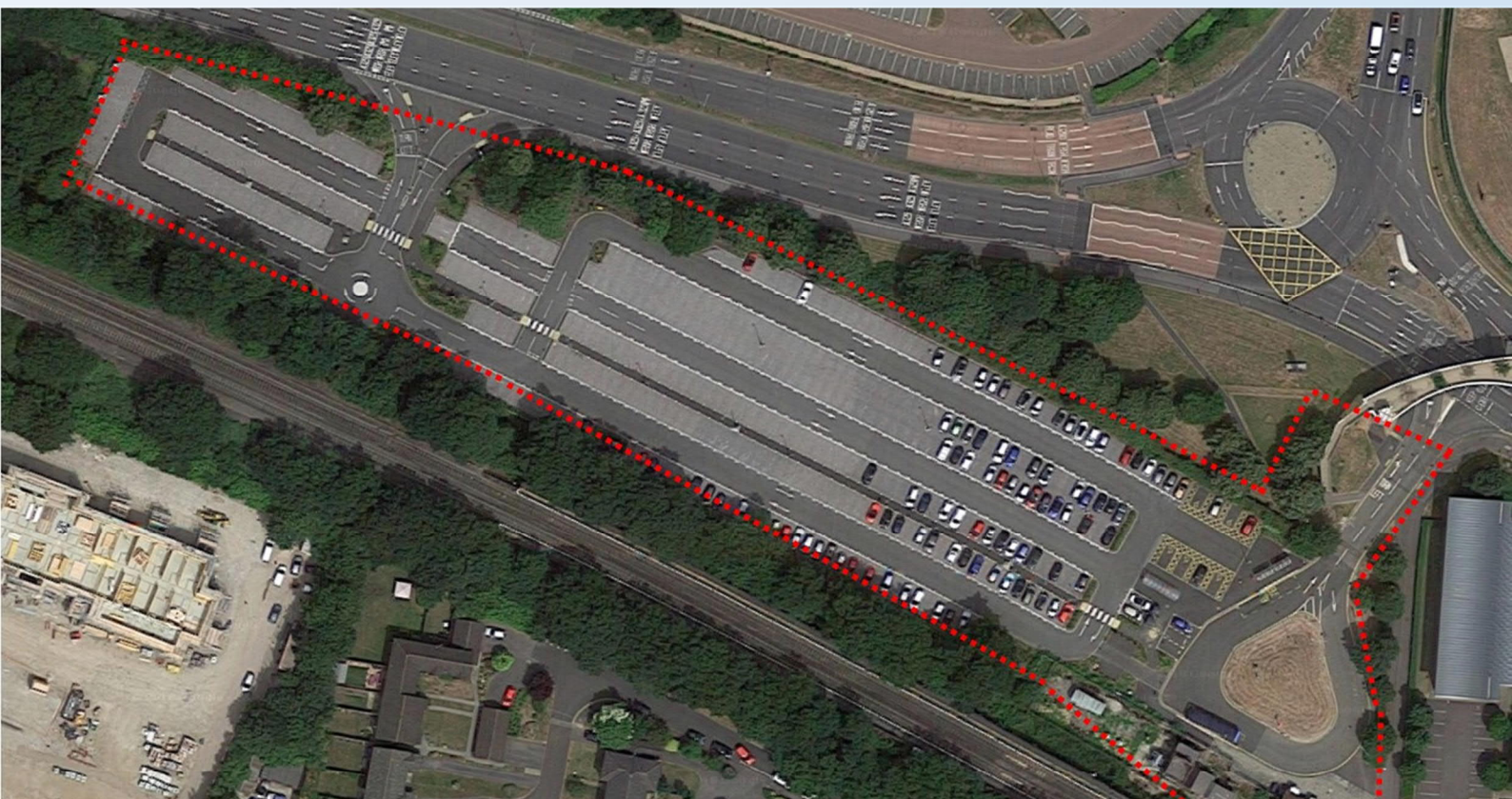




Wokingham Borough Council

WINNERSH TRIANGLE PARKWAY

Full Business Case





Wokingham Borough Council

WINNERSH TRIANGLE PARKWAY

Full Business Case

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70042838

DATE: MARCH 2019

WSP

2 London Square
Cross Lanes
Guildford, Surrey
GU1 1UN

Phone: +44 148 352 8400

WSP.com



QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	1 st Draft v1	2 nd draft v2	3 rd draft v3	4 th Draft v4
Date	25 January 2019	19 February 2019	21 February	06 March
Prepared by	Oliver Stone-Houghton	Oliver Stone-Houghton	Oliver Stone-Houghton	Oliver Stone-Houghton
Signature				
Checked by	Rohan McGinn	Rohan McGinn	Rohan McGinn	Rohan McGinn
Signature				
Authorised by	Nidhish George	Nidhish George	Nidhish George	Nidhish George
Signature				
Project number	70042838	70042838	70042838	70042838
Report number				
File reference	\\uk.wspgroup.com\central data\Projects\700428xx\70042838 - Wokingham-Winnersh Tr Parkway\02 WIP\TP Transport planning\03 Document\2. FBC			

CONTENTS

1	OVERVIEW	1
1.1	INTRODUCTION	1
1.2	BACKGROUND	1
1.3	STRUCTURE OF REPORT	5
2	THE STRATEGIC CASE	6
2.1	INTRODUCTION	6
2.2	BACKGROUND	6
2.3	POLICY CONTEXT	7
2.4	PROBLEM IDENTIFICATION	10
2.5	IMPACT OF NOT CHANGING	12
2.6	OBJECTIVES	13
2.7	MEASURES FOR SUCCESS	16
2.8	CONSTRAINTS	17
2.9	INTER-DEPENDENCIES	17
2.10	STAKEHOLDERS	18
2.11	OPTIONS	18
2.12	SCOPE	19
3	THE ECONOMIC CASE	21
3.1	INTRODUCTION	21
3.2	OUTLINE APPROACH TO ASSESSING VALUE FOR MONEY	21
3.3	MODELLING APPROACH	21
3.4	SCENARIOS APPRAISED	24
3.5	ASSESSMENT OF ECONOMIC IMPACTS	25

3.6	TRANSPORT ECONOMIC EFFICIENCY (TEE), PUBLIC ACCOUNTS (PA) AND ANALYSIS OF MONETISED COSTS AND BENEFITS (AMCB)	35
3.7	SENSITIVITY AND RISK PROFILE	36
3.8	VALUE FOR MONEY STATEMENT	37
3.9	APPRAISAL SUMMARY TABLE	38
4	THE FINANCIAL CASE	39
<hr/>		
4.1	INTRODUCTION	39
4.2	COST ESTIMATES AND SPEND PROFILE	39
4.3	BUDGET/FUNDING COVER	40
5	THE COMMERCIAL CASE	41
<hr/>		
5.1	INTRODUCTION	41
5.2	OUTPUT BASED SPECIFICATION	41
5.3	PROCUREMENT STRATEGY	42
5.4	SOURCING OPTIONS	42
5.5	PAYMENT/CHARGING MECHANISMS AND FRAMEWORK	42
5.6	RISK ALLOCATION AND TRANSFER	43
5.7	HUMAN RESOURCES	45
5.8	CONTRACT LENGTH	45
5.9	CONTRACT MANAGEMENT	45
6	THE MANAGEMENT CASE	46
<hr/>		
6.1	INTRODUCTION	46
6.2	EVIDENCE OF SIMILAR PROJECTS	46
6.3	PROJECT DEPENDENCIES	47
6.4	GOVERNANCE	47
6.5	COMMUNICATIONS AND STAKEHOLDER MANAGEMENT PLAN	49
6.6	PROJECT PROGRAMME	50
6.7	ASSURANCE AND APPROVALS PLAN	51
6.8	REPORTING	51

6.9	KEY ISSUES FOR IMPLEMENTATION	52
6.10	CONTRACT MANAGEMENT	52
6.11	RISK MANAGEMENT STRATEGY	52
6.12	BENEFITS REALISATION PLAN	54
6.13	MONITORING AND EVALUATION	56
7	SUMMARY AND CONCLUSIONS	62

7.1	STRATEGIC CASE	62
7.2	ECONOMIC CASE	62
7.3	FINANCIAL CASE	63
7.4	COMMERCIAL CASE	63
7.5	MANAGEMENT CASE	63

TABLES

Table 1-1 - DfT Five Case Model for Business Cases	1
Table 2-1 - Summary of key problems	10
Table 2-2 - Scheme objectives and desired outcomes	13
Table 2-3 – Wider objectives	14
Table 2-4 – Measures for success	17
Table 2-5 – Options considered	19
Table 3-1 – Proportion of trips using car and Park and Ride	23
Table 3-2 – Number of trips switching to Park & Ride	24
Table 3-3 – Options appraised	24
Table 3-4 – Inputs and assumptions	25
Table 3-5 – TUBA user classes	27
Table 3-6 – Passenger Demand	27
Table 3-7 – Passenger Return Fares	28
Table 3-8 – Station Improvement Uplift	29
Table 3-9 – Benefit value per journey	30
Table 3-10 – Benefit appraisal period benefits	30

Table 3-11 – Car park tariffs per day	31
Table 3-12 – Analysis of monetised costs and benefits	36
Table 3-13 – Sensitivity test with higher optimism bias	37
Table 3-14 – Summary of non-monetised impacts assessment	37
Table 4-1 - Cost estimates and spend profile	39
Table 4-2 - Budgetary impact summary	40
Table 5-1 – Key project risks	44
Table 6-1 – Stakeholder engagement activities	49
Table 6-2 – Programme plan	51
Table 6-3 – Objectives, outputs and outcomes	56

FIGURES

Figure 1-1 – Winnersh parish boundary	2
Figure 1-2 - Current Winnersh Triangle Park and Ride Site	3
Figure 1-3 - Current Winersh Triangle Park and Ride Map	3
Figure 1-4 - Site Location in the Context of the Local Highway Network	4
Figure 2-1 - Forecasted Passenger Growth	12
Figure 2-2 - Strategic Outcomes	15
Figure 3-1 - Highways links used for Flow Bundle Analysis	23
Figure 6-1 - Organisational Structure and Roles	48
Figure 6-2 – Risk management process	53
Figure 6-3 - Distribution of total risk cost	54
Figure 6-4 – Benefit management lifecycle	55
Figure 6-5 – Outcomes and impacts	60

APPENDICES

APPENDIX A

CONGESTION DELAY PLOTS



APPENDIX B
FLOW DIFFERENCE PLOTS
APPENDIX C
OPTIONS ASSESSMENT REPORT
APPENDIX D
DECKING DRAWING
APPENDIX E
ASR
APPENDIX F
LOGIT MODEL PARAMETERS
APPENDIX G
TEE, PA AND AMCB TABLES
APPENDIX H
DETAILED FARE REVENUE CALCULATIONS
APPENDIX I
DETAILED PARKING REVENUE CALCULATIONS
APPENDIX J
INVESTMENT COST BREAKDOWN
APPENDIX K
AST
APPENDIX L
SECTION 151 LETTER
APPENDIX M
MODEL NOTE - IMPACT ON LHN
APPENDIX N
LETTER OF SUPPORT FROM READING BUSES
APPENDIX O
RISK REGISTER

1 OVERVIEW

1.1 INTRODUCTION

- 1.1.1. WSP have been appointed by Wokingham Borough Council (WBC) to produce a full transport business case (FBC) in support of the Winnersh Triangle Park and Ride scheme. Having successfully passed the Thames Valley Berkshire Local Enterprise Partnership's (TVB LEP) prioritisation stage, the schemes are currently at the programme entry stage. Accordingly, WBC have been granted permission by TVB LEP to submit a combined package of measures, supported by robust business case submission, to enable the full funding to be secured. This business case has been prepared for consideration by TVB LEP to recommend financial approval to Berkshire Local Transport Body (BLTB).
- 1.1.2. The scheme will comprise:
- Development of a circa 130-space single deck car park over the existing Winnersh Triangle surface Park and Ride site, thereby improving the Park and Ride offer
 - Improvements to the station building interior by revamping the passenger waiting area and ticketing office
 - 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
- 1.1.3. The structure and content of this FBC is based on the best practice in "The Transport Business Cases" (DfT, January 2013) – the five-case model and on supplementary guidance based on the Transport Investment Strategy (DfT December 2017) – the five-case model outlined in Table 1-1 below.

Table 1-1 - DfT Five Case Model for Business Cases

DfT Case	Summary
Strategic Case	Shows that there is a robust 'case for change', closely aligned to wider strategic and public policy objectives.
Economic Case	Shows that the scheme provides very high value for money, based on a formal appraisal undertaken in line with DfT guidance.
Financial Case	Explains how much the scheme will cost and how it will be paid for, showing that it is affordable.
Commercial Case	The proposed approach to finance and procurement is robust, showing that the scheme is commercially viable.
Management Case	Shows that the scheme is achievable in practical terms, explains how the project will be managed to ensure it achieves its objectives.

1.2 BACKGROUND

SCHEME AREA DESCRIPTION

- 1.2.1. Winnersh is a civil parish and a large village in the Borough of Wokingham in the county of Berkshire. Winnersh is bounded by the M4 Motorway to the south, with an existing residential area and development in the north, King Street Lane to the west and the A329 Reading Road to the east. Figure

1-1 shows the location and parish boundary. Winnersh is 38 miles west of London, about 2 miles north-west of Wokingham and 6 miles south-east of Reading.

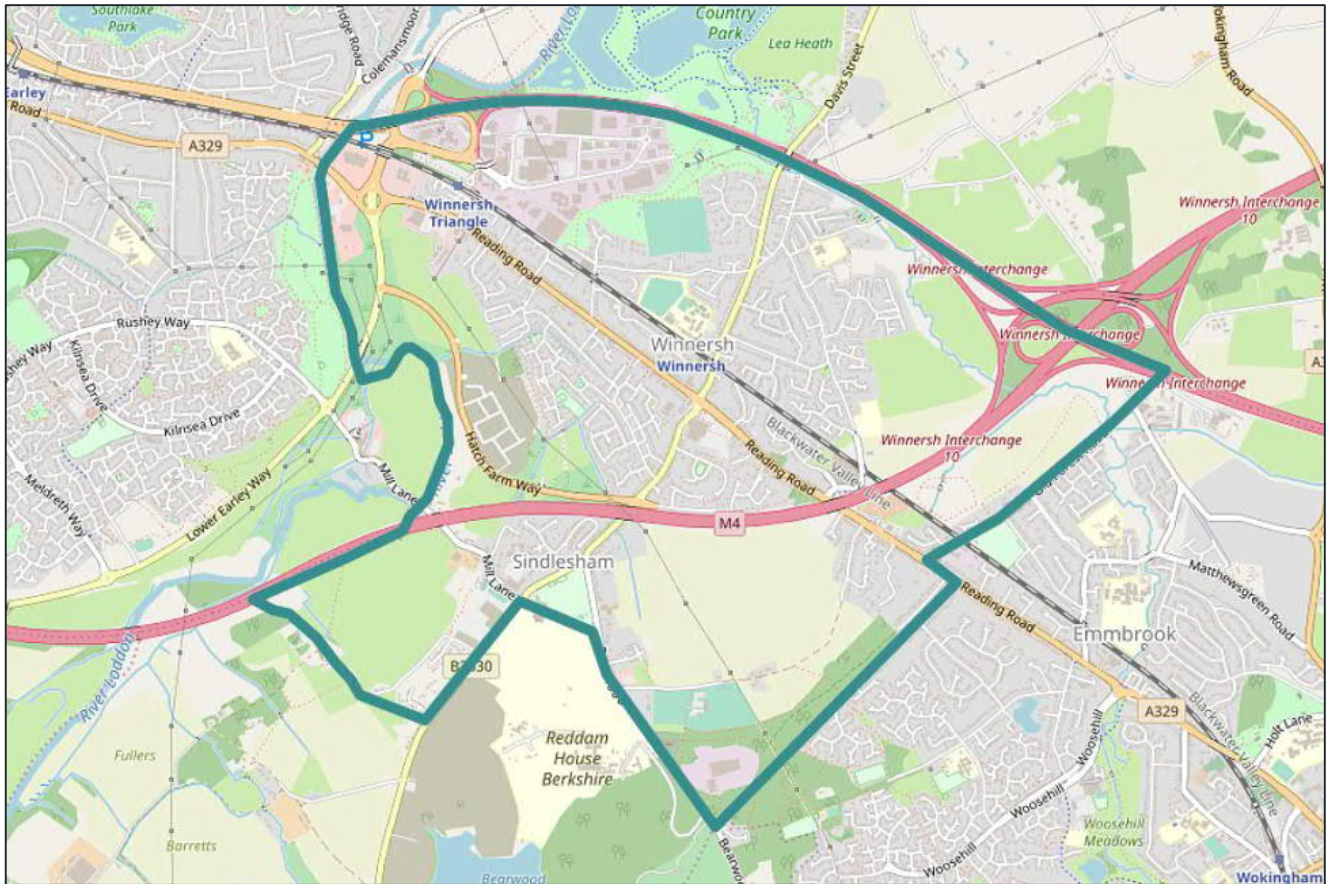


Figure 1-1 – Winnersh parish boundary

SITE DESCRIPTION

- 1.2.2. The scheme is located in the Borough of Wokingham, on the western fringe of the Winnersh Triangle business park and adjacent to Winnersh Triangle railway station, approximately 6km south east of Reading town centre (Figure 1-4). The A329(M) north of the site, can be accessed via adjacent A3290 (eastbound) and the Wharfdale Road (westbound). The A329(M) provides access to junction 10 of the M4, to the south of the site.
- 1.2.3. The proposed location for the scheme is located on the current Park and Ride site, adjacent to Winnersh railway station, approximately 1.76ha. Figure 1-2 shows the site and Figure 1-3 shows the site map. The existing Park and Ride site consists of around 390 car parking spaces.



Figure 1-2 - Current Winnersh Triangle Park and Ride Site

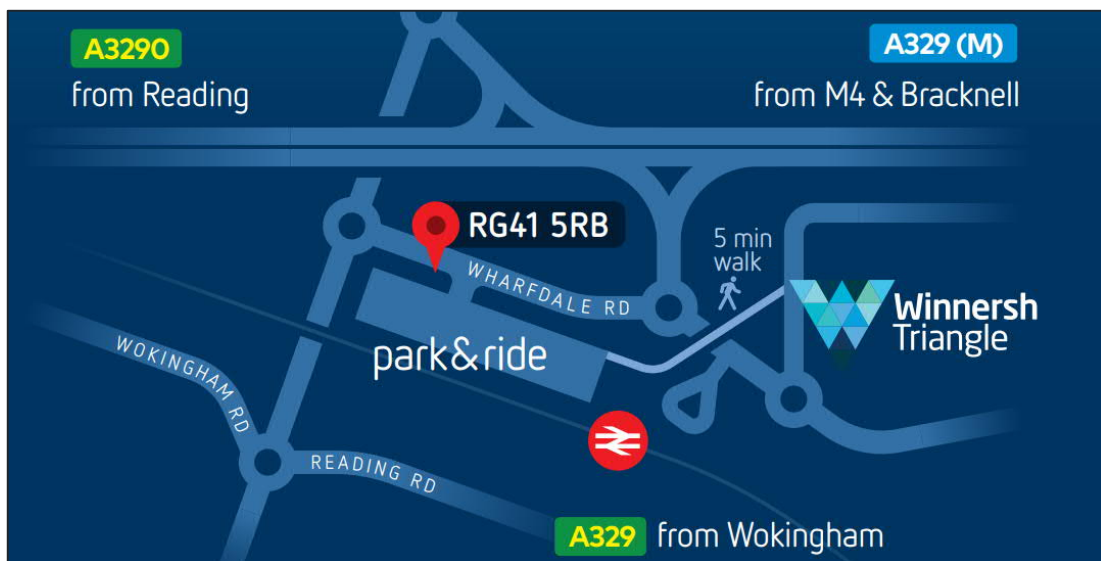


Figure 1-3 - Current Winersh Triangle Park and Ride Map

Source: <https://www.reading-buses.co.uk/park-ride>

- 1.2.4. Wokingham is a major employment centre within the south east, comprising the two major business parks of Thames Valley Business Park and the Winnersh Triangle Business park, which are home to large international companies, including Microsoft, Oracle, Jacobs and BG Group. Central Reading is also a key employment destination, and has a growing number of large companies including HSBC, Barclays, Thames Water and Yell.
- 1.2.5. The enhanced Park and Ride provision would be predominantly used by employment trips during weekdays, and leisure trips during weekends, into central Reading, thereby reducing overall road congestion along the A329 corridor (A3299M), A329, A3290 and their local feeder routes) into Reading town centre. The existing Park and Ride patronage comprises 70% bus and 20% rail park and ride users as well as 10% bus concessionaires, who are entitled to the bus Park and Ride usage after 9:30AM. It is anticipated that the proportional split in the type of users at the expanded Park and Ride will be consistent with current patterns. The enhanced Park and Ride facility will continue to be served by Reading Buses that currently operate a service every 15 minutes into central Reading. The scheme location in the context of the Strategic Road Network is shown at Figure 1-4.

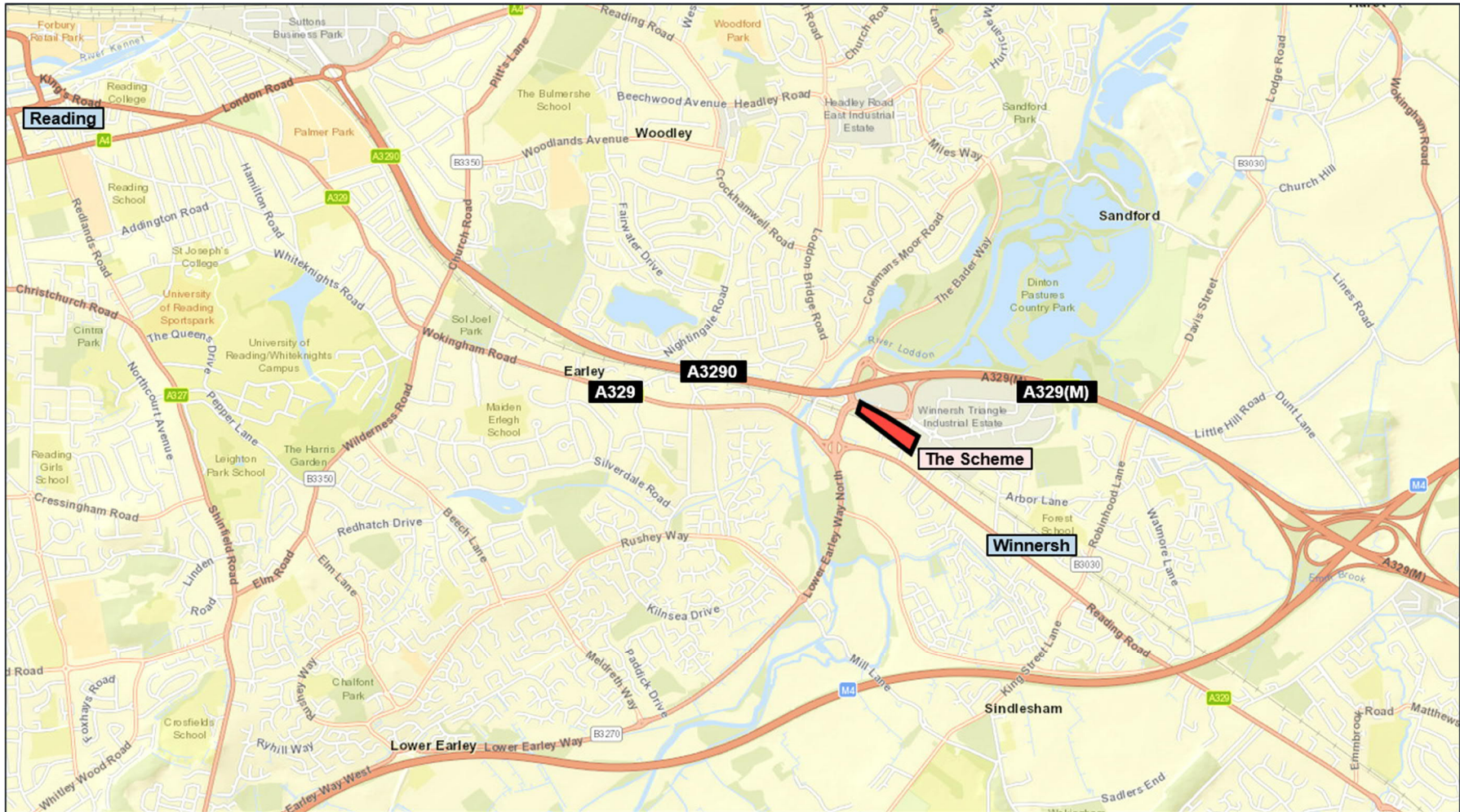


Figure 1-4 - Site Location in the Context of the Local Highway Network

Source: iGIS – Esri, HERE, Garmin, OpenStreetMap Contributors and the GIS User Community

- 1.2.6. The scheme would complement the Park and Ride at Moreoak, and the planned Thames Valley Park and Ride, which could help reduce congestion on the A4 corridor as well as central Reading, capturing traffic from the A4 which this scheme does not serve.
- 1.2.7. Wokingham Borough is set to deliver 13,000 new homes by 2026, of which 4,450 are located surrounding the A329 corridor in Winnersh (450 units), North Wokingham (1,500) and (South Wokingham (2,500). The Park and Ride will support this growth by providing additional public transport capacity to accommodate the increased usage.

