needs to be investigated further (this relates to the issues discussed in paragraph 4.47).
- 4.56 The cost sensitivity test provides a useful assessment of the impact of applying a higher level of optimism bias. Given some of the uncertainties around the cost of the car park decking, it is a positive outcome for the economic case that the value for money remains high even when a higher optimism bias is applied.
- 4.57 The absence of any benefit sensitivity test means we are unable to comment upon the potential impact of lower growth or lower P&R usage. Whilst it is considered highly unlikely that this will result in the value for money falling below 2 to 1, these tests still need to be completed
- 4.58 The Appraisal Summary Table provides a sufficient summary of the impacts, not withstanding the earlier issues identified with some of the disaggregate outputs (as discussed in paragraph 4.47 and 4.55)

Financial Case

- 4.59 The Financial Case provides details of the schemes anticipated costs, as well as the budgets and funding cover.
- 4.60 The estimated **total cost of the scheme is £3.37m** in 2018 prices, of which around £264,500 relates to the station improvement work and pedestrian crossing and £2.645m relates to the delivery of the decked car park. A further £102,000 is allowed for design and supervision and the quantified risk assessment has identified the need for a risk contingency of around £363,000.

- 4.61 The costs for the decked car parking have been built up from a unit 'price per space' supplied by a specialist contractor and comprises the complete civils package for design and build, including CCTV.
- 4.62 The cost of the station facility upgrade has been provided by South Western Railway, inclusive of preparation and management costs. The costs of the pedestrian crossing facility have been provided by WBC.
- 4.63 All costs have been adjusted for inflation.
- 4.64 The profile of total scheme costs is £306,744 in 2019/20 and £3,067,808 in 2020/21.
- 4.65 **Maintenance costs** for the additional car parking spaces have been estimated at £100/space. Maintenance for the other elements are considered negligible and can be accommodated within existing maintenance budgets for the site.
- 4.66 The scheme is seeking £2,824,552 from LGF funds, with an additional S106 contribution of £550,000, which has already been secured.

Independent Assessor Comment

- 4.67 The majority of the scheme costs relate to the additional decked car parking provision. These have been developed based upon a unit price per space provided by a specialist contractor. This approach to cost estimation, whilst acceptable for early stage scheme assessments, is not considered to be fully robust and it is conceivable that it could be subject to notable variation. WBC have, separately, provided further assurance over the accuracy of the scheme costs and a signed letter from the Section 151 Officer demonstrates the procedure that would be undertaken in the event of costs exceeding overall budget availability.
- 4.68 No specific details are presented on how the other scheme elements have been costed, other than the internal station elements have been costed by SWT and the pedestrian crossing by WBC. These elements represent a relatively small proportion of the total scheme budget.
- 4.69 The quantified risk budget represents around 12% of the overall scheme costs (including design and supervision). Whilst this has been based upon a detail risk assessment process, the value, itself, it is not considered to be a significant contingency given some of the potential uncertainties around the car park decking costs.
- 4.70 An allowance for on-going maintenance of the decked car park is included and is stated as being based upon typical maintenance costs for the site. It is unclear whether the decked structure is likely to add any additional maintenance requirements, in comparison to the current surface car park. It seems reasonable to assume the other construction elements will have negligible impact upon the overall current maintenance of the station and forecourt area.

Commercial Case

- 4.71 The Commercial Case provides an output-based specification for the scheme, an overall procurement strategy, the sourcing options and payment/charging mechanisms, as well as a broad discussion of the risk allocation and management processes. Issues around human resource management and contract management are also addressed.
- 4.72 The **output-based specification** identifies the outcomes which the procurement strategy must address, including costs certainty, minimisation of preparation costs, assurance of contractor experience, and establishment of contractor risk allocations. In addition, the specification also defines the scheme outputs that the preferred procurement solution must ultimately deliver.