BACKGROUND OF SUPPORT

- 1.2.8. A consultation for the scheme, aimed informing the relevant stakeholders about the proposal, was held between 19/01/18 and 19/02/18. The consultation comprised of:
 - Discussions with stakeholders to determine their interest and benefit from the scheme
 - Defining any contributions to the scheme
 - Disagreements or amendments to the proposed developments

1.3 STRUCTURE OF REPORT

- 1.3.1. This FBC is set out as follows:
 - Section 1 - Overview
 - Section 2 - Strategic Case
 - Section 3 - Economic Case
 - Section 4 - Financial Case
 - Section 5 - Commercial Case
 - Section 6 - Management Case
 - Section 7 - Summary and Conclusions

2 THE STRATEGIC CASE

2.1 INTRODUCTION

2.1.1. This section of the FBC sets out the strategic case for the scheme. The structure of the strategic case is as follows:

- Introduction
- Background
- Policy Context
- Problem Identification
- Impact of Not Changing
- Objectives
- Measures for Success
- Scope
- Constraints
- Inter-Dependencies
- Stakeholders
- Options

2.2 BACKGROUND

2.2.1. The scheme constitutes a part of the national and local commitment to improve the transport network and to reduce congestion at constrained locations. Reading and Wokingham Borough Councils have already implemented a range of schemes to reduce congestion on particularly congested links on the road network. These schemes have included the Mere oak Park and Ride on the A33, the current Winnersh Park and Ride facility, which the scheme looks to enhance, the Ready Bike Hire Scheme, a pedestrian / cycle bridge and the regeneration of Reading Railway Station. These schemes have had considerable success in alleviating congestion in constrained areas and encouraging people to use more sustainable modes of transport.

2.2.2. By reducing congestion and improving connectivity, the scheme will help support a mode change from single occupancy car journeys, to bus travel.

SOCIO-ECONOMIC BACKGROUND

Wokingham and Reading

2.2.3. At the time of the 2011 Census, Wokingham and Reading boroughs had populations of 154,380 and 155,698, respectively. Key statistics for Wokingham Borough, based upon the 2011 Census data, include:

- The borough has the highest level of average car ownership out of all Unitary Authorities in England, with 1.64 cars per household. Certain Middle Super Output Areas (MSOA) in the borough have car ownership levels of 1.98
- Approximately 70% of the borough's population is economically active
- Across the borough, 73% of people travel to work by car, however it is as high as 82% in some MSOAs

- Over 8% of people living in Wokingham travel to work in central Reading, 43% of which drive to work

Winnersh

2.2.4. The socio-economic statistics of Winnersh ward, based upon 2011 Census Data, include:

- All households in the ward have access to a car or van, compared to the Wokingham average of 9%
- 9% of residents in the ward use public transport to get to work, which is lower than the borough average of 11%
- The ward has a lower proportion of people travelling to work by car than the borough – 51% compared with 68%
- The average household size in the ward is 2.60 people, which is just higher than the borough average of 2.56 people
- 71% the ward population between 16 and 74 years of age are in employment, which is just higher than the borough average of 70%

2.2.5. Analysis of the 2010 English Index of Multiple Deprivation (IMD), using the ‘Lower Super Output Area’ for the location of the scheme (Winnersh E00084278), shows that the area is the 11th deprived out of 100 areas in the borough.

2.3 POLICY CONTEXT

2.3.1. This section outlines how the scheme fits into the following national, regional and local policies aspirations:

- National Planning Policy Framework (NPPF)
- Thames Valley Berkshire (TVB) Local Enterprise Partnership (LEP) Strategic Economic Plan (SEP) Wokingham Borough Core Strategy
- Wokingham Borough Council Local Transport Plan (3)
- Reading Borough Council Core Strategy
- Reading Borough Council Local Transport Plan 3

NATIONAL POLICY

National Planning Policy Framework (NPPF)

2.3.2. Park and Ride facilities adjacent to rail stations and on bus corridors, support the Government’s NPPF (updated in February 2019) through the provision promotion of alternative transport modes to the car and other sustainable development opportunities. The NPPF states the following should be ensured, “*appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location*”. The scheme will help improve the attractiveness and increase sustainable transport usage between Reading and Winnersh.

2.3.3. The NPPF also states there should be “safe and suitable access to the site can be achieved for all users”, and developments should “give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use”. The scheme supports many of the objectives of NPPF: “*significant development should be focused on locations*

which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes”.

REGIONAL POLICY

Thames Valley Berkshire (TVB) Local Enterprise Partnership (LEP) Strategic Economic Plan (SEP)

- 2.3.4. The TVB LEP submitted their SEP in March 2014, which outlines the case for investment in infrastructure, enterprise and employment, required to support the region’s economic growth. The scheme has been prioritised within the TVB Implementation Plan as it will ‘enhance urban connectivity’. Previous plans submitted Wokingham Borough Council agreed to double available office space at Winnersh Triangle; though the recession did affect the delivery for this plan. Since 2008, with economic prospects significantly improving, there has been positive growth for Winnersh Triangle Business Park, with the construction of hotels and office buildings.
- 2.3.5. The station facilities however are largely unchanged since the station was opened in May 1987, apart from the opening of the current Park and Ride offering. The station facilities require improvement to reflect the increased employment at the business park and the growing usage of the station; as well as to reduce congestion on the road network into the centre of Reading – an enhanced Park and Ride service can deliver on both of these.
- 2.3.6. There are 437 new homes planned to be developed at Hatch Farm Dairies in Winnersh. The site is approximately a ten-minute walk from Winnersh Triangle Station. The station is accessible by foot and bicycle as it is connected to the main A329 corridor through an arch, only open to pedestrians and cyclists, under the railway line. The development of the new homes is not dependant on the railway station; however, it will place ever increasing demands on the existing infrastructure.
- 2.3.7. The redevelopment of the station into a parkway station has provided a sustainable transport alternative into the centre of Reading, and the addition of a crossing point on the station forecourt would improve general pedestrian amenity and safety of the site.

LOCAL POLICY

Wokingham Borough Core Strategy

- 2.3.8. Wokingham Borough Council’s Core Strategy document identified the need for ‘*high quality express bus services...via the Park and Rides*’, particularly along the A4 and A329 corridors between Reading and Wokingham, which the scheme would support with the enhanced park and ride offering.
- 2.3.9. The construction of the scheme would aid any planning obligations for the developers involved in the delivery of the Strategic Development Locations (SDL), in particular North Wokingham (1,500 homes) and South Wokingham (2,500 homes). The developers would be expected to enter a legal agreement to ensure that the surrounding infrastructure and facilities are adequate to support the development and the surrounding area. Proposed measures include:
- Improvements to the quality and frequency of public transport services along any part of the network;
 - High quality express bus service or mass rapid transit along A329; and
 - Measures to improve accessibility by non-car modes along the A321 and A329 corridors.

Wokingham Borough Council Local Transport Plan (3)

- 2.3.10. Wokingham Borough Council's Local Transport Plan (LTP3) for the period 2011-2026 has a policy specifically related to Park and Ride facilities. Policy PT8 states. '*Council will promote the use of Park and Ride services and will support the future introduction of new sites in the Borough where feasible.*' The LTP3 summarises the benefits of Park and Ride facilities as:
- Enhancing the economic viability of town centres
 - Reducing congestion
 - Promoting sustainable travel
- 2.3.11. Policy PT8 also outlined plans to work across boundaries to deliver and retain the following Park and Ride facilities:
- West of Coppid Beech Roundabout on the A329
 - Mere oak
 - Park and Ride at Winnersh
 - Thames Valley Business Park
- 2.3.12. Policy SP1 supports Park and Ride proposals, stating Wokingham Borough Council will '*actively support development of suitable major transport projects that are necessary to support the future growth and success of the borough.*' It also states that future transport growth needs to be managed effectively to support the build out of the SDLs, which without any transport network mitigation would result in an increase in overall journey times of 22%.

Reading Borough Council Core Strategy

- 2.3.13. Reading Borough Council's Core Strategy, adopted in January 2008 and updated in January 2015, is supportive of Park and Ride Schemes. Policy CS21 on Major Transport Projects states that as '*a regional transport hub, priority will be given to the implementation of the priority transport projects identified in the Local Transport Plan, particularly...Park and Ride Sites, Mass Rapid Transit, road improvements, Quality Bus Routes and associated transport improvements*'.

Reading Borough Council Local Transport Plan 3

- 2.3.14. Reading Borough Council's vision for transport in the borough, as outlined in their LTP3, is that '*Transport in Reading will better connect people to the places that they want to go: easily, swiftly, safely, sustainably and in comfort.*' *The council pledges to promote prosperity for Reading by providing a transport system to accommodate residents travelling for all journey purposes and by all modes, helping to 'meet the challenges of a dynamic, low carbon future*'.
- 2.3.15. Reading Borough Council also produces Area Action Plans (AAP's) including an Eastern Local Action Plan, which identifies that the '*A329(M) and the A4...suffer congestion during peak periods at Sutton Seeds Roundabout, which is attributed to the conflicting movements at the roundabout and the bottleneck at Cemetery Junction*'. The Action Plan outlines a number of future plans relating to the provision of Park and Ride facilities in the area:
- To work with Wokingham Borough Council to progress the implementation of a long-term Park and Ride strategy, considering alternative sites to Loddon Bridge, including the possible use of Broken Brow at the northern end of the A329(M)
 - To work with neighbouring authorities to deliver an enhanced interurban public transport network

- To work with the private sector and Wokingham Borough Council to innovate and secure delivery of integrated transport choices associated with new development proposed within Wokingham Borough
- To work with Wokingham Borough Council to deliver an East Reading Transport Link and associated Park and Ride facilities

2.4 PROBLEM IDENTIFICATION

2.4.1. Table 2-1 outlines the transport problems and how the scheme will resolve issues by meeting the objectives.

Table 2-1 - Summary of key problems

Problem	The scheme
Congestion	The scheme will provide improved access to Reading town centre, reducing congestion on key road corridors and improving journey times for all users, at peak times
Housing growth	The scheme will provide better access to current and future housing
Passenger growth	The scheme at Winnersh Triangle, will provide additional capacity to support future demand, alongside what the site currently offering, as well as the planned Parkway site at TVB
Inadequate station facilities	The scheme will provide improved station facilities

CONGESTION

- 2.4.2. Currently there is congestion and queuing on the A3290 towards Reading at the Thames Valley Park roundabout approach. Wokingham Borough intends provide a completed relief road around the A3290. The scheme could compliment this scheme, along with other park and rides, to reduce overall congestion through varying methods. There is congestion north of the scheme in the AM Peak. This is an area of immediate benefit from the scheme, as it is a route directly to and from Winnersh Triangle. As demonstrated by the delay plots, congestion and queuing is currently experienced at various locations on the A329 and A4 between the park and ride site and Reading Town centre. Congestion delay plots are included at Appendix A.
- 2.4.3. The traffic congestion will continue to escalate if no additional capacity is provided to cater for the increase in traffic volumes. The expansion of the Winnersh Triangle business park and committed local housing developments will exacerbate the situation and heavily increase car traffic if no alternate modes of transport are put into place.
- 2.4.4. Without the proposed scheme, the congestion will also continue to be a detriment to air quality and noise quality, an increase in alternate modes of travel will reduce emissions and noise – benefiting public health and the local environment.
- 2.4.5. The scheme has been identified by Wokingham Borough Council as a further measure to reduce congestion in the area, which can be heavily constrained and subject to frequent congestion. A

reduction in traffic levels at peak times is needed, and this can be achieved by offering an enhanced Park and Ride facility on the current Winnersh Station site.

- 2.4.6. Frasers Property, the owners of the Winnersh Triangle Business Park, have also recognised the need for the scheme to work towards their goal to attain larger business commitment to the Winnersh Triangle Business Park. They recommend that increased and improved transport links were critical to their business growth, by making the area more attractive to businesses and commuters and hence current and projected congestion would be detrimental to the economic growth of the area.

HOUSING GROWTH

- 2.4.7. By 2026, Wokingham Borough Council is set to provide the delivery of up to 13,000 new homes, 4,450 of which surround the A329 corridor in: Winnersh (450 units), North Wokingham (1,500) and South Wokingham (2,500). The scheme will support this growth by providing additional car parking and public transport capacity into central Reading to accommodate the increased usage.
- 2.4.8. The scheme has been identified as a result of its potential contribution to enhance urban connectivity.
- 2.4.9. Plots showing the difference in traffic flows on the modelled network between 'do minimum' and 2021 and 2036 are included at Appendix B. The plots compare the forecast years scenarios (2021 & 2036) against the base year for both the AM and PM peaks. The flow difference plots clearly demonstrate that there are predicted flow increases on the A329 corridor.

PASSENGER GROWTH

- 2.4.10. Passenger demand at the station is set to increase further over the next few years, due to a number of factors including:
- Aspiration for more trains to stop at Winnersh Triangle
 - Planned expansion of the Winnersh Triangle Business Park
 - Future committed developments in the area
 - The general trend of increased station utilisation over the last five years
- 2.4.11. The facilities that are available do not reflect this intensification of use. Using previous years demand of passenger usage of Winnersh Triangle train station, it is calculated that without input from development the patronage of the station would increase by 0.6% per year.
- 2.4.12. The forecast demand growth rate of 0.6% has been calculated from estimates of station usage from 2012-2013 to 2017-2018 published by the Government¹. It should be noted that the passenger numbers presented in Figure 2-1 represent the total annual entries and exits at Winnersh Triangle station. Currently, there is no granular information regarding the number of passengers leaving and arriving the station specifically during the AM and PM peak hours.

¹ <http://orr.gov.uk/statistics/published-stats/station-usage-estimates>

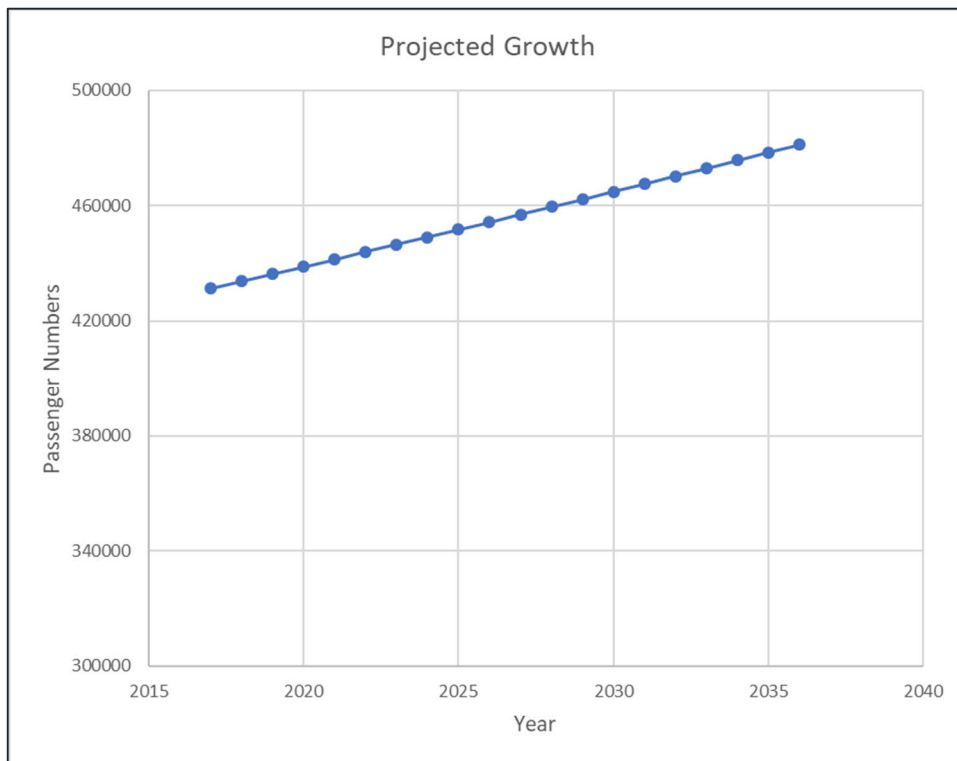


Figure 2-1 - Forecasted Passenger Growth

STATION FACILITIES

- 2.4.13. The current waiting area is dated and poorly heated and has limited customer information screens. Staffing is limited to Monday-Friday (06:00-11:00 hours) and Saturday mornings (08:00-13:00 hours).
- 2.4.14. As part of the consultation of the proposed schemes at Winnersh Triangle, Frasers Property had emphasised that having a well-presented train station with appropriate facilities and access, and one that is consistent with the quality of their estate, would enhance the arrival experience at Winnersh Triangle and therefore assist in the business park attracting and retaining dynamic businesses. Apart from the lack of amenities within the station building, one of the issues highlighted by Frasers Property was the lack of a direct, coherent and safe pedestrian route between the forecourt and the station building and platform.

2.5 IMPACT OF NOT CHANGING

- 2.5.1. Specific outcomes of a 'Do Nothing' scenario include:
 - Without the introduction of the scheme, congestion along the A329/A329(M)/A3290 will remain and become intensified by future traffic growth planned residential developments, as well as employment areas.
 - The opportunity to establish Winnersh Triangle station as a key transport interchange to increase the uptake of sustainable modes of transport, therefore reducing demand on the local road network, would be lost.
 - Station facilities will continue to be lacking basic facilities such as customer information screen and poor pedestrian access.

- Passenger demand will continue to be restricted from any use of the station, with passenger numbers likely to increase in future years, the number of potential disabled passengers will increase.
- Passenger demand will continue to increase regardless of station improvements, exacerbating issues currently experienced by station users.

2.6 OBJECTIVES

2.6.1. The scheme objectives and their respective desired outcomes are shown in Table 2-2, aim to solve the identified problem and align with Wokingham Borough Council’s strategic aims. The objectives follow the SMART guidance (Specific, Measurable, Achievable, Realistic and Timebound).

Table 2-2 - Scheme objectives and desired outcomes

Objective	Desired outcome
1) Ensuring sustainable transport is accessible for all types of users.	<ul style="list-style-type: none"> ■ Ensuring public transport is inclusive of everyone. ■ Increase public transport usage.
2) Enabling a variety of transport choices for the public.	<ul style="list-style-type: none"> ■ Reduce the environmental impact of travel. ■ Reduce congestion. ■ Improve car journey times through a reduced mode share of people using the private car.
3) Promoting sustainable transport as an alternative to the car.	<ul style="list-style-type: none"> ■ Increase public transport usage. ■ Congestion reduction. ■ Air quality improvements and noise reduction. ■ Improved journey times to key destinations.
4) Promoting economic development in Wokingham to support the production of jobs in the local area.	<ul style="list-style-type: none"> ■ Support employment and housing in Winnersh.

2.6.2. The public realm improvements, together with improvements to the station facilities and additional car parking will all contribute to making the area a more attractive and user-friendly transport node and ensure that the optimum benefits can be maximised.

2.6.3. Figure 2-2 shows a logic map, demonstrating how the scheme outputs flow through the objectives to achieve the desired outcomes.

INDIRECT IMPACT OF THE SCHEME

2.6.4. The scheme will also help contribute towards a number of wider environmental objectives as set out in Table 2-3.

Table 2-3 – Wider objectives

Wider objectives	How the scheme will address the wider objectives
Climate change	Improved public transport offering, will aim to encourage people to switch from just using the private car for trips into central Reading, and to use the park and ride option instead, reducing congestion and therefore emissions
Health	Reduced congestion will lead to reduced driver stress and improved air noise quality
Accessibility	The scheme will improve transport access to central Reading, and provide an affordable option for travel for everyone to key services and destinations
Safety	A reduction in the number of vehicles will reduce the chance of accidents

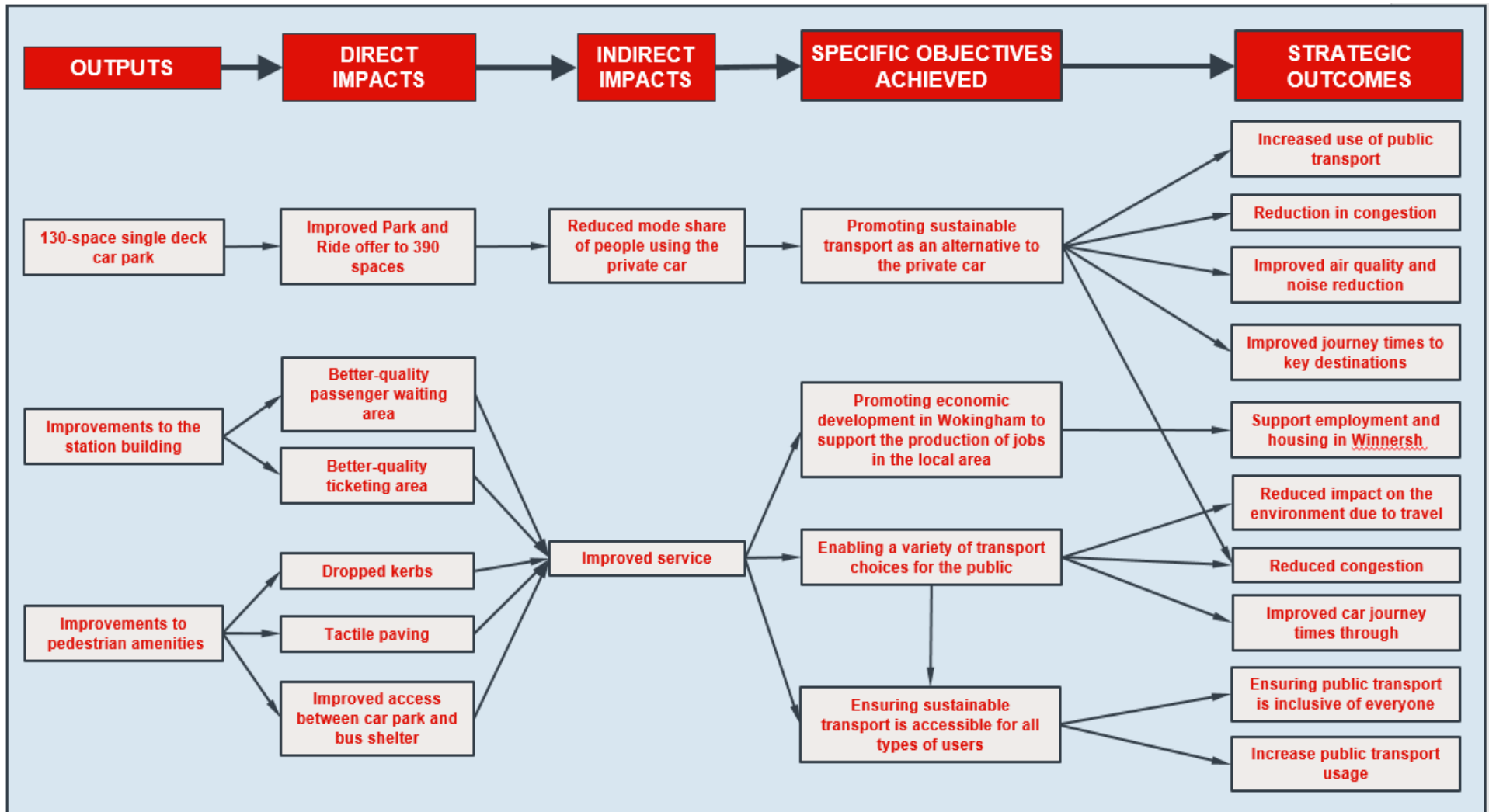


Figure 2-2 - Strategic Outcomes

- 2.6.5. The scheme will enhance access into Reading, including its key shopping, leisure and employment areas. In combination with the existing park and ride facility at Mere oak, and the planned facility at the Thames Valley Business Park, it would potentially encourage people who currently drive into central Reading to switch and use the park and ride instead, thereby contributing to a reduction in traffic volumes.
- 2.6.6. The scheme will support the forecast housing and employment growth within Wokingham by offering a wider range of sustainable travel opportunities for commuters and leisure travellers alike.
- 2.6.7. The enhanced amenities and increased parking at the Winnersh Triangle station would improve the perception of the station as a key transport interchange, which in turn would strengthen the case for increasing the number of services calling at the station as well as providing step free access to the platforms and revamping the existing platforms, which are in poor state of repair. The Council is proactively seeking alternative funding opportunities for these longstanding aspirations.
- 2.6.8. The scheme would contribute towards delivering the expansion plans for the Winnersh Triangle Business Park by improving the station amenities.
- 2.6.9. It is envisaged that the scheme would also address perceptions around the existing Park and Ride being full during the peak hours, which is currently resulting in a degree of suppressed demand. A parking accumulation analysis has been undertaken for the existing Park and Ride car park. This was based upon a log of the permanent ANPR cameras at the entrance and exit of the car park, over a week, during the month of October 2018. The analysis indicated that the car park was never more than 85% occupied, on a Tuesday, Wednesday or Thursday. However, site visits undertaken by both WBC and WSP noted that the car park was full on the days of their site visits. It was observed that some cars within the car park were poorly parked, parking over more than one parking space. This is mainly because, although bays are numbered, the bays themselves are porous and have no line markings, resulting in inefficient parking. It is therefore considered that the parking accumulation analysis is unreliable, possibly due to the poor parking of some drivers taking more than one car parking space and this not being accounted for by simply recording entries and exits to the car park. And that in conclusion, the car park is in reality fully occupied, and demand exceeds supply.
- 2.6.10. It is therefore evident that peak travellers are currently perceiving the car park to be full. It is generally established within the parking industry that a car park only needs to be 85% full to be considered full (Source: Winchester City Council Car Parking Strategy 2014-2018). This is especially true where drivers park across two spaces, which is known to happen at Winnersh Triangle (Source – WBC).
- 2.6.11. It is also considered that the distance from the furthest spaces to the Park and Ride Bus Stop and Station Building is a factor for making the current Park and Ride less attractive (~250m) especially when they are perceived to be full, by commuters, during the peak hour. The proposed parking deck will have two benefits in that will put more spaces closer to the Park and Ride Bus Stop and Station Building and also provide rain cover for those walking from the furthest spaces.

2.7 MEASURES FOR SUCCESS

- 2.7.1. Successful delivery against the scheme objectives will be monitored as part of the post-construction scheme evaluation, details of which are discussed in section 6 (the Management Case) of this FBC.

2.7.2. A programme of monitoring will be put in place prior to construction, then again at one-year and five-year milestone post-construction. A programme of monitoring will include before and after monitoring of some of the items listed in Table 2-1, including:

- Traffic congestion and / or journey times
- Bus usage numbers
- Car park usage / demand

2.7.3. The parts of the objectives relating to economic growth and investment in business and housing, will be difficult to quantify, especially in the short-term, so cannot be directly attributable to this. A longer-term evaluation could seek to monitor economic, employment and housing growth.

2.7.4. Table 2-4 demonstrates how the scheme objectives flow through to the benefits of each, and how they will be measured.

Table 2-4 – Measures for success

Objective	Benefit	Measure	Timescale
1) Ensuring sustainable transport is accessible for all types of users	■ Increased accessibility	■ Bus patronage ■ Train patronage	Short-term
2) Enabling a variety of transport choices for the public	■ Reduced congestion	■ Car parking occupancy	Short-term
3) Promoting sustainable transport as an alternative to the car	■ Reduction in car trips into central Reading	■ Journey time and reliability monitoring	Short-term
4) Promoting economic development in Wokingham to support the production of jobs in the local area	■ Increased employment and housing opportunities	■ Employment statistics ■ Housing developments	Long-term

2.8 CONSTRAINTS

2.8.1. There are no constraints identified for this scheme. The project team will take every effort to ensure that there are no technical, technological or buildability issues with the scheme design. The design team has experience of successfully designing schemes of similar scope.

2.9 INTER-DEPENDENCIES

2.9.1. There are no major inter-dependencies associated with the deliverability of the scheme. The land required for the scheme is owned by Wokingham Borough Council, thereby eliminating any risk associated with land acquisition. The scheme is essentially a stand-alone scheme, which can be designed, costed and constructed regardless of whether other schemes are progressed. No other schemes have been identified which may have a direct bearing on the successful delivery of the scheme.

2.9.2. Minor inter-dependences are as follows:

- Planning permission approval
- Allocation of funding from TVB LEP

2.9.3. The delivery of the scheme is contingent on securing the necessary planning approvals. However, no significant risks are envisaged that could affect a favourable planning application outcome. The site is an existing transport interchange with no known environmental sensitivities. Need for any potential

off-site highway mitigation measures has been explored as part of the modelling process by examining the change in levels of service at the junctions in the vicinity of the park and ride. Details are provided within Section 3.7 of the Economic case. Costs for any highway mitigation have been robustly captured through a Quantified Risk Assessment (QRA).

2.10 STAKEHOLDERS

2.10.1. A number of stakeholders have been consulted regarding the scheme, these include:

- Wokingham Borough Council
 - Reading buses have confirmed a steady growth in use of the park and ride bus service and that the route would be fully viable for the proposal increased of car park capacity.
 - Have committed to supporting the provision of this facility and are open to providing higher frequencies or larger buses if necessary.
 - Continue to monitor loadings and invest in successful and growing services.
- South Western Railway
 - To support a request for additional trains to stop at Winnersh Triangle to support economic growth and sustainable travel options to and from the business park – in line with the Thames Valley Berkshire LEPs Local Growth Fund allocation.
 - The half hourly stopping rate will be increased to a frequency of every 15 minutes.
- Frasers Property (Winnersh Triangle Business Park landowners)
 - Have an invested interest in greater parking availability to encourage businesses to the park
 - Aim to make existing and future occupiers reduce their reliance upon the car but actively promoting alternate travel options, with Winnersh Triangle crucial to this growth.
- Thames Valley Berkshire Local Enterprise Partnership
 - Successful bid for £3 million funding for train station improvements.
 - Regarding the development as 8th priority project across the region.
- Great Western Railway
 - Wherever possible and practical agree with the proposed journey time reductions, frequency enhancements and improved connectivity.
 - Agree with station improvements to ensure attractive environments to grow passenger usage.

2.10.2. Further correspondence with the key stakeholders is provided in the management case.

2.11 OPTIONS

2.11.1. The need to deliver and retain Park and Ride facilities at four locations to “complement the high quality express bus services or mass rapid transit along the A4 or A329 corridors into central Reading” has been well established and enshrined in policy within Wokingham Borough Council’s Local Transport Plan. Alternative options to a Park and Ride facility have not therefore been considered as part of the options appraisal process. However, a number of sub-options were considered within the Options Assessment Report provided at Appendix C and these are summarised in Table 2-5.

Table 2-5 – Options considered

Objective	Desired outcome
Do minimum	<ul style="list-style-type: none"> ■ Name change to include Parkway; and ■ Extended ticket office opening hours.
Do Minimum + car park expansion	<ul style="list-style-type: none"> ■ Name change to include Parkway; ■ Extended ticket office opening hours; and ■ Car park expansion (i.e. decked).
Do Minimum + new station building/lifts to Platform	<ul style="list-style-type: none"> ■ Name change to include Parkway; ■ Construct accessible toilets ■ Construction of new station building; and ■ Lifts to platforms.
Full Station Redevelopment	<ul style="list-style-type: none"> ■ Name change to include Parkway; ■ Construct accessible toilets; ■ Construction of new station building; ■ Lifts to platforms; and ■ Expanded car park (i.e. decked).

- 2.11.2. The Options Assessment Report recommended the ‘Full Station Redevelopment’ to be taken further to a FBC to assess all aspects of the redevelopment. It is worth noting that ‘Do Minimum and car park expansion’ scored as well as Full Station Redevelopment against deliverability and feasibility.
- 2.11.3. Prohibitive costs and engineering challenges, particularly with the delivery of step free access to the platform, has resulted in the Council’s decision to proceed with the development of a decked car park and the improvements to station buildings and surrounding land. Space constraints within the station building has meant that the existing staff toilet cannot be converted to an accessible toilet for passengers. Significant scaling down of the improvements to the station infrastructure has resulted in the decision to not progress with the renaming of the station to include ‘Parkway’. It should be noted that these proposals will continue to be part of WBC’s long-term aspirations for Winnersh Triangle Station and the Council is actively exploring funding alternatives to enable their fruition.

2.12 SCOPE

- 2.12.1. The current scheme has therefore evolved into the following components:
- Expanded car park (i.e. decked) to include 145 additional parking spaces. An assessment of the current site layout undertaken by a specialist parking deck solutions company has revealed that the maximum number of spaces that can be accommodated on a single deck within the proposed location is 145. Due to the requirements for access and egress ramps and structural columns, there would be a loss of around 15 existing spaces at the ground level.
 - Improvements to the station building:
 - Roof will be insulated and ceiling repainted giving the waiting area a brighter and more modern feel
 - Heating system to be replaced

- Replace current lighting and seating within Station Building to give the waiting area a modern appearance
- Two large RTI screens with train arrival and departure times at the Park and Ride bus stop and directly outside the station building, as well as enhanced information provision within the station building.
- Cycle racks will be covered by CCTV, which will be installed and extended to cover sensitive areas around the station. Providing double deck cycle racks to replace SWR cycle stands.
- Creation of a new surface pedestrian crossing at a location closer to the current pedestrian desire line between the pedestrian overbridge, connecting the business park, and the station forecourt, by means of dropped kerbs and tactile paving. Improvements to surrounding land also includes removing a 3m wide section of the existing metal fencing and paving an area that is currently part of the grass verge to improve the pedestrian permeability between the footbridge connecting the business park and the station forecourt.

2.12.2. It should be noted the staffing periods at the station will not be increased as part of the scheme proposals.

2.12.3. The scheme drawing for the parking deck is provided at Appendix D.

3 THE ECONOMIC CASE

3.1 INTRODUCTION

- 3.1.1. The Economic Case is undertaken to fulfil one of the Department of Transport's five-case business case models for demonstrating value for money.
- 3.1.2. The Economic Case identifies and assesses all the impacts of the scheme to determine its overall value for money. It takes account of the costs of developing and building the scheme, and a full range of its impacts. These include those impacts which can be monetised. The economic case considers the extent to which the scheme's benefits will outweigh its costs.
- 3.1.3. The structure of the economics case is as follows:
- Introduction
 - Outline approach to assessing value for money
 - Modelling approach
 - Scenarios appraised
 - Assessment of economic impacts
 - Transport economic efficiency (TEE), public accounts (PA) and Analysis of Monetised Costs and Benefits (AMCB)
 - Sensitivity and risk profile
 - Value for money statement
 - Appraisal summary table (AST)

3.2 OUTLINE APPROACH TO ASSESSING VALUE FOR MONEY

- 3.2.1. The proposed methodology for assessing scheme value for money has set out in the Appraisal Specification Report, a copy of which is provided at Appendix E. This methodology, is formed within a WebTAG-compliant framework, but adapted to include other methods taken from the TfL Business Case Development Manual (BCDM). The methodology includes:
- Transport modelling - The Wokingham Strategic Transport Model 4 (WSTM4) has been utilised to assess the impact of the Winnersh Triangle Park and Ride car park proposals. Further details of the modelling approach are outlined within section 3.3.
 - Benefits appraisal:
 - The economic cost of delays and vehicle operating costs associated with closing the bridge were assessed using the Department for Transport's Transport Users Benefit Appraisal (TUBA) programme.
 - Demand-led increases in rail revenue based on the Passenger Demand Forecasting Handbook.
 - Benefits of the station improvements to existing rail users using 'willingness to pay' values set out within TfL's BCDM.

3.3 MODELLING APPROACH

- 3.3.1. The WSTM4 consists of the following sub-models:
- Highway model built using VISUM software suite

- Public Transport model developed using VISUM software
- Variable demand model set up using DIADEM

3.3.2. The WSTM4 covers the following time periods:

- AM peak hour (08:00-09:00)
- PM peak hour (17:00-18:00)

3.3.3. The WSTM4 was developed to represent 2015 transport conditions. To ensure the model still represents a robust basis for the assessment of major infrastructure schemes in the Borough, a present year validation has been undertaken for the highway model only. The results of the present year validation are detailed in 'Wokingham Strategic Transport Model 4 (WSTM 4) – Local Model Validation Report' (May 2018).

3.3.4. The 2021 and 2036 WSTM4 forecast models were updated to include the latest development proposals.

CALCULATING LEVEL OF DEMAND

3.3.5. The first step in identifying the level of demand was to calculate mode split for trips travelling to Reading Town Centre travelling past the Park and Ride site. This approach utilises a spreadsheet logit model which compares the relative attractiveness of car and Park and Ride.

3.3.6. Generalised time parameters were input into the logit model for both 'Car' and 'Park & Ride' users travelling to / from Reading Town centre. Based upon these parameters the logit model then calculated a proportion for users travelling by Park & Ride and car.

3.3.7. The user classes representing Light Goods Vehicle (LGV) and Heavy Goods Vehicle (HGV) were excluded from the analysis as they will not use the parking facilities.

3.3.8. The parameters used to calculate Car Generalised Time include:

- Car journey time
- Vehicle operating cost
- Car parking cost
- Egress time

3.3.9. Car journey times in 2021 and 2036 have been extracted from the respective WSTM4 forecast models for use within the logit model.

3.3.10. The parameters used to calculate Park and Ride Generalised Time include:

- Transfer time from A329(M) to P&R
- Car parking cost
- Bus fare
- Access time from P&R site to bus stop
- Bus travel time
- Bus wait time
- Egress time

3.3.11. The lambda value used in the logit model calculations for this assessment is consistent with that used in the economic case assessment for the Thames Valley Park and Ride Business Case (January

2017) due to the similarities of the two Park and Ride sites in terms of geographic location and accessibility to the A3290.

- 3.3.12. Full details of the parameters used in the logit model are included in Appendix F. For the public transport journey certain components of generalised cost have been weighted to reflect the perceived time spent at each stage of the journey. Values of walk time and wait time have been weighted consistent with guidance given in Tag Unit M3.2 – Public Transport Assignment Modelling.
- 3.3.13. Table 3-1 details the mode split, calculated from the logit model, between Park and Ride and car travel.

Table 3-1 – Proportion of trips using car and Park and Ride

Forecast Year	Peak Hour	Mode Share	
		Car	Park & Ride
2021	AM	50%	50%
	PM	46%	54%
2036	AM	52%	48%
	PM	49%	51%

- 3.3.14. The next step in the process identified the volume of trips, travelling to and from Reading town centre, that the proportions in the above table were apportioned. Flow bundle analysis was undertaken for two routes on the highway network, within close proximity to the Park and Ride site, where trips could potentially divert from for the AM (08:00-09:00) and PM (17:00-18:00) peak hours. These routes are the A329 Reading Road and A3290. The location of the links used for flow bundle analysis are identified in Figure 3-1.

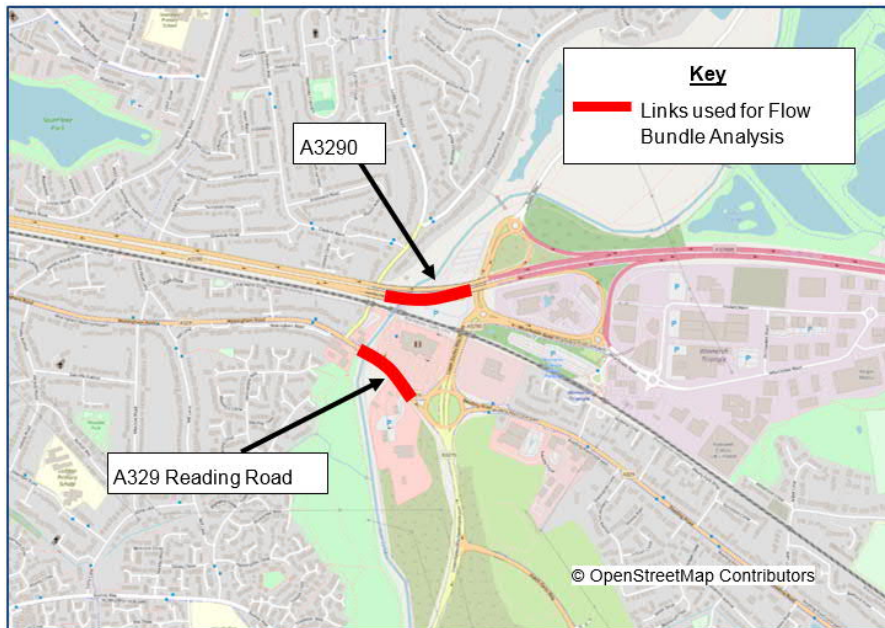


Figure 3-1 - Highways links used for Flow Bundle Analysis

3.3.15. Table 3-2 sets out the volume of trips that will switch to Park & Ride for each scenario after the corresponding proportions have been applied to the selected trips identified in the flow bundle analysis.

Table 3-2 – Number of trips switching to Park & Ride

Year	Time period	Total trips	Trips switched to P&R
2021	AM	223	111
	PM	191	103
2036	AM	228	109
	PM	273	138

3.3.16. Table 3-2 demonstrates that the potential number of trips transferred over to the Park and Ride ranges between 103 and 138 in the forecast years. As per the current usage trends at Winnersh Triangle Park and Ride, 80% are bus Park and Ride users and 20% are station users. It is anticipated that the future usage proportions would be consistent with the current trends. Accordingly, 80% of the net increase in 130 parking spaces equates to 104 spaces, which would be generated by the bus Park and Ride element. Table 3-2 indicates that the predicted demand in the peak hours alone would meet the parking requirement for the bus Park and Ride element. The remaining spaces would be utilised by the additional rail passengers generated by the station improvements, the background rail passenger growth and also those users parking during the off-peak hours. It is therefore reasonable to assume that the proposed 130 space car park will be fully utilised in the opening year itself.

3.3.17. Although the potential switch to P&R range between 103-138, for the appraisal of scheme benefits, the number of trips has been capped at 110 to reflect a conservative average maximum switch in the two forecast years. For example, the number of P&R users in 2021 PM has been maintained at 103, whereas the numbers switching in 2036 PM peak has been capped at 110.

3.3.18. An assessment of the duration of stay at the existing Park and Ride has revealed that the average length of stay is approximately 7 hours, implying that, currently, there is a very low turnover of spaces. Consistent with this pattern, the assessment has assumed that there will be no turnover of spaces at the additional spaces either.

3.4 SCENARIOS APPRAISED

3.4.1. In order to assess the transport impacts of the Winnersh Triangle Park and Ride car park scheme, two transport scenarios have been modelled to inform the scheme appraisal, as set out in Table 3-3.

Table 3-3 – Options appraised

Scenarios	Description
Do Minimum	<ul style="list-style-type: none"> This option represents the existing situation at Winnersh Park and Ride site with forecast growth in 2021 and 2036.

Scenarios	Description
Do Something (core scenario)	<ul style="list-style-type: none"> This option considers expansion of the car park at Winnersh Park and Ride to include an additional 130 car parking spaces resulting in the transfer of trips currently travelling on A329 Reading Road and A3290 to the Winnersh Park and Ride site. This scenario also includes forecast growth in 2021 and 2036.

3.5 ASSESSMENT OF ECONOMIC IMPACTS

APPRAISAL ASSUMPTIONS

3.5.1. The economic case has been compiled in agreement with the assumptions and methodology recommended by the Department of Transport's WebTAG appraisal guidance for Transport Schemes and the Treasury's Green Book, using the most up to date parameters. Various inputs and assumptions are set out in Table 3-4.