- 4.73 The **procurement strategy** establishes that WBC will have responsibility for procurement and contract management. As responsibility for station infrastructure rests with South Western Railway (SWR) the station infrastructure works will be undertaken through SWR's standard procurement routes. The construction of the pedestrian crossing facility will be undertaken by VolkerHighways, WBC term contractor. The specialist nature of the car park decking has led to the conclusion that a full tendering process will be undertaken to identify a specialist contractor as a design and build contract.
- 4.74 The **sourcing options** for procurement are stated to utilise standard procurement procedures and follow a tendering process.
- 4.75 The **payment mechanisms** will be based on specific task orders on a target price arrangement and awarded based on the NEC contract model.
- 4.76 Risks will be minimised through the contracting process, with the contract being based on a schedule or rates, rather than a fixed price, so as to reduce the level of **risk allocated** to the contractor and, hence, reduce the overall price they will quote.
- 4.77 A **Risk Management Plan** will be developed throughout the life of the project and will set out the process and responsibilities for updating risk management. The risk management organisation will consist of the Project Board and the Risk Owner. WBC will act as the Project Sponsor. The roles of the Project Board and Project Manager in relation to risk management are set out.
- 4.78 A series of **key project risks** are identified along with mitigation measures. These are categorised as 'planning/approval risks and mitigation'; 'cost risks and mitigation'; and 'delivery risks and mitigation'.
- 4.79 No specific **human resource** issues are identified, although the contractor's ability to resource the project effectively will be scrutinised during the procurement stage.
- 4.80 The **contract lengths** for delivery will be from Q2 2019 to Q3 2020.
- 4.81 The station improvements **contract management** will be the responsibility of SWR. For the parking deck, the contract will follow a design and build NEC4 format and contractual /commercial arrangements will be well-defined. The pedestrian crossing, and ancillary works, will be managed by WBC.

Independent Assessor Comment

- 4.82 The Commercial Case broadly covers that required range of elements; however, the level of detail provided, particularly in relation to the procurement processes, is considered limited.
- 4.83 The outputs-based specification is well set out, establishing both the requirements of the procurement process but also clearly setting out the outputs that the contracts will need to deliver.
- 4.84 The procurement strategy provides a broad outline of the procurement process and identifies the approach to procuring contractors for the three distinct elements of work: ii) internal station works; ii) external station highway and public realm works; and iii) the decked car park. It does not, however, establish the potential full range of procurement options and why the selected options will represent the optimum solution and best value for money.
- 4.85 There is no discussion of how procuring three separate contractors to complete the work will be advantageous or otherwise, although it is noted that the decked car park is, by far, the most significant construction element. The Commercial Case should present the evidence for how the preferred procurement strategy has been selected, particularly for the decked car park element.

- 4.86 The sections on sourcing options and payment mechanisms provide some information but are relatively limited in scope.
- 4.87 There is a reasonably detailed amount of information in relation to risk allocations and management, that provides a useful understanding of how it is anticipated that risks will be allocated between parties and managed. It is not clear whether all three elements will follow similar protocols and, in particular, there is relatively limited information related to the works to be conducted by SWR and their protocols.
- 4.88 It is acknowledged that human resource issues will be minimal, and the contract lengths set out appear reasonable although, again, it is not clear whether this applies to all three elements of construction works.
- 4.89 There is a broad overview of contract management responsibilities, but the details presented are relatively limited.

Management Case

- 4.90 The Management Case presents information on how the proposal will be delivered and managed.
- 4.91 Examples of **similar projects** that WBC has successfully delivered are presented, including a detailed description of another Park & Ride scheme recently completed.
- 4.92 **Project dependencies** are discussed, albeit the scheme is relatively free from dependencies, being an existing P&R facility owned by WBC. The car park decking element requires planning permission, however, the principle of the scheme has long been established in planning policy and strategic transport plans. In addition, the application for the original Winnersh Triangle P&R site did not identify any issues of not. The planning risk is, therefore, considered by the Applicant to be low.
- 4.93 An organisational **governance structure** is provided, demonstrating key roles and reporting lines. The responsibilities of the Project Board are set out, as well as the Project Manager (who is named).
- 4.94 A **communications and stakeholder management plan** is presented with key objectives established, along with the identification of the main stakeholders. A summary of engagement activities already undertaken by WBC is presented and reference made to letters of support.
- 4.95 A **project programme** has been developed, with key milestones, timescales and tasks, although it is relatively high-level in nature.
- 4.96 An **assurance and approvals plan** sets out the expectation of applying a 'Gateway Process' as a mechanism for assessing the project at critical stages in its lifecycle, although the actual 'Gateways' are not identified.
- 4.97 The various responsibilities for **reporting** are outlined to ensure that the Project Board and Elected Members are kept informed.
- 4.98 A live risk register contains a full set of **key issues for implementation**, along with planned mitigation.
- 4.99 **Contract Management** aspects are presented for the three elements of the project with WBC taking overall responsibility and leading on the external station works and car park decking and SWR leading on the internal station works.
- 4.100 A **risk management strategy** is presented that set out the process by which risks will be managed and refers to the **risk register** that has been developed and informed through a Quantified Risk Assessment (QRA) workshop undertaken in January 2019.