Table 3-4 – Inputs and assumptions

Inputs	Assumption
Opening year	2021 was considered as the opening year for all scheme elements for appraisal purposes. WSTM4 has a forecast year of 2021, which is closest to the construction opening year of the schemes - Q3/Q4 2020.
Forecast year	2036
Appraisal period	Parking deck – 30 years Station improvements – 15 years
Cost profile	Costs have been taken from information provided by WBC. It is assumed that S106 funds are utilised in proportion to the scheme cost profile.
Price base year	All costs have been re-based to the DfT's price base year of 2010 based on the GDP deflator methodology using values in the November 2018 TAG Data Book Annual Parameters.
Discounting	All costs and benefits are discounted to the department's base year of 2010
Inflation	The scheme costs have been adjusted for inflation based on Bank of England's CPI inflation projections published in the inflation report of August 2018
Risk	A Quantified Risk Assessment has been undertaken (detailed provided in the management case) and the base scheme costs have been adjusted to include the mean risk cost estimate. The mean risk cost estimate is approximately 12% of the scheme costs.
Optimism bias	Given the high certainty of the scheme cost estimates, an optimism bias of 15% has been applied to all scheme elements
Market prices	All costs and benefits (including car park and rail fare revenues) are appraised in market prices. Whilst TUBA estimates transport user benefits in market prices, all

Inputs	Assumption
	costs, car park revenues and station user benefits have been converted to market prices using the DfT recommended uplift factor of 1.19

HIGHWAY USER IMPACTS - TRANSPORT USER BENEFIT APPRAISAL (TUBA)

General assumptions and methodology

- 3.5.2. The impacts of the parking deck scheme on journey times and vehicle operating costs for road users have been assessed using the Department for Transport's TUBA software.
- 3.5.3. The current version of the TUBA software is Version 1.9.11. The software carries out the appraisal of the following economic elements associated with the scheme (excluding those accrued during construction and maintenance):
- Time savings
 - Vehicle operating costs
 - Carbon savings
 - Scheme costs
 - Indirect tax revenues
- 3.5.4. The WSTM4 2021 and 2036 forecast models were used as the basis for the economic assessment in TUBA. TUBA extrapolates growth between these years, and after 2036 the default TUBA assumption of no growth beyond this point has been retained, in the absence of more detailed information. Calculated benefits are therefore likely to represent a conservative estimate. The assessment has been completed for a 30-year appraisal period.
- 3.5.5. The outputs produced by the WSTM4 represent an average weekday AM peak hour (08:00 – 09:00) and PM peak hour (17:00 – 18:00). An annualisation factor of 253 was applied to the two modelled time periods, representing the number of weekdays in a year (excluding bank holidays). No additional factor was applied to convert the benefits from peak hour to AM peak (07:00 – 10:00) and PM peak (16:00 – 19:00) periods as the volume of trips diverting to the car park in the peak hour meets the capacity provided by the additional spaces, thereby taking a conservative approach in calculating the benefits for the scheme.
- 3.5.6. Benefits for the interpeak and off-peak period, as well as weekends and bank holidays, have not been considered in this assessment. Therefore, the calculated benefits stated in this report are likely to represent a conservative estimate.
- 3.5.7. The VISUM user classes one to five have been aggregated to match the TUBA user classes. The input TUBA user classes are set out in Table 3-5.

Table 3-5 – TUBA user classes

UC	VISUM UC	TUBA UC	Vehicle Type	Purpose	Person
UC1	HBW	Commuting	Car	Commuting	All
UC2	HBEd	Commuting	Car	Commuting	All
UC3	HBO	Business	Car	Business	All
UC4	LGV	Other	Car	Other	All
UC5	OGV	Other	Car	Other	All

STATION USER IMPACTS

- 3.5.8. A series of assessments have been undertaken to quantify the benefits to station users and transport operators of the various improvements which will be implemented by the scheme. These benefits have been calculated on the basis of 2017/18 demand levels and the calculation of benefits are described in more detail in the following sections.
- 3.5.9. Rail passenger demand has been based on MOIRA data for Winnersh Triangle Flows 2017/18. The survey captures the total flows for the year, categorised by destination. Treatment of this data is summarised as follows:
- The total number of entries and exits obtained from the MOIRA dataset have been halved to estimate the total passenger numbers at Winnersh Triangle station. It has therefore been assumed that an entry and an exit constitutes a trip. This would ensure a conservative estimate of the annual patronage at the station.
 - In order to establish the split between commuter and business/leisure trips, it has been assumed that all season ticket holders and those paying a full ticket price are commuters and the remaining passengers represent business/leisure trips. Accordingly, commuter to business/leisure trip split has been established as 76% / 24%.
 - Table 3-6 shows the passenger numbers for 2017/2018.

Table 3-6 – Passenger Demand

Element	Total entries and exits	Passenger Numbers
Annual patronage	431,402	215,701

- 3.5.10. From 2012-2018 demand levels, a 0.577% per year exogenous demand growth was calculated to arrive at the scheme opening year 2021, with constant 0.577% growth continuously applied over the 15-year period.
- 3.5.11. Fare values applying to commuter and business/leisure users are based on peak and off-peak return fares to main destinations from Winnersh Triangle Station, from MOIRA data. This is summarised in Table 3-7.

Table 3-7 – Passenger Return Fares

Destination	% of passengers	Peak Price	Off Peak
Reading	35.6%	£4.30	£4.20
London BR	28.2%	£31.70	£20.90
Wokingham	6.6%	£3.70	£3.60
Bracknell	6.3%	£5.30	£5.20
Slough	2.7%	£12.00	£11.50
Basingstoke	2.3%	£11.10	£9.50
Didcot Parkway	1.9%	£11.60	£8.10
Richmond London	1.6%	£26.00	£19.60
Martins Heron	1.6%	£5.50	£5.40
Clapham Junction	1.4%	£28.00	£19.60
Newbury	1.2%	£10.90	£8.10
Twickenham	1.0%	£25.00	£19.50
Sandhurst Berks	1.0%	£5.20	£5.10
Croydon BR	0.9%	£31.10	£24.50
Oxford	0.8%	£18.10	£12.00
Ascot Berks	0.8%	£6.80	£6.60
Guildford	0.8%	£14.00	£10.20
Staines	0.8%	£19.60	£15.10
Farnborough	0.7%	£6.80	£6.60
Egham	0.6%	£17.10	£13.80
Feltham	0.6%	£22.40	£18.70
Reading West	0.6%	£4.30	£4.20
Willesden Jn	0.5%	£30.70	£23.10
Earley	0.5%	£3.30	£3.10
Crystal Palace	0.4%	£31.10	£24.50
Peckham Rye	0.4%	£31.90	£19.60
Putney	0.3%	£26.00	£19.60

Station Facilities improvements

3.5.12. Benefits arising from improved station facilities broadly fall into two categories:

- Benefits arising from the patronage uplift at Winnersh Triangle station as a result of the improved station facilities. The Passenger Demand Forecasting Handbook² (PDFH) which is industry standard guidance help by Association of Train Operating Companies has been used to estimate the passenger usage due to the improvements.

² <http://www.atoc.org/about-atoc/commercial-activities/passenger-demand-forecasting-council/>

- Benefits attributed to the values that existing and new transport users that may place on improved amenities and facilities, using TfL’s Business Case Development Manual.

Benefits from passenger uplift

- 3.5.13. The PDFH incorporates over 20 years of research on factors involving service quality and environment on changes in rail demand. User benefits from upgraded stations are factored as demand uplifts. Passenger demand is then monetised through changes in rail fare revenue. For appraisal purposes, the fare revenue has been split into Commuters and Business/Leisure to account for the price differences in tickets.
- 3.5.14. As stated previously, baseline rail passenger demand has been calculated by obtaining the annual entries and exits for the year 2017/18, and then halving this data as single entry and exit accounts for one return journey. The fares are therefore all in return journey prices. Percentage growth rates for forecasting the change in demand have been obtained from the PDFH for rail and reproduced in Table 3-8 for the scheme specific improvements.

Table 3-8 – Station Improvement Uplift

Specification Improvement	Station quality improvement from PDFH	Business/Leisure Uplift	Commuter Uplift
<p>The roof is not currently insulated. Roof would be insulated and ceiling repainted giving the waiting area a brighter and more modern feel.</p> <p>The current heating system is not currently energy efficient and does not provide much heat. Heating system to be replaced.</p>	Wind shelters in some places, providing some protection → Waiting room, providing all round protection	0.2%	0.1%
Replace current seating and lighting within Station Building to give the waiting area a modern appearance.	Poor condition seats → Good condition seat provided, but no waiting room	1.7%	1.0%
Two large RTI screens with train arrival and departure times at the Park and Ride bus stop and directly outside the station building, as well as enhanced information provision within the Station Building.	No information screens → Information screens	n/a	n/a
The current fencing round the Station creates a poor impression and environment this would be replaced and improved to reflect the modern business park.	Not related to any uplift factors	-	-
The cycle racks need to be covered by CCTV and this will need be installed and extend to cover sensitive areas around the station. Provide double deck cycle racks to replace SWR cycle stands.	CCTV in station only → CCTV in station and surrounding area	0.5%	0.4%

3.5.15. Applying the uplifts in demand set out in Table 3-8 to the estimated annual patronage, including the application of ‘rule of half’, indicates that there will be approximately 5 additional people per day using the station, resulting in a total annual benefit in the first year of the scheme of £25,399. This equates to a total benefit of £380,978 over the 15-year appraisal period at 2018 prices. For appraisal purposes, these benefits have been rebased to 2010, discounted to 2010 and the market prices correction factor applied as well, resulting in present value of benefits of £108,008. This has been included under the private sector revenue section within the TEE table (Appendix G). Detailed fare revenue calculations are presented in Appendix H.

Benefits to current users

3.5.16. The value of station benefits has been based on TfL’s BCDM, which attributes monetary values to levels of quality and provision. This is based on extensive market research and an ongoing continuing programme of extensive mystery shopper surveys of transport users to determine willingness to pay.

3.5.17. Table 3-9 sets out the proposed improvements to the station and their impact on transport users and the general public. This describes the anticipated changes in quality or provision and the calculated net benefits, given in pence per journey.

Table 3-9 – Benefit value per journey

Benefit	Change in value (Pence per journey)³ 2013 prices (factor unit)
Seats provided, but in good condition	5.86
Waiting room, providing good all-round protection from wind and rain	5.47
Outside of station in good state of repair	5.6

3.5.18. To calculate the benefits, the annual rail forecast patronage at Winnersh Triangle station over a 15-year period between 2021 and 2035 has been multiplied by the changes in value for the benefits set out in Table 3-9. The resulting benefits in 2013 prices is £583,720, as outlined in Table 3-10. For appraisal purposes, these benefits have been rebased to 2010, discounted to 2010 and the market prices correction factor applied as well, resulting in present value of benefits of £178,640. This has been included in the AMCB (Appendix G) against ‘journey quality’ benefits.

Table 3-10 – Benefit appraisal period benefits

Benefit	1st year benefits	15-year appraisal period benefits in 2013 prices (factor unit)
Seats provided, but in good condition	£12,934	£202,044
Waiting room, providing good all-round protection from wind and rain	£12,073	£188,597
Outside of station in good state of repair	£12,360	£193,079
Total	£37,368	£583,720

³ TfL BCDM Table E-21 (Pence per journey, 2013)

CAR PARKING REVENUE

- 3.5.19. Parking revenue for the decked car park has been calculated based upon historic survey information for the existing surface level car park, between 08/10/2018 and 14/10/2018.
- 3.5.20. The current tariffs received by the council, and percentage of users for each type of ticket are in Table 3-11.

Table 3-11 – Car park tariffs per day

Type of ticket	Price	Percentage of Users
Rail	£4	20%
Bus	£1	70%
Concessionary	Free	10%

- 3.5.21. The average weekly revenue at the existing car park was estimated by applying the ticket prices, by user type, to number of users under each of the three categories set out in Table 3-11. The following assumptions were made in converting the weekly revenue into gross annual revenue:
- Friday revenue has been included in weekday revenue
 - An annualisation factor of 253 has been used, implying that weekends and bank holidays were excluded
 - The estimated average revenue per space has been multiplied by 110 spaces to determine the additional revenue. This is based on the assumption that the car park could potentially be 85% full in line with current utilisation levels due to perception issues. This is a conservative estimate as it is expected that the car park will be fully utilised in 2021 for the reasons set out in 3.3.16. In addition, bays on the decked parking will also be fully marked out, thereby eliminating the parking inefficiencies observed at the current surface car park.
- 3.5.22. On the basis of the above methodology, an additional annual revenue of £41,935 has been estimated for the additional spaces, at 2018 prices. For appraisal purposes, it has been assumed that the same revenue will be generated on an annual basis over the 30-year appraisal period. The forecast revenue has also been rebased to 2010 prices, discounted to 2010 and market correction factor applied, for the appraisal, resulting in a present value of benefit of £569,600. This has been entered in the PA table against 'local government revenue funding' (Appendix G). Detailed parking revenue calculations are presented in Appendix I.

INVESTMENT AND MAINTENANCE COSTS

- 3.5.23. The core scenario costs are inclusive of the following cost components:
- The cost of the parking deck has been based on a price per space provided by a specialist parking deck supplier. The pricing comprises the provision of a complete civils package including taking the scheme through the planning process, obtaining the necessary consents and approvals, surveys, CCTV and an allowance for foundation
 - Cost of station facility upgrades has been provided directly by South Western Railway inclusive of management, and construction.
 - Cost of the pedestrian crossing has been provided by WBC

- Maintenance costs have been included only for the additional parking spaces on the parking deck. This has been assumed as £100/space and is based on typical maintenance costs incurred by WBC for the existing P&R. Maintenance costs for the station and the pedestrian crossing are considered to be negligible and can be accommodated within the current annual maintenance budgetary allowances set aside by South Western Railway and WBC.
- As stated previously, an allowance has been made for risk (discussed below), and an uplift of 15% for optimism bias (OB). A sensitivity test has also been on the value for money calculation by using an optimism bias of 44%. Given the high cost certainty, especially of parking deck, an optimism bias of 15%, in combination with the allowance for risk, is considered sufficient. However, an OB of 44% would account for unknown factors such as the cost of potential relocation of statutory undertakers' equipment.

3.5.24. Detailed breakdown of the investment cost calculations, used for the appraisal, is presented in Appendix J.

QRA

3.5.25. Risk management is seen as a key process underpinning good scheme governance and achievement of scheme objectives in a cost-effective manner. TAG Unit A.1.2 requires all project related risks, which may impact on the scheme costs, to be identified and quantified in a Quantified Risk Assessment (QRA) to produce a risk-adjusted cost estimate. Whilst the QRA process is deemed as mandatory for schemes over £5m, the DfT encourages the use of QRA for smaller schemes in order to robustly adjust the base costs for identifiable risks. DfT also places emphasis on a proportional approach to ensure that the time and resources afforded to the risk assessment process is of a scale that is appropriate for the size of the scheme.

3.5.26. The outcome of the QRA process is the prediction of an 'expected' value which is the average of all risk outcomes, factoring in the various probabilities of these outcomes materialising. This 'expected' value effectively becomes the risk adjusted cost estimate'. Further details of the QRA are presented in the Management Case.

3.5.27. The mean risk value used for the economic appraisal is £363k, which is approximately 12% of the scheme costs.

ASSESSMENT OF ENVIRONMENTAL IMPACTS

Air Quality

3.5.28. A preliminary assessment of air quality and vehicle emissions concluded that there will be insignificant impacts as a result of the scheme. Overall the proposed development does not increase traffic by more than 1,000 AADT or 200 HDVs, the established thresholds above which an air quality impact assessment is considered to be necessary. As such, there will be insignificant impacts on air quality as a result of the proposed development. Current car park utilisation figures show the average user of the car park stays for approximately 7 hours. In addition, around 70% of users stay for 5 hours or more. Therefore, it is not envisaged that an increase in capacity would cause a large influx of new drivers affecting air quality and emissions as most users will arrive and remain at the car park all day.

3.5.29. Although increasing the Park and Ride capacity, enhancing the station patronage and improving NMU access to the station may encourage modal shift to more sustainable travel, the impact on local air quality will probably be negligible.

3.5.30. The anticipated impact on air quality is therefore considered to be **neutral**.

Noise

3.5.31. The scheme is not expected to significantly affect traffic flow in the vicinity of the station, therefore noise levels are not likely to be impacted. The noise aspect has therefore been scoped out of further assessment. The nearest residential receptor is located in Cavendish Gardens which is approximately 50m south of the site, it is considered that the existing elevated 4m railway track adjacent to Cavendish Gardens will provide sufficient noise screening for the residents in the area from the future operational noise and operational traffic noise generated on site. It is anticipated that the noise and vibration impact to the residents in Cavendish Gardens from the future operational noise and road traffic noise will be negligible.

3.5.32. There may be some noise related to construction but these effects are considered to be temporary. Planning conditions may need to be imposed to protect local residents from construction and operational noise, including restricted hours and a cap on the level of noise allowed by equipment.

3.5.33. Traffic noise impacts on the local road network as a result of the scheme are considered **neutral**.

Landscape

3.5.34. Landscape in WebTAG is categorised as a result of the physical and cultural characteristics of the land itself. The impact on the landscape in the immediate vicinity of the proposed development site was assessed considering the pattern, tranquillity, cultural assets, land cover and character of the existing landscape. The overall impact on the landscape has been appraised as minimal, and unlikely to cause offence.

3.5.35. The Landscape Assessment undertaken for the existing Park and Ride had confirmed that at the most distant viewpoints, successive layers of vegetation, landform and built-form prevented the location of the site being identified. Therefore, there is no visual impact from a distance. Glimpsed views into the site were only possible at close range, which were almost adjacent to the site.

3.5.36. The magnitude of the views into the site from the surrounding landscape is either negligible, or low within a close range of the development, although for the greater part of the surrounding area the proposed development site is not visible at all.

3.5.37. The overall impact on landscape has therefore been appraised as **neutral**.

Historic environment

3.5.38. An Archaeological Desk-Based Assessment has been undertaken of the site to inform the proposed development. The impact on the surrounding historical environment was appraised to be unlikely to have a significant archaeological impact due to the extent of impact from past development and Post-Medieval ploughing.

3.5.39. The overall impact on historic environment has therefore been appraised as **neutral**.

Biodiversity

3.5.40. The biodiversity aspect considers the effects of the Winnersh Triangle scheme on biodiversity and earth heritage (geological) features.

- 3.5.41. Considering that the scheme will be built on the site of an existing Park and Ride site, the scheme will not necessitate the removal of any trees or vegetation. In terms of ecological features within the site, there are none that would be affected by the scheme.
- 3.5.42. Overall it is expected that the impact on biodiversity will be **neutral**.

Water Environment

- 3.5.43. The Flood Risk Assessment (FRA) which was prepared in support of the planning application for the existing park and ride site indicated that:
- The western half of the site lies within the 1 in 100 annual probability flood-plain and is therefore Flood Zone 3a 'high probability'
 - The eastern half of the site lies outside the 1 in 100 annual probability flood-plain and is therefore Flood Zone 2 'medium probability'
- 3.5.44. The FRA showed that the existing floodplain levels and extent are respected within the proposed scheme and so this is not exacerbated by the proposals. The FRA concluded that the proposed development is safe, it does not increase flood risk and also does not detrimentally affect third parties, in accordance with the objectives of the NPPF.
- 3.5.45. The scheme is unlikely to increase flood risk or significantly affect water features. The overall impact on the water environment has therefore been appraised as **neutral**.

ASSESSMENT OF OTHER SOCIAL AND ECONOMIC IMPACTS (QUALITATIVE)

Reliability (social)

- 3.5.46. The scheme aims to reduce congestion, as a result reliability of journey time should increase, and this would be applicable to commuters and other users
- 3.5.47. Overall, it is expected that the impact of the scheme on reliability (social) will be **slightly positive**.

Physical activity

- 3.5.48. It is considered unlikely that the scheme will result in a significant impact on the amount of walking and cycling trips undertaken within the vicinity of the scheme extents and as such there would be limited or negligible impact on physical activity.
- 3.5.49. Overall it is expected that the impact of the scheme on physical activity will be **neutral**.

Accidents

- 3.5.50. Detailed accident assessment using DfT's Cost and Benefits to Accidents – Light Touch (COBALT) programme was considered disproportionate to the scale of the scheme and has therefore been excluded. It is, however, envisaged that the increase in capacity at the existing Park and Ride would result in congestion benefits on key routes between Winnersh Triangle and Reading, which in turn would result in accident benefits along these road sections.
- 3.5.51. Overall it is expected that the impact of the scheme on safety will be **slightly positive**.

Security

- 3.5.52. Security will be improved by the provision of additional CCTV where the proposed cycle storage will be located. Overall it is expected that the impact of the scheme on security will be **slightly positive**.

Access to services

- 3.5.53. Currently, there is a lack of a direct, coherent and safe pedestrian route between the pedestrian bridge and the train station. This has been highlighted by Frasers Property. This has resulted in pedestrians taking a more direct route than currently offered, as evidenced by a route being created along the grass verge in the form of a muddy track. However, the route chosen by pedestrians requires stepping up and down a high kerb, walking along a muddy track which is likely to be slippery in damp or wet conditions, and along a banked verge adjacent to vehicular traffic which leads to a very narrow footpath only approximately a metre wide adjacent to a taxi rank where persons are likely to be waiting. The route is also unsafe as the crossing point is adjacent to the turning facility / one-way system at the station entrance for taxis and buses, where drivers may not see pedestrians crossing as they exit the station or may not see pedestrians walking along the grass verge, as they drive into the station.
- 3.5.54. The proposals will provide a coherent route to the train station from the pedestrian footbridge, by providing dropped kerbs at an appropriate crossing location. It may be less direct than the route taken by some pedestrians, but the crossing point is safer as it is visible to drivers. The proposals will link pedestrians to the main pedestrian route to the train station which is approximately three metres wide, surfaced, lit and segregated from the vehicular traffic by a wide grass verge. Planting will also be provided to dissuade pedestrians from taking the route along the grass verge.
- 3.5.55. Overall it is expected that the impact of the scheme on access to services will be **slightly positive**

Severance

- 3.5.56. The scheme provides improved pedestrian crossing facilities. The provision of a greater number of park and rider car parking spaces, and thereby greater opportunity to change mode of transport to bus or train, will improve access into Reading town centre. Overall it is expected that the impact of the scheme on severance will be **slightly positive**.

Wider impacts

- 3.5.57. The scheme will not lead directly to the creation of long-term employment. However, by improving sustainable modes of transport, it is considered that it will support the ambitions of the Local Plan in terms of employment
- 3.5.58. Overall it is expected that the impact of the scheme on wider impacts will be **slightly positive**.

3.6 TRANSPORT ECONOMIC EFFICIENCY (TEE), PUBLIC ACCOUNTS (PA) AND ANALYSIS OF MONETISED COSTS AND BENEFITS (AMCB)

- 3.6.1. The AMCB, PA and TEE tables for the Winnersh Triangle scheme are provided at Appendix G. The whole 15 years of anticipated increase in revenue is included in the TEE table in the 'revenue' line under the Private Sector Provider Impacts. The user benefits from the station improvements is included within the AMCB as a proxy for 'journey quality'. The AMCB for the core scenario is presented in Table 3-12. All costs are presented in market prices and values.

Table 3-12 – Analysis of monetised costs and benefits

Item	Costs and Benefits (In 2010 prices discounted to 2010)
Noise	-
Air Quality	-
Greenhouse Gases	-
Journey Quality (Proxy for benefits to forecast baseline station users from the station improvements)	£178,640
Physical Activity	-
Accidents	-
Economic Efficiency: Consumer Users (Commuting)	£7,311,000
Economic Efficiency: Consumer Users (Other)	-£1,133,000
Economic Efficiency: Business Users and Providers	£147,565
Wider Public Finances (Indirect Taxation Revenues)	£811,000
Present Value of Benefits (PVB)	£7,315,205
Present Value of Costs (PVC)	£1,666,965
Net Present Value (NPV)	£5,648,240
BCR	4.4

3.6.2. The PVB comprises £108,009 by way of additional revenue from the station improvements. The PVB also includes £178,640, which accounts for the user benefits enjoyed by the forecast baseline users. The value is entered against 'Journey quality' as a proxy.

3.6.3. The core scenario shows a BCR of 4.4, which is classed as providing Very High value for money.

3.7 SENSITIVITY AND RISK PROFILE

COST SENSITIVITY TESTING

3.7.1. In order to assess how a differing cost will affect the scheme's NPV (and therefore the BCR), a higher level of optimism bias (currently estimated as 15%) have been applied to the risk adjusted cost estimate. Table 3-13 presents how a change in optimism bias would affect the scheme's economic performance.

Table 3-13 – Sensitivity test with higher optimism bias

Test Scenario	PVB	PVC	NPV	BCR
Optimism bias of 44%	£7,315,205	£2,391,933	£4,923,272	3.1

3.7.2. Table 3-13 demonstrates that, even with a high degree of cost uncertainty, the scheme would provide very high value for money.

BENEFITS SENSITIVITY TESTING

3.7.3. In order to test the effect of lower background growth in traffic on the transport user benefits. Consistent with the methodology suggested TAG Unit M4 (Forecasting and uncertainty), the forecast year flows for core scenario have been reduced by an amount that is 2.5% of the base year demand. This is to reflect the uncertainty around annual forecasts from the National Transport Model (NTM), based on macro-economic variables that affect the main drivers of travel demand. This assessment is still to be completed.

3.8 VALUE FOR MONEY STATEMENT

3.8.1. The above economic assessment demonstrates that the proposed scheme, under a core scenario, offers very high value for money made up of:

- Present Value of Benefits (PVB) of £7.32m
- Present Value of Costs of £1.67m
- Net Present Value (NPV) of £5.65m
- Benefit to Cost Ratio (BCR) of 4.4

3.8.2. Sensitivity tests undertaken to ascertain the value of money category under a high cost scenario has demonstrated that the scheme would still offer a very high value for money.

3.8.3. The scheme is judged to have neutral impacts on noise and air quality as a result of the redistribution of traffic around the network, and also to have neutral impacts on landscape. It should be noted that although these are neutral impacts, the scheme would bring a number of slight and strong positive benefits to users of the transport systems including improved accessibility, safety and enhanced levels of journey quality. Table 4-17 summarises the scale of non-monetised impacts that the Core Scenario will have.

Table 3-14 – Summary of non-monetised impacts assessment

Indicator	Scheme Impact
Noise	Neutral
Local air quality	Neutral
Landscape	Neutral
Townscape	Neutral
Historic environment	Neutral
Biodiversity	Neutral
Water environment	Neutral
Accidents	Slight positive

Indicator	Scheme Impact
Reliability	Slight positive
Physical activity	Neutral
Security	Slight positive
Access to services	Slight positive
Severance	Slight positive
Wider impacts	Slight positive

3.9 APPRAISAL SUMMARY TABLE

3.9.1. The Appraisal Summary Table (AST) is provided at Appendix K.

4 THE FINANCIAL CASE

4.1 INTRODUCTION

4.1.1. The financial case concentrates on the affordability of the proposal, its funding arrangements and technical accounting issues. It presents the financial profile of the different options and the impact of the proposed deal on the client's budgets and accounts. The necessary elements required to achieve compliance in the financial case are:

- Details of the scheme's anticipated costs; and
- Details of the budgets and finding cover

4.2 COST ESTIMATES AND SPEND PROFILE

4.2.1. The estimated anticipated cost of the total scheme is £3.37m in 2018 prices and the breakdown of the scheme costs, and the spend profile by financial year, are set out in the Table 4-1.

Table 4-1 - Cost estimates and spend profile

Scheme Element	Cost in £		
	2019-2020	2020-2021	Total
Station improvements and pedestrian crossing	£264,488	£0	£264,488
Decked Parking	£0	£2,645,192	£2,645,192
Design and supervision	£9,257	£92,582	£101,839
Total Cost (Excluding Quantified Risk and Optimism Bias)	£273,745	£2,737,773	£3,011,518
Risk	£33,000	£330,034	£363,034
Risk-adjusted Total Cost at 2018 prices	£306,744	£3,067,808	£3,374,552

4.2.2. The cost of the parking deck has been based on a price per space provided by a specialist parking deck supplier. The pricing comprises the provision of a complete civils package including taking the scheme through the planning process, obtaining the necessary consents and approvals, surveys, CCTV and an allowance for foundation.

4.2.3. Cost of station facility upgrades has been provided directly by South Western Railway inclusive of preparation, management, and construction.

4.2.4. Cost of the pedestrian crossing has been provided by WBC and is also inclusive of preparation and construction.

4.2.5. The scheme costs have been adjusted for inflation using the Consumer Prices Index (CPI) projections from the Bank of England's Inflation Report, August 2018

4.3 BUDGET/FUNDING COVER

4.3.1. An estimated budgetary impact summary outlined in Table 4-3 split by the respective financial year. Overall, the local contributions will fund approximately 16% of scheme outturn costs, with devolved funding required for the remaining 84%. All of the S106 contributions have already been secured and no risks, especially in terms of forward funding requirements, are therefore envisaged.

Table 4-2 - Budgetary impact summary

	2019-2020	2020-2021	Total
LGF Funds	£256,750	£2,567,802	£2,824,552
S106 Contributions	£49,995	£500,005	£550,000
Total	£306,744	£3,067,808	£3,374,552

4.3.2. Maintenance for the parking spaces will be undertaken by WBC, as per current arrangements. Maintenance costs for the proposed additional parking spaces have been assumed as £100/space and is based on typical maintenance costs incurred by WBC for the existing Park and Ride. Maintenance costs for the station and the pedestrian crossing are considered to be negligible and can be accommodated within the current annual maintenance budgetary allowances set aside by South Western Railway and WBC.

4.3.3. WBC's Section 151 Officer has provided a letter of assurance to provide an undertaking to meet any ongoing revenue requirements on the understanding that no further increase in major transport scheme funding will be considered beyond the maximum contribution requested. The letter is included at Appendix L.

5 THE COMMERCIAL CASE

5.1 INTRODUCTION

5.1.1. The Commercial Case has been developed following the outline approach below:

- Set the procurement objectives, outcomes and constraints;
- Identify potential procurement/purchasing options;
- Assess the procurement options in terms of pros and cons, as a rationale for selecting the preferred sourcing option;
- Confirm the preferred payment mechanism and pricing framework; and
- Assess how different types of risk might be apportioned/shared with risks allocated to the part best placed to manage them.

5.1.2. The structure of the commercial case is as follows:

- Output based specification
- Procurement strategy
- Sourcing options
- Payment mechanisms
- Pricing framework and charging mechanisms
- Risk allocation and transfer
- Contract length
- Human resourcing
- Contract management

5.2 OUTPUT BASED SPECIFICATION

5.2.1. The Commercial Case is based on strategic outcomes and outputs, against which alternative procurement options are assessed. The outcomes which the procurement strategy must deliver to are:

- Achieve cost certainty, or certainty that the scheme can be delivered within the available funding constraints
- Minimise further preparation costs with respect to scheme design by ensuring best value, and appropriate quality
- Obtain contractor experience and input to the construction programme to ensure the implementation programme is robust and achievable
- Obtain contractor input to risk management and appraisals, including mitigation measures, to capitalise at an early stage on opportunities to reduce construction risk and improve out-turn certainty, thereby reducing risks to a level that is 'As Low as Reasonably Practicable'

5.2.2. The scheme outputs which the preferred procurement strategy must deliver are to:

- Expanded car park (i.e. decked)
- Improvements to the station building:
 - Roof will be insulated and ceiling repainted giving the waiting area a brighter and more modern feel
 - Heating system to be replaced

- Replace current lighting and seating within Station Building to give the waiting area a modern appearance
- Two large RTI screens with train arrival and departure times at the Park and Ride bus stop and directly outside the station building, as well as enhanced information provision within the station building.
- Cycle racks will be covered by CCTV, which will be installed and extended to cover sensitive areas around the station. Providing double deck cycle racks to replace SWR cycle stands.
- Creation of a new surface pedestrian crossing at a location closer to the current pedestrian desire line between the pedestrian overbridge, connecting the business park, and the station forecourt, by means of dropped kerbs and tactile paving. Improvements to surrounding land also includes removing a 3m wide section of the existing metal fencing and paving an area that is currently part of the grass verge to improve the pedestrian permeability between the footbridge connecting the business park and the station forecourt.

5.3 PROCUREMENT STRATEGY

- 5.3.1. Wokingham Borough Council will be responsible for the overall procurement and contract management. Considering the disparate nature of the three scheme elements, the procurement will be different for all three schemes.
- 5.3.2. Considering that the responsibility for the station infrastructure rests with South Western Railway, the station improvements will be undertaken through SWR's standard procurement routes. The construction of pedestrian crossing facility will be undertaken by VolkerHighways, WBC's incoming term contractor.
- 5.3.3. Given the specialist nature of the parking deck works involved, the most appropriate procurement route is considered to be the full traditional tendering process. This allows WBC to select potential bidders who have the necessary technical and managerial competencies to deliver high quality work whilst ensuring good value for money. The parking deck will therefore be delivered as a design and build contract by a specialist contractor who would undertake the full civils work from surveys to design and planning through to final handover.

5.4 SOURCING OPTIONS

- 5.4.1. WBC will utilise procurement procedures to source three quotes from suppliers and will follow a tendering process to establish the best value and quality supplier in line with the requirements which will be clearly set out by WBC as part of the tendering process.
- 5.4.2. It is proposed that the tendering for a construction supplier can be carried out upon receipt of the outcome of the submission of this bid to the LEP (March 2019) and will take approximately four months.

5.5 PAYMENT/CHARGING MECHANISMS AND FRAMEWORK

- 5.5.1. Task orders based on a fixed or target price arrangement will be awarded based on the NEC contract model.

5.6 RISK ALLOCATION AND TRANSFER

- 5.6.1. Contracts will be awarded via processes set out in Section 5.3 ensuring quality and competitive pricing. The contract will be based on a schedule of rates, rather than a fixed price and will include a reasonable contingency to cover unforeseen issues, Experience has shown that this approach is the most cost effective, since a fixed price quotation would result in the contractor submitting a considerably higher price in order to cover their risk. The authority and support authorities have experience dealing with large procurement and construction contracts, and will work towards minimising risk through the contract process.
- 5.6.2. Wokingham Borough Council has experience working on major schemes with large budgets including Wokingham Station Link Road, Coppid Beech Junction Improvements, Thames Valley Park Park and Ride as well as in-house experience to manage construction and/or contracts. There is confidence that all aspects of contractual and commercial arrangements can be determined before works are implemented resulting in the scheme delivered to plan.

RISK MANAGEMENT PLAN

- 5.6.3. A Risk Management Plan will be developed throughout the life of the project. Following confirmation of scheme funding, ownership of the risks will be allocated to those parties best able to manage them.
- 5.6.4. The Risk Management Plan will set out the full risk management process and responsibilities for undertaking risk management to deliver the scheme proposals. Implementation of a structured, forward looking and continuous risk and opportunity management process is intended to increase the certainty of cost-effective scheme delivery and operational success.
- 5.6.5. Further risk identification will be carried out in numerous ways such as, workshops, reviews, meetings, day to day operation. When a risk is identified, the data will be added to the risk register.

RISK MANAGEMENT ORGANISATION

- 5.6.6. The risk management organisation for this scheme consists of the Project Board and the Risk Owner. Wokingham Borough Council will act as Project Sponsor.
- 5.6.7. The Project Board has overall responsibility for ensuring sufficient resources are available to manage risks across the scheme. Risks shall be allocated and managed in a cost-effective manner by the most appropriate party to do this and at the appropriate level. The Project Board shall be primarily concerned with managing strategic level risks relating to interfaces between the scheme and the wider project environment.
- 5.6.8. The Project Manager has overall responsibility for ensuring that the risk management process is implemented and managed in accordance with strategies. The Project Manager shall ensure that risks are actively managed in a consistent and appropriate manner across all work streams in accordance with this Plan. All severe risks shall be reported to the Project Board through the Project Manager. In addition, all risks which relate to the overall direction, organisation and control of the scheme, e.g. loss of key project staff, shall be reported to the Project Board.
- 5.6.9. The project manager shall:
- ensure that an appropriate procedural framework is adopted;
 - report to the Developers Project Manager in review and management of project performance;
 - agree the required level of risk management support to be provided for risk identification,

- analysis, review and reporting;
- facilitate risk workshops/meetings as appropriate supported by a risk co-ordinator if required;
- and
- be the custodian of the risk register and the contained data

5.6.10. The Risk Owner shall be responsible for the day to day management of the risk(s) that they own. The selection and appointment (by Project Manager) of a risk owner will be on a “best person for the task” approach and, once appointed, the risk owner will monitor and update the risk register informing the risk manager of changes

5.6.11. The residual risks have been captured and appropriate risk allocation is included in the project budget. Management and monitoring of progression of project and its budget will help mitigate the risk of budget overruns. The key project risks are found in Table 5-1.

Table 5-1 – Key project risks

Risk	Mitigation
PLANNING / APPROVAL RISKS AND MITIGATION	
Failure to achieve planning.	Early discussions with Planning authorities and statutory bodies.
COST RISKS AND MITIGATION	
Allocated budget does not cover the cost to design and implement the scheme.	Capital programme allocation within the council should be used to supplement delivery where possible.
Significant relocation of statutory utilities within the existing car park.	Early C2 collation and adjustment to design as required, in addition C3 stats in design processes.
Decked parking may require amendments to the existing SUDS.	The risk cost has been captured through the QRA process
Traffic impact on the junctions adjacent to the Winnersh Triangle P&R not fully understood until a transport assessment is undertaken.	The traffic modelling has demonstrated the impacts of the reassigned traffic at the junctions within the vicinity of the existing Park and Ride site are not significant enough to warrant any off-site highway mitigation measures.
Poor accuracy of cost estimates.	Ongoing review of costs during preliminary and detailed design work and negotiations with Term Contractor.
DELIVERY RISKS AND MITIGATION	
Lack of commitment from Elected Members and senior officers. Opposition from key stakeholders.	Detailed consultation during project to ensure support.
Impact of temporary TM restrictions greater than expected.	Early involvement with Technical Officers, discussions with Emergency Services, detailed TM plans when contractor in place.
Supply chain insolvencies.	Local Term Contractor to be used for delivery, existing contract in place.

- 5.6.12. As detailed within Table 5-1 there is a risk that the traffic impact on the junctions adjacent to the Winnersh Triangle Park and Ride is not fully understood. However, a high-level assessment undertaken, using the WSTM4 model outputs, to provide a degree of confidence, has concluded that the provision of additional spaces at the Winnersh Park and Ride site, and the associated redistribution of trips, will not have a significant impact on the local highway network. The modelling note is provided at Appendix M.

5.7 HUMAN RESOURCES

- 5.7.1. Given that parking deck will be constructed as a design and build project and the station improvements will be undertaken through SWR's standard procurement routes, no human resource issues are envisaged for these elements. The ability for the contractor to resource the project effectively will be scrutinised at procurement stage via the procurement specifications set out in the tender documentation. The pedestrian crossing facilities and ancillary works, which is the smallest element in the package of schemes, will be undertaken by WBC's incoming term contractor, with no human resources issues anticipated.

5.8 CONTRACT LENGTH

- 5.8.1. The contract for the supplier will run from Q2 2019 to Q3 2020.

5.9 CONTRACT MANAGEMENT

- 5.9.1. As regards the station improvements, the contract will be managed by South Western Railway by following their standard protocols. As for the parking deck, the contract will follow a design and build NEC4 format, ensuring that the contractual / commercial arrangement will be well defined. Under this contract type, risk from detailed design is carried by the contractor. The client develops a detailed knowledge of risk, enabling a more informed negotiation of risk transfer at tender stage. The pedestrian crossing and ancillary works will be managed through the contractual arrangements WBC will have in place with their incoming term contractor

6 THE MANAGEMENT CASE

6.1 INTRODUCTION

- 6.1.1. The management case assesses whether a proposal is deliverable. It tests the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.
- 6.1.2. The structure of the management case is as follows:
- Introduction
 - Evidence of Similar Projects
 - Project Dependencies
 - Project Programme
 - Assurance
 - Reporting
 - Key Issues
 - Contract Management
 - Risk management strategy
 - Benefits Realisation plan
 - Monitoring and evaluation
 - Contingency plan

6.2 EVIDENCE OF SIMILAR PROJECTS

- 6.2.1. In recent years Wokingham Borough Council has established it can deliver successful transport projects, which include the redevelopment of Wokingham Rail Station and the new Station Approach link road. Capacity improvement have also been made to Coppid Beech roundabout and significant town centre regeneration works.
- 6.2.2. Wokingham Borough Council, alongside Reading Borough Council, have delivered the existing park and ride facility at Winnersh Triangle and also the Mere oak Park and Ride on the A33.

THAMES VALLEY PARK AND RIDE

- 6.2.3. Most recently, WBC secured Local Sustainable Transport Funds (LSTF) for the Thames Valley Park and Ride (P&R), which is a proposed P&R facility off the A3290 in the east of the Reading urban area. The scheme components comprise:
- 277 parking spaces (including 6 disabled spaces);
 - Two Park and Ride bus stops for 12m long single decker buses;
 - Space for motorcycle and cycle parking; and
 - Bus shelter facilities
- 6.2.4. The scheme is proposed on an undeveloped parcel of land south of the River Thames and west of the Thames Valley Business Park. The scheme will improve access to Reading town centre and major employment sites by providing congestion relief on the road network in east Reading. The scheme has obtained the necessary planning approvals and the scheme is currently in the detailed design stage with the planned opening in the summer of 2019. Balfour Beatty, the current term contractor for WBC, have been appointed to deliver the scheme as a design and build contract, which is expected

to expedite the completion timescales. The overall scheme cost is £3.6m, of which around £700k will be allocated from S106 contributions.

- 6.2.5. Key project risks include obtaining environmental consents and putting appropriate mitigations in place, securing an operationally viable bus service and requirement for utility diversion. All ecology surveys have been completed and discussions have commenced with WBC Development Management with a view to discharging planning conditions and implementing the mitigation measures. With regards to the bus service, discussions are ongoing with potential providers including Thames Valley Business Park. It is understood that operational principles have been established and the heads of terms agreed in principle. With respect to utility diversions, discussions are underway with the respective statutory undertakers

6.3 PROJECT DEPENDENCIES

- 6.3.1. The scheme is a standalone scheme, with no future projects or commissions depending on it. The site of the proposed extension to the Park and Ride is under the ownership of Wokingham Borough Council, which eliminates the risk purchasing any third-party land through a Compulsory Purchase Order.
- 6.3.2. Whilst the station building improvements and the proposed pedestrian crossing need not be subject to a planning permission, the delivery of the parking deck is contingent on securing the necessary planning approval.
- 6.3.3. The principle of a park and ride facility has been established through adopted planning policy and transport site allocation SAL07, which specifically favours a park and ride facility. The planning application for the existing Winnersh Triangle Park and Ride (planning application reference: F/2013/0889) site did not identify any material impacts by way of transport and access, landscape, visual impact and lighting, ecology, archaeology, flood risk or trees that would affect the viability of the existing site. The site is not in an environmentally sensitive area and is also not subject to, or in the vicinity of, any statutory or non-statutory environmental designations. No environmental consents are therefore envisaged as part of a planning application. It is therefore unlikely that there will be any significant risks in obtaining a favourable planning outcome.

6.4 GOVERNANCE

- 6.4.1. Wokingham Borough Council has established a clear and robust structure to provide accountability and an effectual decision-making process for the management of the scheme. The organisation structure that would apply to the project is shown in Figure 6-1. Key roles and reporting hierarchies/lines of accountability are illustrated.
- 6.4.2. Ultimate responsibility for delivery of the scheme rests with Wokingham Borough Council, who will assume an overall project management role on the project. The Project Manager will work closely with the contractors and also form a point of contact for stakeholders. The usual governance procedures will apply to all aspects of the project management, with issues being escalated in accordance with Council protocols as necessary.

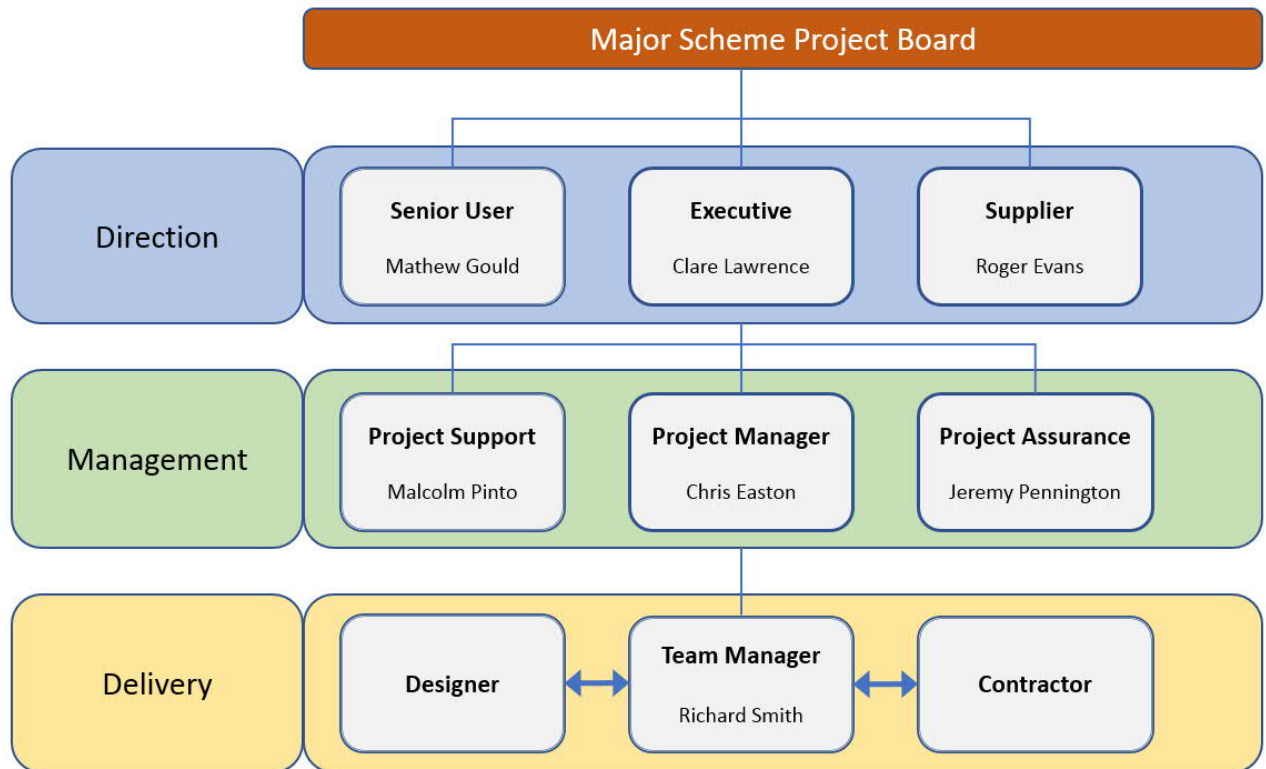


Figure 6-1 - Organisational Structure and Roles

6.4.3. The Project Board is responsible for the strategic management of the project and has authority to commit resources to the project in accordance with the Council’s Constitution. Responsibilities of the Project Board includes:

- appointing the project manager
- agreeing project controls
- authorising project start
- reviewing progress against the agreed programme
- authorising variations to expenditure
- managing key risks in the highlighted risk log
- authorising project closure

6.4.4. The project manager will be Chris Easton who will be Responsible for delivering the project on behalf of the Project Board. Key responsibilities of the Project Manager include:

- Leading and managing the delivery team. The project manager will have authority and responsibility to run the project on a day-to-day basis.
- Delivering the agreed outputs to the required level of quality and within the specified constraints of time, cost, resources and risk.
- Preparing project information including the Project Plan. The Project Manager will also identify and evaluate risks, determines and manages actions, and maintains the risk log.
- Managing and controlling changes to the project scope, requirements, personnel etc. The Project Manager will ensure that the project is properly resourced, with sufficient, properly skilled support.
- Monitoring and reporting progress against the agreed programme, budget and other performance metrics, updating the Project Board at the monthly meetings.