- 4.101 A **benefits realisation strategy** is presented setting out the responsibilities for realisation of benefits and the components element to the process. The scheme objectives, outcomes and impacts are set out and how the monitoring of benefits realisation will be controlled. There is also a broad discussion of **contingency planning**, albeit at a relative high-level.
- 4.102 A detailed **monitoring and evaluation plan** sets out a three-stage approach, relating to pre-construction baseline, and 1-year, and 5-year post-evaluation. The evaluation will consider 'process evaluation: efficiency of scheme delivery'; 'impact evaluation: delivery of projected outcomes'; and 'economic evaluation: accountability for investment'. A detailed assessment programme for all three elements is presented and how these will be used to answer a summary set of key evaluation questions and a set of evaluation metrics, both which are set out.

Independent Assessor Comment

- 4.103 The previous project examples demonstrate WBC's ability to deliver projects of this type, including specific P&R schemes. It is not explicitly stated the experience of SWR or VolkerHighways in delivering the specific elements of the project that they will be responsible for. However, given the scale of these works, it is assumed that these will represent standard projects.
- 4.104 The project dependencies are well presented and demonstrate that there are few dependencies and that the risks associated with planning requirements are very low.
- 4.105 The governance structure is clear, with responsibilities outlined.
- 4.106 The communications and stakeholder engagement plan demonstrates a comprehensive approach and that engagement work has already commenced.
- 4.107 The project programme is relatively high-level, and will need to be developed further, but provides sufficient confidence that there is a broad understanding of the overall project timeframes.
- 4.108 The assurance and approvals plan provides an overall structure, referring to a 'Gateway Process' but there is limited detail about when these 'gateways' will be.
- 4.109 The summary of reporting is considered to provide sufficient information and the key issues for implementation are identified within the risk register.
- 4.110 The overview of the contract management process is relatively high-level and only really discusses responsibilities, as opposed to processes.
- 4.111 The risk management strategy and risk register are considered to be well structured and transparent and demonstrate sufficient considerations of risk and mitigation measures.
- 4.112 The benefits realisation plan provides a good structure for determining whether benefits are being delivered, but it does not focus upon any pre-emptive approaches to ensure that maximum benefits are realised from the investment.
- 4.113 The monitoring and evaluation plan is considered to be well structured and relatively comprehensive. Whilst a range of evaluation metrics are identified, these are not translated into specific targets.

Summary and Conclusions

Summary

4.114 The review of the five cases has identified a series of points for further consideration. These are summarised below:

- The **Strategic Case** demonstrates good policy alignment and provides a clear case for the intervention to encourage sustainable travel, reduce highway congestion leading into central Reading, and support local housing growth. The need to enhance provision at the current Winnersh Triangle Station is established, in terms of enhanced passenger facilities, as well as the capacity of parking provision.
- A range of options for improvements at the station are presented, with a clear framework demonstrating how an optimum solution was initially selected. This includes complete re-development of the station buildings and step-free access to platforms. Ultimately, it is not this initial preferred option that has taken forward within the full business case process, as it was deemed that insufficient funds were available, at this time, to complete all of the proposed works. The final solution proposed represents a scaled-down version and excludes complete re-development of the station buildings, step-free access to platforms, and extended ticket office opening hours. These elements remain a longer-term aspiration.
- The overall **Economic Case** for the scheme appears strong. The forecast transfer of travellers from car to P&R delivers decongestion benefits to the highway network and the improvements in and around the station buildings result in journey quality benefits and projected increases in rail patronage. Some of the disaggregate impacts upon individual highway users are not clearly explained and requires further information to be provided. Additional tests on the sensitivity of the results to changing external circumstances are also required.
- The scheme will deliver a range of benefits in terms of environmental and social impacts, and support wider economic growth, through increased sustainable travel opportunities.
- The **Financial Case** presents a clear overview of scheme costs and funding profiles. The car park decking costs are built up from a unit cost price per space, provided by an independent specialist supplier. A Quantified Risk Budget representing 12% of overall scheme costs has been added. Typically, we would require a more detailed breakdown of scheme costs within a FBC; however, such is the modular nature of a car park decking scheme, these cost estimate are considered likely to be relatively accurate. Furthermore, assurances has been sought from the Applicant to verify both these cost and to confirm the process by which any cost overruns will be covered.
- The costs for the internal station work have been provided by South Western Railway, whilst the costs for external pedestrian improvement works have been developed by WBC. Neither have provided a detailed breakdown of the cost elements, but confirmation is provided that they include preparation, management and supervision costs.
- The **Commercial Case** is reasonably detailed but could elaborate on a few aspects to strengthen and provide additional assurance. Whilst a clear procurement approach is set out, there is no overarching discussion of any potential alternative approaches that may have been considered and/or how the preferred approach was selected.

- The **Management Case** presents sufficient detail to provide overall assurance in relation to the delivery of the scheme. It focuses primarily upon the processes to be employed by WBC in the management of the car park decking and external station pedestrian improvements, with limited reference to SWR procedures. It is, however, acknowledged that the SWR works will make up a relatively small element of the overall project. Whilst a project programme is provided, it is relatively high level in nature. It indicates that the internal and external station works will be completed by April 2020 and the decked car park will open before the end of December 2020.

Conclusions

- 4.115 The overall scheme aligns well with local, TVB LEP, and national strategic priorities to encourage sustainable travel, reduce congestion, and support growth. It has been demonstrated that there are specific constraints at the existing Winnersh Triangle P&R site, in terms of the standard of passenger facilities and the car parking spaces available.
- 4.116 The analytical modelling demonstrates both demand for the proposed additional car parking provision and the overall positive impact that removing these trips from the highway network will bring. Some of the disaggregate model outputs do, however, require further explanation in order to understand the impacts of the scheme upon all road users.
- 4.117 The analysis also demonstrates the positive impact that the additional works to the station buildings and surrounds will have in terms of the improving the quality of the travel experience for passengers and encouraging higher overall rail patronage.
- 4.118 The overall economic case demonstrates the scheme will deliver very high value for money, although there are limited tests to demonstrate how sensitive the results are to any changes in external circumstances.
- 4.119 The financial case appears reasonably robust, with a quantified risk budget included. Given the way in which the costs have been forecast, and that a competitive contract tendering process is still to be completed, there is the potential for the costs to vary, either up or down. In the event that costs were to rise, confirmation has been sought from WBC that they have a procedure in place to address any cost overruns to ensure the project is delivered.
- 4.120 The commercial and management cases are generally considered to be robust but could be enhanced in some areas. This includes providing specific evidence that the design and build contracting approach for the decked car park represents the best procurement option for this element of the scheme, as well as a greater understanding of the approach SWR will take to the internal station works. Additional reference to the management processes for the internal station works to be delivered by SWR are also required.
- 4.121 It is our conclusion that whilst there appears to be strong overarching case for the scheme, there are currently too many uncertainties within the business case to permit an unconditional approval of the scheme.

Conditions for Approval

4.122 We recommend that the following series of conditions are applied before the scheme is taken forward:

- 1) **Either:** Provide clear evidence to justify the different journey time and vehicle operating cost impacts across all user classes
Or: Provide updated VISUM model and TUBA Model outputs that demonstrate both positive and consistent impacts across all user classes.
- 2) Provide benefits sensitivity test outputs for a low growth and reduced P&R occupancy scenario that demonstrate the scheme will continue to represent high value for money from investment under these circumstances
- 3) Provide additional evidence to support the commercial case to demonstrate the optimum procurement approaches will be adopted by both WBC and SWR.
- 4) Provide confirmation of SWR management arrangements for delivering the internal station works
- 5) That the scheme retains high or better value for money once these conditions have been met



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