6.5 COMMUNICATIONS AND STAKEHOLDER MANAGEMENT PLAN

6.5.1. The key objectives of the scheme's stakeholder management are to:

- Keep stakeholders aware of the scheme's development and progress
- Increase public and stakeholder awareness of the scheme through local publicity, website etc;
- Provide information and support to those affected by the scheme during construction and operation

6.5.2. The Project Board will ensure a programme of regular meetings take place with the contractors and designers, to ensure that the project is on target.

6.5.3. An overarching communications strategy will be developed and managed by the Project Board. This will ensure a co-ordinated approach to communicating with and managing stakeholders. The strategy will include ongoing regular meetings with relevant internal and external stakeholders.

6.5.4. Stakeholders to consider include:

- South Western Railway
- Frasers Property (Winnersh Triangle Business Park landowners)
- Thames Valley Berkshire Local Enterprise Partnership
- Great Western Railway
- Reading Buses

6.5.5. A summary of the engagements WBC have already undertaken with these stakeholders is outlined in Table 6-1.

Table 6-1 – Stakeholder engagement activities

Stakeholder	Nature of consultation / Interest	Date	Outcome
South Western Railway (SWR)	To understand the level of investment needed to change the layout of the platforms, which are on an embankment. WBC had asked SWR to explore what would be needed to deliver access for all. Further consultations have been undertaken to fully understand the scope of civil works to be undertaken to the station building.	December 2017	Prohibitive costs and engineering challenges, particularly with the delivery of step free access to the platform has meant that step free access cannot be considered within the business case. SWR have identified a comprehensive list of work to be undertaken to improve the station amenities.
Frasers Property	To gauge support for the scheme	July 2018	The initial meeting suggested that the business park would be willing to improve access and the visual appearance to the station approach as far as they could and on the land within their control.
Thames Valley Berkshire Local Enterprise Partnership	Regular Engagement	n/a	Scheme confirmed eligible for LEP Growth Fund funding in November 2017

Stakeholder	Nature of consultation / Interest	Date	Outcome
Great Western Railway/Department for Transport	Response to the public consultation to the Great Western Rail franchise - Winnersh Triangle Station serves the adjacent and expanding business park that employs some 5,000 people. With proposals for electrified services, WBC would hope that a call on the stopping services to Guildford could be accommodated within the timetable to widen the pool of prospective employees who could travel there by rail, as well as offering a greater frequency of trains from this station which is being developed as a park and ride location.	February 2018	Continuing engagement with DfT and GWR to continue to make the case for an additional stop at Winnersh Triangle
Reading Buses (P&R bus operator)	To gauge support for the scheme and to explore the possibility of increasing the service provision if need be.	January 2019	Reading Buses responded that they fully recognise the long term potential of the route between Winnersh Triangle P&R and Reading and that they fully welcome the proposals to increase the capacity of the car park. They have also confirmed that they would not anticipate any issues in catering for increased usage of the services. They have also put forward an option to provide larger vehicles at current frequencies or an additional bus into the current cycle to cater for any additional demand.

6.5.6. A letter of support has been provided by Reading Buses welcoming the proposals to increase the capacity of the car park. This is included at Appendix N.

6.6 PROJECT PROGRAMME

6.6.1. A project programme has been developed (Table 6-2). Key milestones, timescales and tasks are summarised below:

- Full Business Case ready for submission: 2019
- Approval sought from TVB LEP: 2019
- Works begin on ground: 2020
- Completion works: 2020

Table 6-2 – Programme plan

	FQ1 2019	FQ1 2019	FQ2 2019	FQ3 2019	FQ4 2019	FQ1 2020	FQ2 2020	FQ3 2020
Full Business Case Submission to ITE								
Consideration at Board and financial approval from TVB LTP								
Detailed design - station improvements and pedestrian crossing								
Procurement - station improvements and pedestrian crossing								
Start of construction - Station improvements and pedestrian crossing								
Procurement – Car Park Deck								
Detailed design works and planning – Car Park Deck								
Start of construction								
Scheme opening								

6.7 ASSURANCE AND APPROVALS PLAN

6.7.1. It is expected that a “Gateway Process” will be used as the mechanism for assessing the project at critical stages in its lifecycle prior to commencing the next stage. The use of the Gateway process enables:

- Realistic and achievable targets to ensure successful delivery
- Deployment of relevant skills and competencies to a project
- Compliance with best practice
- Key stakeholder input and understanding
- Project feedback through lessons learnt
- A visible audit trail

6.7.2. These milestones will be built into the project programme and will be monitored by the Project Manager and reported to the Project Board.

6.8 REPORTING

6.8.1. Responsibility for accurate, timely and appropriate communications within the project team rests with the Project Board. Nominated officials have a responsibility to provide this information when required. The Project Board will then ensure that this information is reported to the Thames Valley LEP through scheduled meetings.

- 6.8.2. The Project Board is responsible for keeping the lead members (Executive Members with relevant responsibilities) aware of the development of the scheme towards meeting the project objectives.
- 6.8.3. It is the responsibility of the nominated officials to ensure that the Project Board has sufficient information and is involved in all decisions that affect performance of the project, achievement of the project objectives or deviation from agreed and delegated responsibilities.

6.9 KEY ISSUES FOR IMPLEMENTATION

- 6.9.1. The live risk register contains a full set of identified risk associated with the implementation of the scheme along with planned mitigation.
- 6.9.2. Table 5-1 in the Commercial Case identifies the key project risks throughout the planning and implementation of the scheme.

6.10 CONTRACT MANAGEMENT

- 6.10.1. Wokingham Borough Council will be responsible for the overall procurement and contract management. Considering the disparate nature of the three scheme elements, the procurement will be different for all three schemes, the details of which are discussed in the Commercial Case.
- 6.10.2. Considering that the responsibility for the station infrastructure rests with South Western Railway, the station improvements will be undertaken through SWR's standard procurement routes. The construction of pedestrian crossing facility will be undertaken by VolkerHighways, WBC's incoming term contractor.
- 6.10.3. Given the specialist nature of the parking deck works involved, the most appropriate procurement route is considered to be the full traditional tendering process. This allows WBC to select potential bidders who have the necessary technical and managerial competencies to deliver high quality work whilst ensuring good value for money. The parking deck will therefore be delivered as a design and build contract by a specialist contractor who would undertake the full civils work from surveys to design and planning through to final handover.

6.11 RISK MANAGEMENT STRATEGY

- 6.11.1. A risk register has been developed, containing all the risks associated with the scheme. The risk register is provided in Appendix O. Effective risk management such as effective change management, efficient resourcing and good project management, aids in achieving scheme objectives. The risk management process is shown in Figure 6-4.

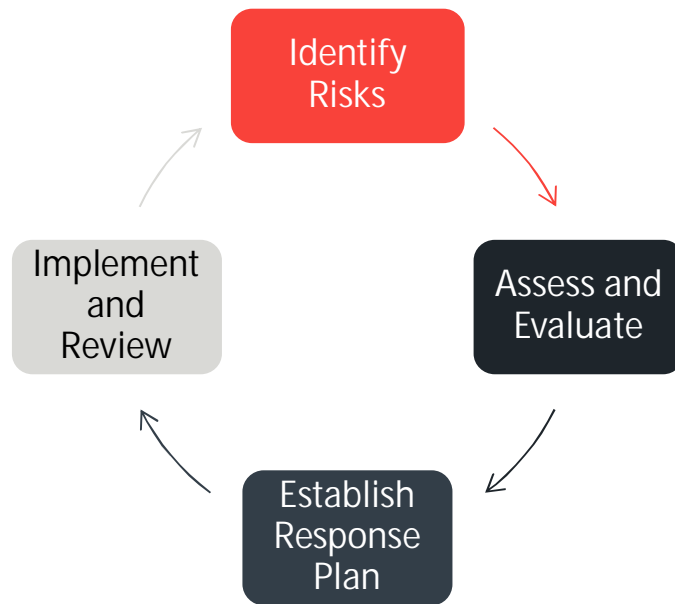


Figure 6-2 – Risk management process

- 6.11.2. All risks within the register are assessed and classified across three areas namely, a) the probability of the risk occurring b) the most likely impact on costs and c) the most likely impact on time which would arise if the risk did occur. The register assesses all risks across the three areas using the risk matrix table, which is included at Appendix O.
- 6.11.3. The register then qualifies each of the risks based on the combination of the likelihood of occurrence and the impact. The probability impact grid of the risk matrix table determines if the risk category is low, medium or high based on the red-amber-green (RAG) assessment.
- 6.11.4. At a QRA workshop that was undertaken on 15 January 2019, involving representatives from WSP and WBC, the risk register was developed and populated with risk headings considered applicable to the works to be undertaken. The probability, cost and time impacts for each heading were reviewed and scored using the risk matrix table. The cost impact of each risk identified within the register has also been quantified, by applying an appropriate weighting of cost and time impact, at this initial stage using the cost matrix (Appendix O). The minimum, most likely and maximum risk values have been estimated by multiplying the values from the cost matrix by the probability of each of the identified risk occurring.
- 6.11.5. Minimum, most likely and the maximum risk values obtained above have subsequently been run through a Monte-Carlo simulation Software programme (Palisade @RISK analysis software version 7.6). The outcome of the QRA process is the prediction of an ‘expected’ value which is the average of all risk outcomes, weighted by the various probabilities of these outcomes materialising. It is to this ‘expected’ value, also known as the ‘mean’ or ‘unbiased’ risk adjusted outcome that the optimism bias has been applied. A probability distribution around the costs of the scheme has been derived using @Risk. The total risk cost distribution is illustrated in Figure 6-3.
- 6.11.6. As per WebTAG guidance, the mean cost has been used in the preparation of the overall scheme cost as it is the ‘expected value’ which represents the weighted average of all outcomes and probabilities. The mean value of risk as predicted by the @Risk software is £363,031.

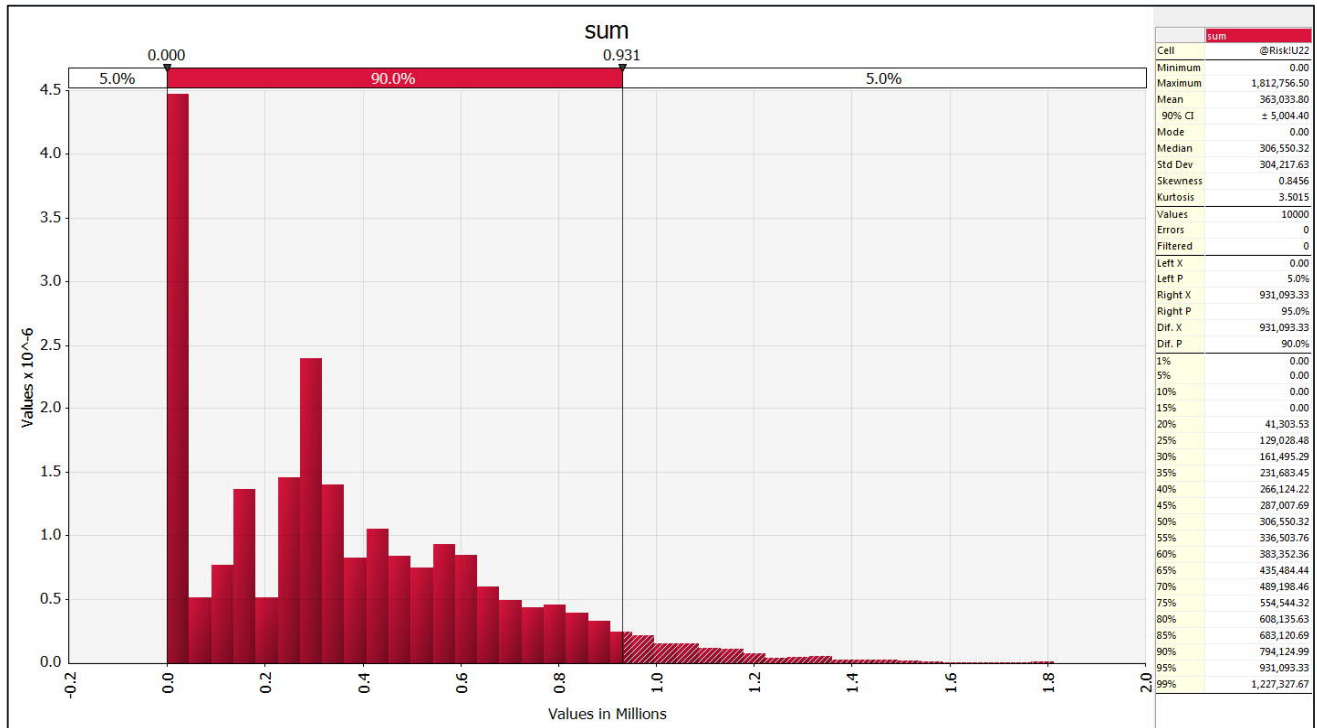


Figure 6-3 - Distribution of total risk cost

6.12 BENEFITS REALISATION PLAN

6.12.1. Tracking of the scheme benefits will be a key element to understand the successes. These benefits will be linked to the monitoring and evaluation plan.

6.12.2. The project working group will be responsible for the realisation of the benefits associated with the proposed improvements. The benefits realisation strategy (to be approved by the project Steering Group) is formed of the following components and also shown in Figure 6-4:

- The identification of tangible and intangible benefits arising from the improvements
- Establishing the baseline and measuring the benefits against the baseline
- A timeline identifying the relevant measurements and reporting points
- Reporting and governance structure associated with benefits realisation
- Post project review and evaluation

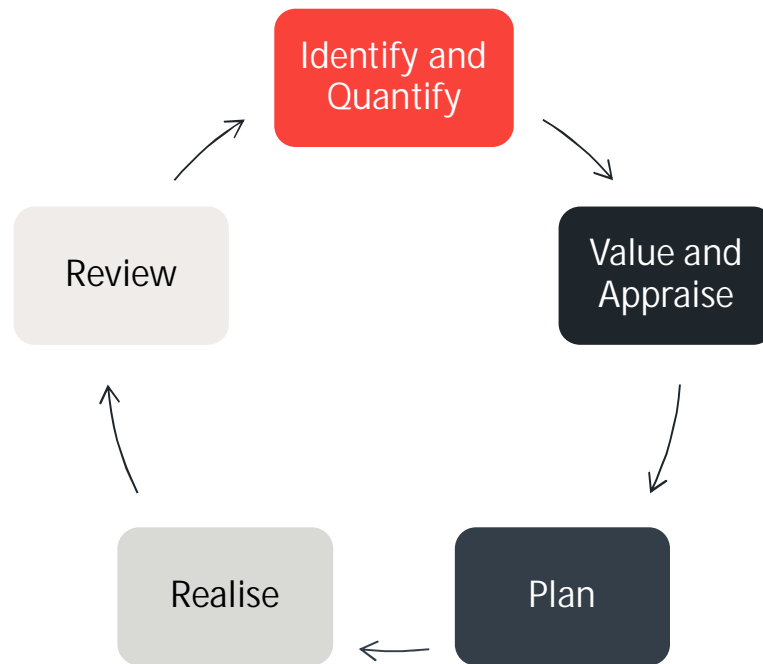


Figure 6-4 – Benefit management lifecycle

- 6.12.3. Tracking of the scheme benefits will be a key element in understanding the success of a specific intervention. The realisation of benefits is intrinsically linked to the Monitoring and Evaluation plan (discussed in the following section).
- 6.12.4. The Project manager will be responsible for tracking the benefits being realised and for reporting any exceptions to the project board. This will allow early identification of any particular areas where benefits are not being realised as expected. The Project Board will then appoint someone with sufficient expertise to oversee remedial actions to try to bring benefits back in line with expectations.

SCHEME OBJECTIVES, OUTCOMES AND IMPACTS

- 6.12.5. The desired outputs are those tangible effects that are funded and produced directly as a result of the scheme. The desired outcomes are the final impacts brought about by the scheme in the short, medium and long term. The scheme objectives, together with the desired outputs and outcomes are summarised in Table 6-3.

Table 6-3 – Objectives, outputs and outcomes

Strategic objectives	Desired outputs	Desired outcomes
1) Ensuring sustainable transport is accessible for all types of users.	Increasing accessibility	<ul style="list-style-type: none"> ▪ Ensuring public transport is inclusive of everyone ▪ Increase public transport usage
2) Enabling a variety of transport choices for the public.	Reducing congestion	<ul style="list-style-type: none"> ▪ Reduce the environmental impact of travel ▪ Reduce congestion ▪ Improve car journey times through a reduced mode share of people using the private car
3) Promoting sustainable transport as an alternative to the car.	Reducing car trips into central Reading	<ul style="list-style-type: none"> ▪ Increase public transport usage ▪ Congestion reduction ▪ Air quality improvements and noise reduction ▪ Improved journey times to key destinations.
4) Promoting economic development in Wokingham to support the production of jobs in the local area.	Increasing employment and housing opportunities	<ul style="list-style-type: none"> ▪ Support employment and housing in Winnersh.

BENEFIT MONITORING

- 6.12.6. The monitoring of the benefits realised against each objective is controlled within the Monitoring and Evaluation plan. This sets out the necessary data and information requirements to track the performance of objectives. The efficiency of scheme management and delivery process leads to whether outcomes have been achieved, which in turn provides the ability to demonstrate accountability for the initial investments.
- 6.12.7. Evaluation objectives have been set to show a clear flow reflecting the process, impact and economic elements of the evaluation.

CONTINGENCY PLAN

- 6.12.8. Delivery against the programme will be measured in terms of its effectiveness, delivery against planned timescales, and actual expenditure versus planned expenditure. Responsibility for this lies with the Project Manager throughout the project, and any changes will be reported to the Project Board.
- 6.12.9. Throughout the project the risk register will be maintained and updated as necessary, with mitigation and contingency measures used as appropriate – as decided and approved ultimately by the Project Board.

6.13 MONITORING AND EVALUATION

INTRODUCTION

- 6.13.1. This section outlines the approach that is being taken in the preparation of a Monitoring and Evaluation Plan. Monitoring and evaluation is key to be able to accurately measure the success of a project. An

intervention logic map is an important way to create a systematic pathway for a scheme. To monitor the impact of the scheme, post scheme surveys will be undertaken to establish the changes that have occurred. This will be reported to the participating councils to inform future projects.

- 6.13.2. Monitoring involves checking progress against the targets set for the scheme. Evidence of expenditure and the delivery of outputs is formally reported.
- 6.13.3. Evaluation involves assessing the effectiveness and efficiency of the scheme both during and after implementation. It seeks to measure the success of the scheme in delivering planned outcomes. It assesses whether, and how, the anticipated benefits have been achieved, or if any benefits have not been achieved, the reasons why.

THREE-STAGE APPROACH FOR MONITORING AND EVALUATION

- 6.13.4. It is important to establish how different scheme-specific objectives are realised over different timescales. Some objectives will be realised immediately or shortly after the scheme opens; such short and medium-term scheme effects are referred to as outcomes. Other objectives such as supporting economic regeneration are less direct and tangible effects of the scheme and are expected to take effect over a longer period; these longer-term effects are called impacts. Impacts can be more difficult to attribute directly to the scheme. For this reason, the Scheme Monitoring and Evaluation Plan will be undertaken in three distinct stages:

- Stage 1 - Pre-Construction Study, Q3 2019
- Stage 2 – One Year Post Opening Process Evaluation, Q3 2021
- Stage 3 - Five Year Post Opening Impact Evaluation Study, Q3 2025

LEVEL OF MONITORING

- 6.13.5. The Department for Transport guidance sets out three levels of monitoring and evaluation:

- Standard monitoring
- Enhanced monitoring
- Fuller evaluation

- 6.13.6. The standard monitoring is required for all schemes, and schemes costing over £50 million are expected to be subject to “enhanced” monitoring. Only selected schemes, identified by the DfT are expected to conduct ‘fuller’ evaluation. As the scheme cost is less than £50 million, the DfT’s standard monitoring guidance will followed.

EVALUATION OBJECTIVES

- 6.13.7. The efficiency of scheme management and delivery process leads to whether outcomes have been achieved, which in turn provides the ability to demonstrate accountability for the initial investments. Evaluation objectives have been set to show a clear flow reflecting the process, impact and economic elements of the evaluation.

Process evaluation: Efficiency of scheme delivery

- 6.13.8. The resources and finances used in delivering the scheme should be understood in order to gain an understanding of existing planning techniques and to provide lessons learned for use in future best practice.

Impact evaluation: Delivery of projected outcomes

- 6.13.9. The planning and processes used in defining an intervention from the outset, and their continual evolution throughout design, construction and implementation play a key factor in predicting outcomes. Understanding of how the predicted outcomes match those which are delivered by scheme is essential in providing lessons learned for future proposals.

Economic evaluation: Accountability for investment

- 6.13.10. The outcomes of the scheme will enable Wokingham Borough Council to establish a revised assessment of the benefits of the scheme. Whether anticipated or not, do the benefits justify the investment made at the outset? How can the VfM forecasts be considered in the planning of future schemes.

PROCESS EVALUATION

- 6.13.11. The Process Evaluation will be undertaken as the construction nears completion through to the Stage 2: One Year Post Opening Process Evaluation.
- 6.13.12. The aim of the process evaluation is to identify factors influencing the extent to which objectives have been achieved, identify and investigate unintended outcomes, and identify lessons learned. The process evaluation will extend beyond a desk-based study and will involve interviews with key project officers and a process review workshop with stakeholders. This will include assessment of:
- Programme management, success factors and key obstacles to delivering the scheme
 - Provide details of project plan assessment, delivery at key milestones, etc. This will help identify good practice in this area, which can be shared in the future
 - A review of evidence collated through WBC project management and governance procedures
 - Consultation with key stakeholders to garner a range of views of the operation and success of the scheme
 - The evolution of the risk register and the effectiveness of the risk management strategy e.g. safety during construction, delays to transport users, impacts on local business during construction
 - If and how the context and rationale behind the scheme has changed
 - All costs involved in the management, construction and delivery of the scheme compared to the forecast costs including an assessment of risk and optimism bias in pricing
- 6.13.13. The process evaluation will make use of the extensive audit trail provided by the use of the PRINCE 2 project management environment. We expect the following reports to be produced as part of this system:
- Highlight Report
 - Exception Report
 - End Stage/Next Stage Report
 - Project Closedown
 - Lessons Learned Log
- 6.13.14. These reports will be used to assist in the evaluation of the process from start to finish. As part of the project closedown process a workshop will be held with key members of the client and contractor teams to capture the items that went well and did not go well and if there are additional lessons that need to be learned. This will include a review of the impact of stakeholder engagement based upon

the feedback that was received during the project, and also perceptions of the construction phase obtained via the residents' attitudes surveys.

IMPACT EVALUATION

6.13.15. The evaluation of impacts will be undertaken using a standard knowledge-based theory of change approach, and designed so that the unique contribution of the scheme can be established, and so that the approaches and methods are commensurate with the scheme's scale. This approach has been adopted as it will allow:

- The evaluation of specific interventions
- The ability to derive causal based effects of the interventions
- An opportunity for continual forecasting of impacts

6.13.16. Stage 1 (Pre-construction) involves the collation of baseline information which can be used in the evaluation of impacts in the later stages.

6.13.17. Collating electronic copies of all reports, documents, data and models relating to the scheme appraisal that will be required to establish baseline conditions and forecast impacts in terms of accidents, traffic volumes and journey times.

6.13.18. In Stages 2 and 3 the impact evaluation will be updated with the following:

- Commission ATC surveys to assess the change in traffic flows on roads within the area impacted by the scheme
- Commission entry/exit surveys at the station to assess the change in demand (including among people with disabilities)
- Commission car parking surveys to assess change in demand
- Compare Stage 1 baseline data to future data to determine scheme impacts
- Compare recorded incidents of crime at the station

6.13.19. A logic diagram is shown in Figure 6-5 showing the inputs, outputs, outcomes and impacts of the scheme.

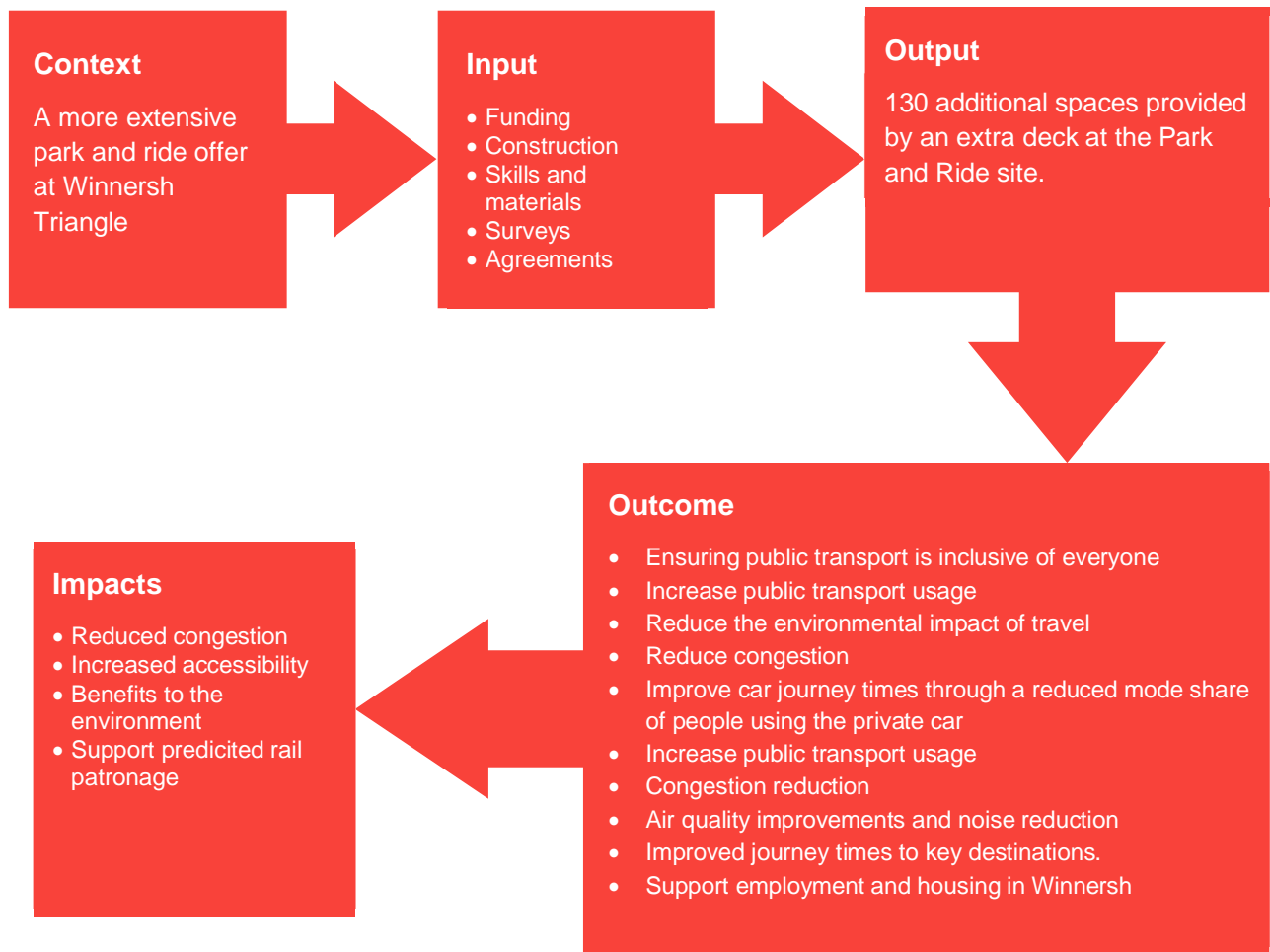


Figure 6-5 – Outcomes and impacts

ECONOMIC EVALUATION

6.13.20. After completion of the Stage 3 monitoring and impact evaluation, an economic evaluation will be undertaken to assess the accountability of the investment into the scheme through answering the following questions:

- How do the realised benefits, and therefore, VfM correspond with those estimates derived from the scheme appraisal?
- Have any unexpected benefits occurred or have other predicted benefits not materialised?
- Are on-going benefits expected to change?

6.13.21. The actual outturn costs and movement data will be used to generate a new BCR. This will be supplemented with an assessment of the wider economic benefits generated by the scheme to understand the Value for Money provided. This will be compared back to that generated within the original Business Case.

SUMMARY OF ANALYSIS

6.13.22. Monitoring and evaluation will be used to aid the answering of some of the following key questions:

- Have the anticipated outcomes and impacts been achieved?

- To what extent are the observed changes additional to what would have happened in the absence of the intervention?
- Were there any unanticipated impacts / displacement effects?
- Which elements of the scheme were particularly influential in achieving the overall goals?
- What lessons can be learnt for future scheme / policy development?
- What is the contribution of the policy to TVB LEPs strategic goals?
- To what extent did the anticipated costs and benefits match the actual outcome?
- Has the scheme been successful? If not, why not?

6.13.23. The evaluation of the scheme will:

- Measure the level change in traffic flows on roads within the area impacted by the scheme
- Measure the change in demand to the station including among people with disabilities) for all users
- Measure the change in demand for the car park
- Measure incidents of crime at the station

6.13.24. The initial one year impact assessment will be used to understand the impact mainly car park demand, change in traffic flows and station demand. The 5 year assessment will look at longer term benefits.

7 SUMMARY AND CONCLUSIONS

7.1 STRATEGIC CASE

- 7.1.1. The strategic case sets out the context of scheme location in Winnersh, which consists of residential, retail, commercial and industrial land uses. The key sites nearby include the Winnersh Triangle business park and the Winnersh Triangle railway station. The scheme is just 6km south east of Reading town centre. Almost 13,000 homes are proposed for Wokingham, and 5,210 in Reading by 2026.
- 7.1.2. The scheme contributes to national and local commitments to improve the transport network and reduce congestion, and previous similar scheme have had considerable success in alleviating congestion in constrained areas and encouraging people to use more sustainable modes of transport. The scheme supports a range of key policies, including some TVB LEP priorities, such as 'enhancing urban connectivity', 'encouraging vibrant town centres' and 'setting foundations for future growth'.
- 7.1.3. The scheme objectives encompass providing and promoting accessible sustainable transport for all users, which include a range of transport choices and a reliable alternative to the private car; as well as improving economic development in Wokingham and job production locally.
- 7.1.4. Without the introduction of the scheme, congestion will intensify through growth in traffic and several planned residential developments and employment areas. The opportunity to establish Winnersh Triangle rail station as a key transport interchange to increase the uptake of sustainable modes of transport, therefore reducing demand on the local road network, should not be overlooked. To support this vision, the station facilities including staffing, real time customer information, and pedestrian access require the suggested improvements.
- 7.1.5. The scheme would improve accessibility from the east into central Reading and by reducing congestion and improving connectivity, the scheme will help support a mode change from single occupancy car journeys, to public transport. As passenger numbers are predicated to increase, regardless of station improvements, the issues identified in this strategic case will be mitigated due to the improvements the scheme will provide.

7.2 ECONOMIC CASE

- 7.2.1. The economic assessment demonstrated that the proposed scheme, under a core scenario, offers very high value for money made up of:
- Present Value of Benefits (PVB) of £7.32m
 - Present Value of Costs of £1.67m
 - Net Present Value (NPV) of £5.65m
 - Benefit to Cost Ratio (BCR) of 4.4
- 7.2.2. Sensitivity tests undertaken to ascertain the value of money category under a high cost scenario have demonstrated that the scheme would still offer a very high value for money.
- 7.2.3. The scheme is judged to have neutral impacts on noise and air quality as a result of the redistribution of traffic around the network, and also to have neutral impacts on landscape. It should be noted that although these are neutral impacts, the scheme would bring a number of slight and strong positive

benefits to users of the transport systems including improved accessibility, safety and enhanced levels of journey quality

7.3 FINANCIAL CASE

- 7.3.1. The total scheme cost, on which this business case is based, is £3.37 million (2018 prices). The Thames Valley LEP contribution is requested to be £2.82 million. The remaining £0.55 million has already been secured through S106 contributions.

7.4 COMMERCIAL CASE

- 7.4.1. Wokingham Borough Council will be responsible for the overall procurement and contract management. Considering the disparate nature of the three scheme elements, the procurement will be different for all three schemes, the details of which are discussed in the Commercial Case.
- 7.4.2. Considering that the responsibility for the station infrastructure rests with South Western Railway, the station improvements will be undertaken through SWR's standard procurement routes. The construction of pedestrian crossing facility will be undertaken by VolkerHighways, WBC's incoming term contractor.
- 7.4.3. Given the specialist nature of the parking deck works involved, the parking deck will be delivered as a design and build contract by a specialist contractor who would undertake the full civils work from surveys to design and planning through to final handover.

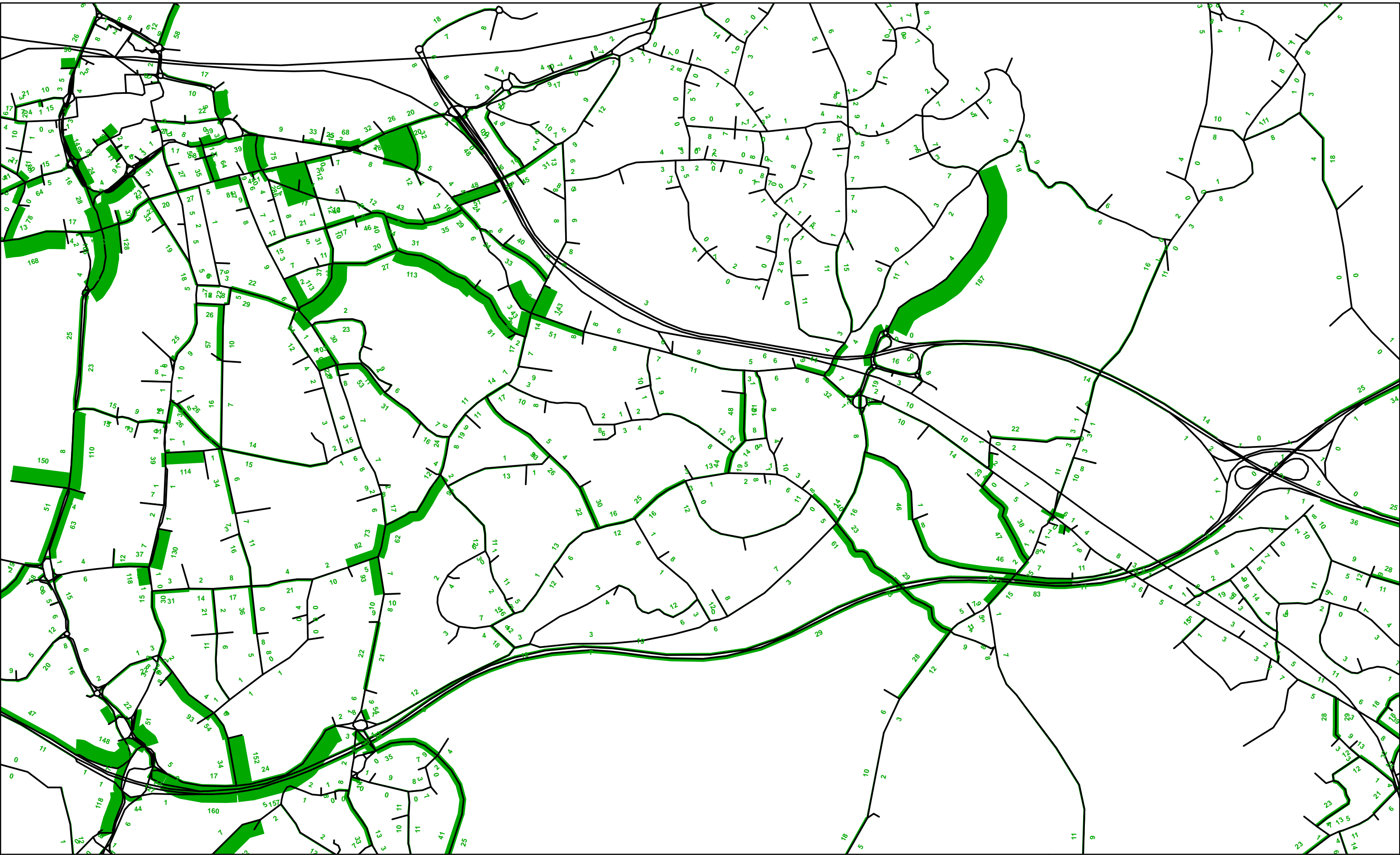
7.5 MANAGEMENT CASE

- 7.5.1. The management case has determined that the scheme is deliverable, after examining the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.
- 7.5.2. Wokingham Borough Council has demonstrated that successful transport projects can be delivered. Most recently, Local Sustainable Transport Funds were secured for the Thames Valley Park and Ride, off the A3290 in east Reading. Wokingham Borough Council, alongside Reading Borough Council, have also delivered the existing park and ride facility at Winnersh Triangle and the Mere oak Park and Ride on the A33.
- 7.5.3. Wokingham Borough Council will be responsible for the overall procurement and contract management, with differing procurement for the three scheme elements. Governance, organisational structure and roles have been illustrated, with a programme plan and assurance & approval plan outlined, as well as a monitoring and evaluation plan.

Appendix A

CONGESTION DELAY PLOTS





WSTM4 2036 DM Delay- AM Peak

Key

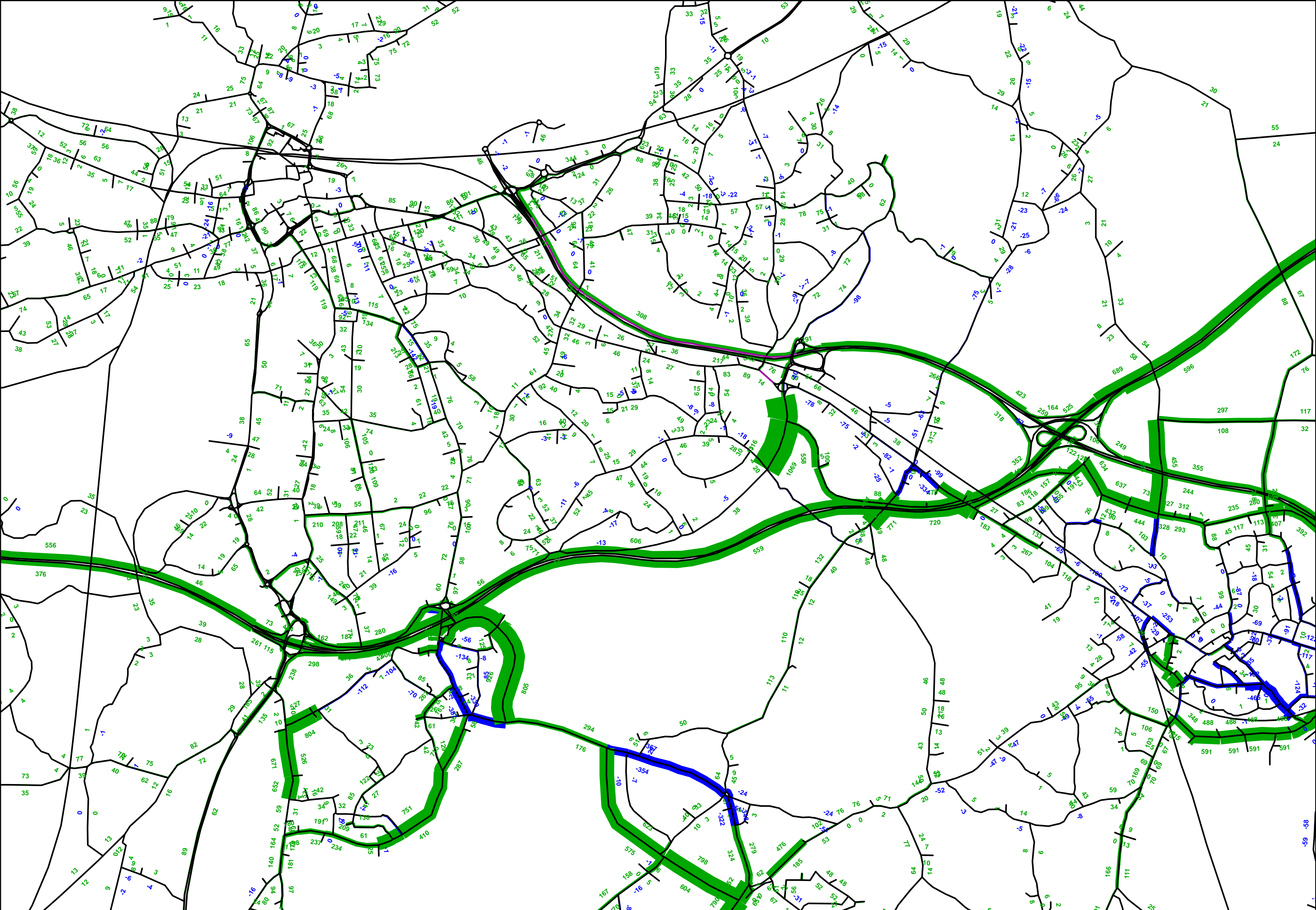
Link bars
Mean delay time 2 PrT



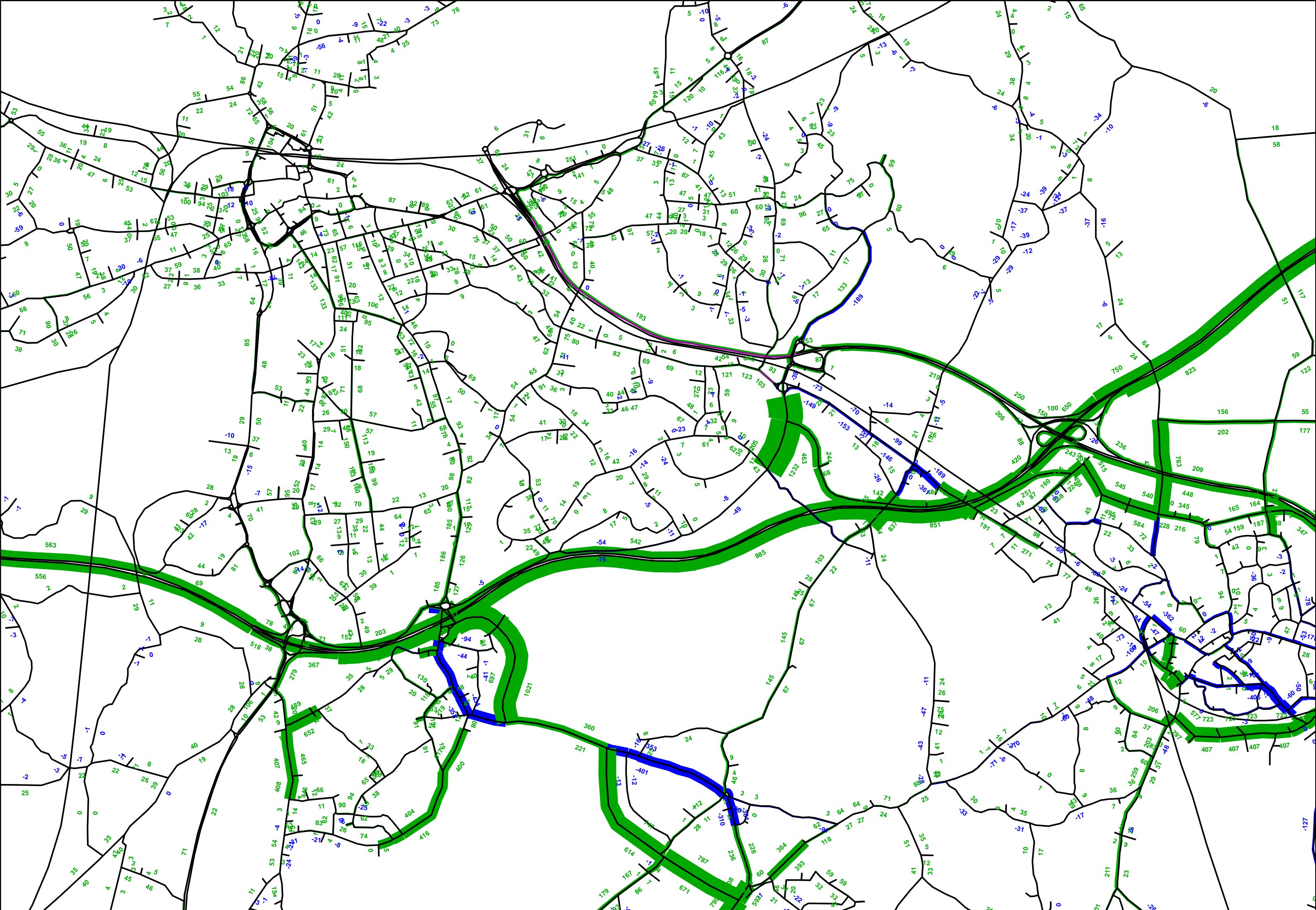
Appendix B

FLOW DIFFERENCE PLOTS

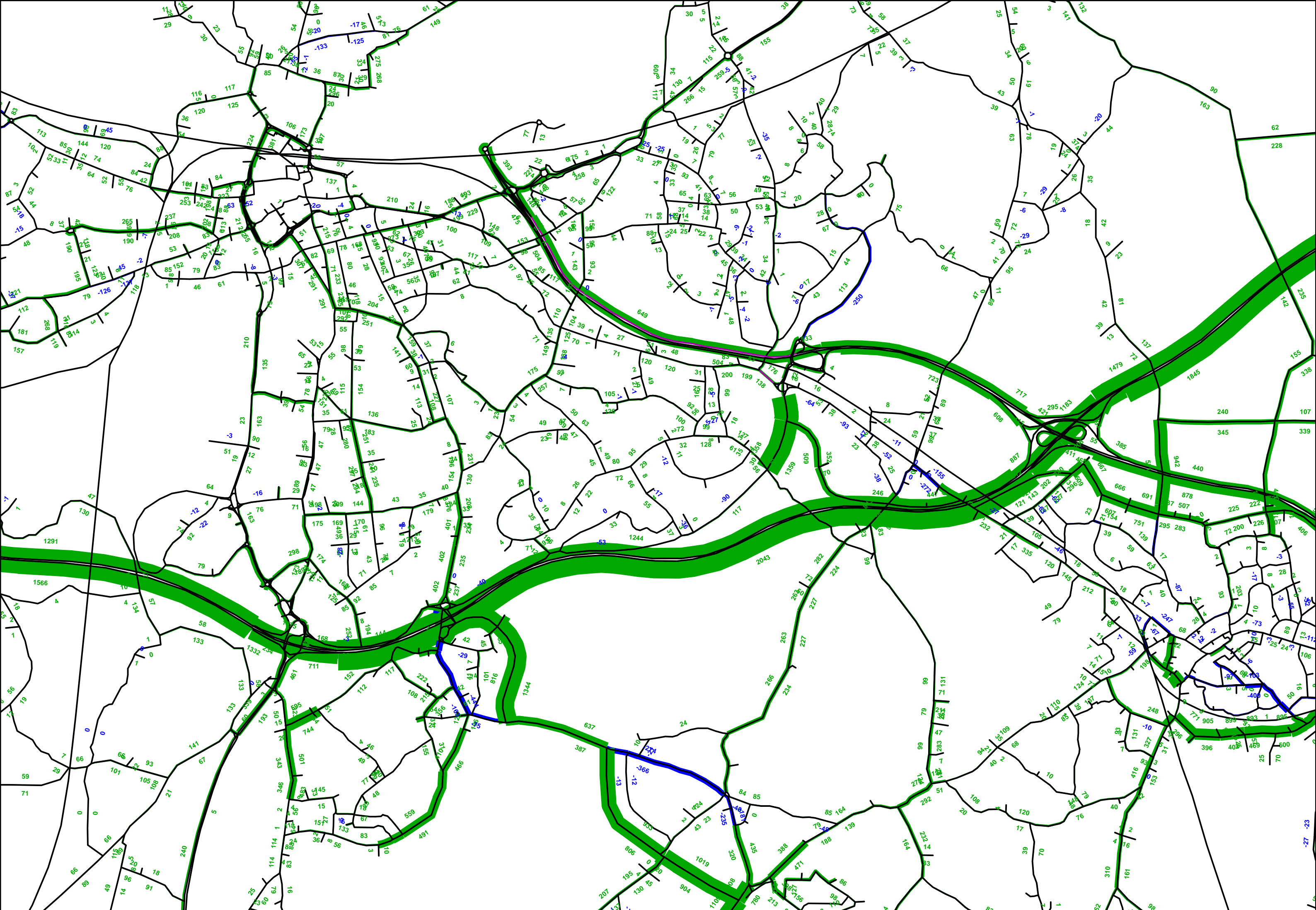




2021 AM DM minus Base Act Flow (veh)



2021 PM DM minus Base Act Flo (veh)



2036 PM DM minus Base Act Flo (veh)

Appendix C

OPTIONS ASSESSMENT REPORT



WINNERSH TRIANGLE STATION OPTIONS ASSESSMENT REPORT

CONFIDENTIAL

SEPTEMBER 2015

WINNERSH TRIANGLE STATION OPTIONS ASSESSMENT REPORT

Wokingham Borough Council

Project no: 70012747
Date: September 2015

WSP | Parsons Brinckerhoff
Mountbatten House
Basing View

Tel: +4 (4) 1256 318 800
Fax: +4 (4) 1256 318 700
www.wspgroup.com
www.pbworld.com

QUALITY MANAGEMENT

ISSUE/REVISION	FIRST ISSUE	REVISION 1	REVISION 2	REVISION 3
Remarks				
Date				
Prepared by	Luke Bacon			
Signature				
Checked by	Tom Beck			
Signature				
Authorised by	Stephen Reed			
Signature				
Project number	70012747			
Report number				
File reference				

PRODUCTION TEAM

WSP GLOBAL INC. (WSP)

Project Director Stephen Reed

Project Manager Tom Beck

Team Member Luke Bacon

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1 PROJECT BACKGROUND	2
1.1 INTRODUCTION	2
1.2 STUDY OBJECTIVES.....	2
2 STRATEGIC CONTEXT	4
2.1 INTRODUCTION	4
2.2 GROWTH AND POLICY ASPIRATIONS	4
2.3 EXISTING CONDITIONS AND POTENTIAL FUTURE STATION USAGE.....	5
2.4 IDENTIFIED ISSUES.....	9
2.5 STRATEGIC TRANSPORT OBJECTIVES.....	10
3 STRATEGIC OPTIONS APPRAISAL.....	11
3.1 INTRODUCTION	11
3.2 STRATEGIC APPRAISAL METHODOLOGY	11
3.3 STRATEGIC OPTIONS.....	11
3.4 ASSESSMENT AGAINST STRATEGIC TRANSPORT OBJECTIVES	12
3.5 ASSESSMENT AGAINST THAMES VALLEY BERKSHIRE (LEP) STRATEGIC ECONOMIC PLAN (2015/16-2020/21).....	14
3.6 ASSESSMENT OF DELIVERABILITY AND FEASIBILITY AGAINST KEY CRITERIA.....	17
4 CONCLUSION	20

TABLES

TABLE 2-1: WINNERSH TRIANGLE STATION DESTINATIONS.....	6
TABLE 2-2: WINNERSH TRIANGLE STATION ANNUAL PATRONAGE.....	6
TABLE 2-3: STRATEGIC OBJECTIVES.....	10
TABLE 3-1: STRATEGIC OPTIONS.....	11
TABLE 3-2: ASSESSING OPTIONS AGAINST STRATEGIC OBJECTIVES	12
TABLE 3-3: ASSESSING OPTIONS AGAINST LEP PACKAGES	14
TABLE 3-4: EVALUATION CRITERIA.....	17
TABLE 3-5: ASSESSING OPTIONS AGAINST DELIVERABILITY AND FEASIBILITY.....	17

FIGURES

FIGURE 1-1: WINNERSH TRIANGLE STATION LOCATION PLAN	2
FIGURE 1-2: WINNERSH TRIANGLE STATION PLAN.....	3
FIGURE 2-1: WINNERSH TRIANGLE STATION FORECAST GROWTH.....	7

APPENDICES

APPENDIX A: MEETING MINUTES

EXECUTIVE SUMMARY

The number of people using Winnersh Triangle Station has seen a large increase and has grown by over 34% in the last two years to over 471,000 entries and exits. The station therefore requires improvement to reflect the intensification of use and to encourage further growth.

The objective of the study was to identify and test a range of options that will establish a business case for positive growth and other Local Enterprise Partnership agenda items. A number of options were established to enable a 'sifting' process to ascertain a preferred option.

Following this assessment the 'full station redevelopment' was the preferred option across all of the three areas of assessment. A fully accessible transport interchange would have a wide range of benefits for the local community, the full analysis can be found in **Section 3**. The 'do minimum and car park expansion' is the secondary preferred option as it has a range of benefits and had the joint highest rank in the final analysis.

In conclusion, it is considered that the 'full station redevelopment' is the main preferred option and should be taken further when establishing a full business case for Winnersh Triangle Station.

1 PROJECT BACKGROUND

1.1 INTRODUCTION

- 1.1.1 The number of people using Winnersh Triangle Station has seen a large increase and has grown by over 34% in the last two years to over 471,000 entries and exits. The station therefore requires improvement to reflect the intensification of use and to encourage further growth.

1.2 STUDY OBJECTIVES

- 1.2.1 The objective of the study is to identify and test a range of options that will establish a business case for positive growth and other Local Enterprise Partnership agenda items.
- 1.2.2 Strategic objectives will be designed to directly address any problems that have been identified. Potential options that have been established will then be measured against the objectives based on a range of factors including the level of transport infrastructure improvements, potential environmental impacts and economics to measure the benefits and costs that could be involved for each option.
- 1.2.3 This will lead to the development of a preferred option as a result of a 'sifting' process that will indicate whether there is merit in investing more time and funding into working up a full business case for LEP funding.
- 1.2.4 Patrizia (owners and developers of Winnersh Triangle Business Park) and South West Trains have also been consulted in order to understand the scope of change required to deliver a true Parkway Station.

Figures 1.1 and 1.2 below show the location and plan of Winnersh Triangle Station.

Figure 1-1: Winnersh Triangle Station Location Plan

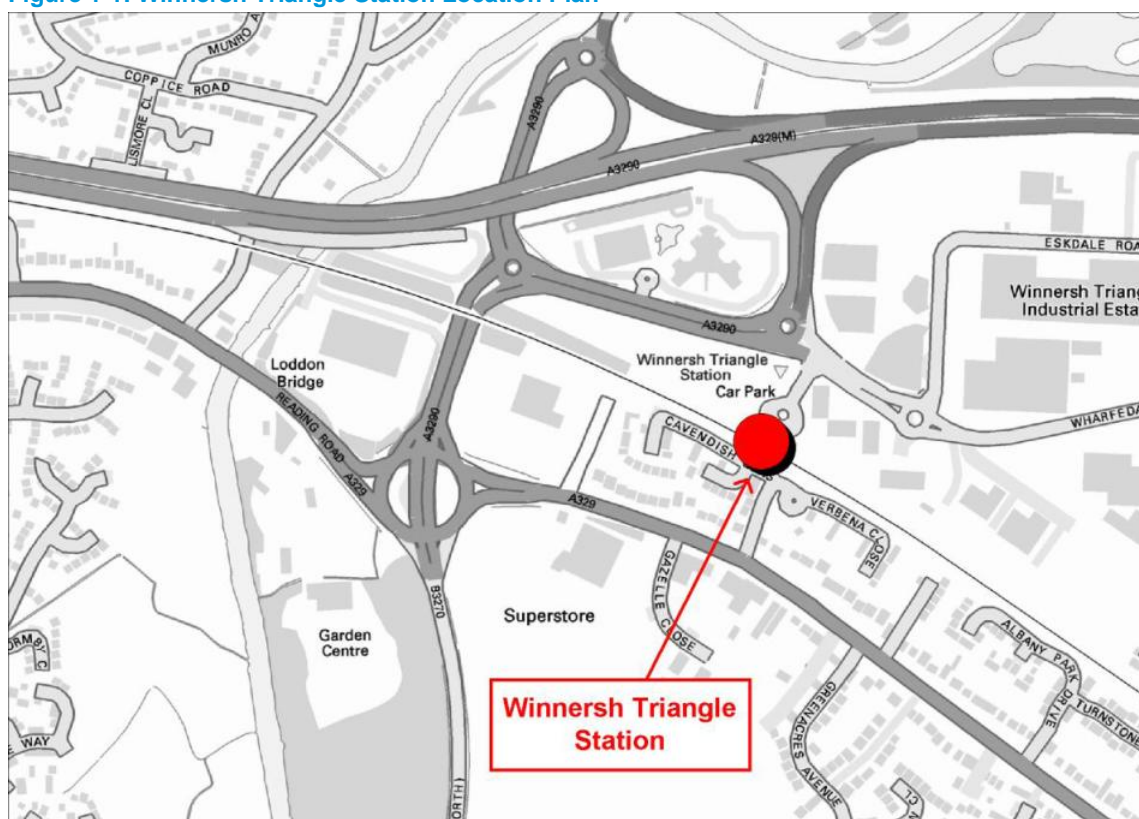


Figure 1-2: Winnersh Triangle Station Plan



1.2.5

Currently the car park is being expanded for shared usage between the bus based park and ride (due to open in September 2015) and rail passengers.

2 STRATEGIC CONTEXT

2.1 INTRODUCTION

2.1.1 This section will review the following:

- How the proposals would fit within the growth and policy aspirations of the Thames Valley Berkshire Strategic Economic Plan and the National Planning Policy Framework;
- the current condition and usage at Winnersh Triangle Station;
- the opening of the new park and ride;
- review discussions with Patrizia and South West Trains; and
- identify current issues at the station and propose strategic transport objectives as a result of the consultations.

2.2 GROWTH AND POLICY ASPIRATIONS

National Planning Policy Framework (NPPF)

2.2.1 Station parkway development aids the Government's NPPF by promoting sustainable transport and sustainable development as it states "*plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people*" a station development will help improve the attractiveness and increase sustainable transport usage particularly between Reading and Wokingham. Furthermore the NPPF states "*The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice on how they travel.*"

2.2.2 In addition, the options support many of the objectives of NPPF, for example: "*proactively drives and supports sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs; promotes mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions...and actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.*"

Thames Valley Berkshire (TVB) Strategic Economic Plan (SEP)

2.2.3 The TVB LEP submitted their Strategic Economic Plan in March 2014. This plan outlines the case for necessary investment to infrastructure, enterprise and employment that is required for the Thames Valley regions economic growth.

2.2.4 Within the 'TVB Strategy' report it states that it is "*the transport and communications infrastructure...is therefore essential to invest in it and also to encourage local sustainable transport networks that promote active travel on foot, on bicycle and on public transport.*"

2.2.5 The following sub-sections provide information of how the development of Winnersh Triangle Station would support the SEP packages.

Foundations for future growth

- 2.2.6 Plans were submitted to Wokingham Borough Council and agreed several years ago to almost double the amount of office space available at Winnersh Triangle; however the recession affected delivery. The economic prospect in 2015 has changed significantly since 2008. There has been significant positive growth at the business park, new hotels have been constructed, office buildings delivered and occupied by new tenants.
- 2.2.7 However the station and facilities are largely unchanged since the station was opened in May 1987. The station requires improvement to reflect the increased employment at the business park and the growing usage of the station.

Unlocking housing development

- 2.2.8 There are 437 new homes planned to be developed at Hatch Farm Dairies in Winnersh. The site is approximately a ten minute walk from Winnersh Triangle Station. The station is accessible by foot and bicycle as it is connected to the main A329 corridor through an arch, only open to pedestrians and cyclists, under the railway line. The development of the new homes is not dependant on the railway station; however, it will place ever increasing demands on the existing infrastructure.

Enhancing urban connectivity

- 2.2.9 The redevelopment of the station into a parkway station will include all forms of sustainable transport as well as improvements to the station building and access to the platforms. This will complement the development of the Park and Ride facility next to the station which is due to open in summer 2015. The two elements will combine to offer an effective alternative to driving both into central Reading as well as to the Winnersh Triangle Business Park and enhance the urban connectivity of the local area.

Enhancing the strategic transport network and encouraging vibrant town centres

- 2.2.10 The development of a Parkway station, combined with a Park and Ride site is primarily aimed at improving connectivity to central Reading and will encourage a vibrant town centre. Reading station is a gateway to destinations to the west of London, to South West England, South Wales and north via Birmingham. Winnersh Triangle station is approximately eight minutes from Reading station by train.
- 2.2.11 **Section 3** considers all of the packages against the proposed options.

2.3 EXISTING CONDITIONS AND POTENTIAL FUTURE STATION USAGE

- 2.3.1 Winnersh Triangle Train Station is located to the south of the A329(M) which joins onto the M4 to the east. Winnersh Business Park is located just to the north of the station, a residential area is located to the east which is bordered by the M4, to the south and the west the site is bordered by the A329 Wokingham Road. The station and the new Park and Ride are ideally located on the A3290 junction with Winnersh to capture trips from the M4 and A329M that would have otherwise continued onwards.
- 2.3.2 The station acts as an important transport interchange for the local community both for commuters travelling to Winnersh and into the neighbouring business park and for local residents travelling outwards towards a range of key destinations. A summary of these services obtained from is shown in **Table 2.1** below.

Table 2-1: Winnersh Triangle Station Destinations

DESTINATION	FREQUENCY INCLUDING ROUTES WITH TRAIN CHANGES AM (08:00 – 09:00)	FREQUENCY INCLUDING ROUTES WITH TRAIN CHANGES PM (17:00 – 18:00)
Reading	2	2
London Waterloo	4	4

Source: National Rail Enquiries

Annual Patronage

- 2.3.3 The annual patronage for the station is shown in **Table 2.2** below. During a period of just five years passenger demand has increased significantly by 77.8% at Winnersh Triangle station. In comparison Winnersh Station has an increase of just 21.7% significantly lower than that at Winnersh Triangle Station.

Table 2-2: Winnersh Triangle Station Annual Patronage

STATION	2009/2010	2010/2011	2011/2012	2012/2013	2013/14	% INCREASE
Winnersh Triangle	264,864	320,090	350,338	430,720	470,988	77.8%
Winnersh Station	406,686	441,598	440,700	469,250	495,026	21.7%

Source: Office of Rail and Road

Existing Facilities

- 2.3.11 There are no available accessible facilities for wheelchair users or toilets.
- 2.3.12 Currently the station is open 24 hours a day seven days a week and offers the following facilities:
- One cycle locker and 12 cycle stand parking spaces;
 - the ticket office is open from Monday – Friday (06:00 – 11:00) and Saturday (08:00-13:00) with ticket machines available; and
 - there are 123 parking spaces available at a daily rate of £2.00.

Winnersh Triangle Park and Ride

- 2.3.13 Winnersh Triangle Park and Ride (due to be completed August 2015) will be adjacent to Winnersh Triangle Station and increase the overall parking at the site from 123 to 400. This is likely to increase car parking demand at the station. As a result of the movement of the Park and Ride the parking fare at the station will increase from £2 to £4 per day.

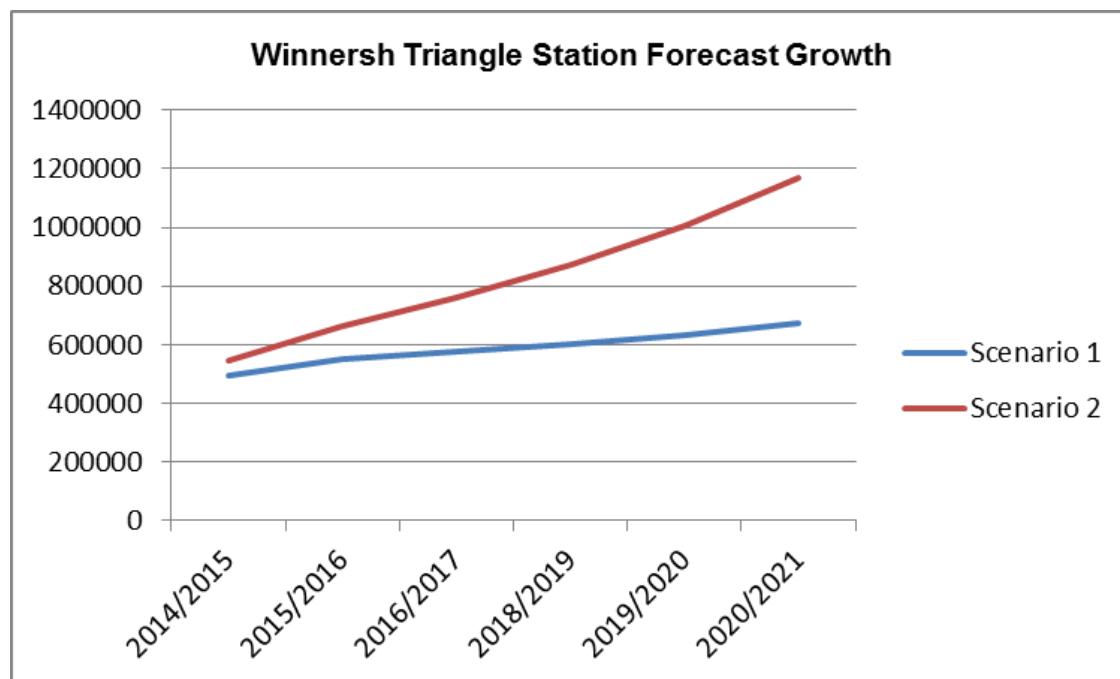
Potential Future Demand at the Station

- 2.3.14 There are several key factors that are likely to increase demand at the station in the future and these include the following:
- aspiration for more trains to stop at Winnersh Triangle;
 - expansion of the Winnersh Triangle Business Park;
 - any future committed developments in the area; and
 - the general trend of increased station utilisation over the last five years.

2.3.15 **Figure 2.1** summarises the potential future usage at the station and shows two scenarios of potential growth, these are outlined below.

- **Scenario 1:** Assumes natural growth of 5% including future committed developments and employment growth at Winnersh Triangle Business Park and assuming predicted growth at the business park is spread evenly over five years.
- **Scenario 2:** Assumes the average growth trend over the last five years of 15% including future committed development and employment growth at Winnersh Triangle Business Park and assuming predicted growth at the business park is spread evenly over five years.

Figure 2-1: Winnersh Triangle Station Forecast Growth



Both scenarios in **Figure 2.1** show significant growth over the next five years, if the current trend continues, particularly for Scenario 1, a station redevelopment will become more important to ensure that the facilities available are robust enough for future growth.

Patrizia Consultation

2.3.16 On the 21st May 2015 WSP Parsons Brinckerhoff attended a meeting with Patrizia, The minutes for this meeting are in **Appendix A**.

2.3.17 Patrizia stated the following regarding the Winnersh Parkway development “*the presentation of the park is hugely important to us. We are constantly marketing the park, both to new and existing tenants, as a high quality centre for business. For those travelling to the park by train, the poor and dated condition of the station creates a disappointing first impression, which does us a disservice. Having a modern, well-presented train station, with appropriate facilities and access, and one that’s consistent with the quality of our estate, would enhance the arrival experience at Winnersh Triangle and therefore assist in us attracting and retaining dynamic businesses.*”

2.3.18 Patrizia outlined the following issues at the station:

- There is no disabled access.
- There is often a rat and rubbish problem around the station.
- The condition of the platform and benches is currently unsuitable.

- The footways do not take the quickest route to the station leading pedestrians to take a shortcut along the road.
- Patrizia are aiming to attract new tenants and the station currently lets down the business park.

2.3.19 Patrizia are supportive of the scheme to upgrade the station. A new station could be positive to working life and they pitched support towards a station improvement bid two years ago.

2.3.20 Patrizia are currently involved in planning obligation S106 discussions with the objective to restructure the agreement with WBC. Patrizia would potentially be willing to commit some funding as part of a group of stakeholders depending on the results of the discussions.

South West Trains Consultation

2.3.21 On the 4th June 2015 WSP Parsons Brinckerhoff attended a meeting with South West Trains (SWT) regarding the Winnersh Parkway development. The minutes for this meeting are in **Appendix A**.

2.3.22 SWT stated that they would be unlikely to currently commit funding and that this should be sought from alternative sources, suggesting that there should be a Masterplan with a phased approach, seeking to show that there is an increased demand following each phase.

2.3.23 The following development strategy was suggested

- Predict the future passenger usage at the station.
- Change name to include 'parkway' and promotion of this to ensure public awareness.
- Show the growth after the name change.
- Rebranding could improve the likelihood of the station being allocated funding in CP6.

2.3.24 SWT outlined the categories that they would consider when deciding whether or not to upgrade a station's accessibility, these include the following:

- current and future predictions of footfall;
- geographic spread of residents;
- location of key local facilities including schools, hospitals and specialist rehabilitation centres;
- connectivity to other modes of transport and operators;
- number of potential users of the improved accessible facilities (as part of supporting this case, consider companies supporting their corporate responsibilities); and
- calculation of a benefit cost ratio.

2.3.25 SWT also suggested approximate costs for different stages of the development and these are reviewed further in **Section 3** as part of the options analysis.

2.4 IDENTIFIED ISSUES

After reviewing the existing conditions and potential future demand at Winnersh Triangle station a range of issues have been identified below.

Passenger Demand

- 2.4.1 Passenger demand at the station is set to increase further over the next few years due to a number of factors and the facilities that are available do not reflect this intensification of use.

Accessibility

- 2.4.2 There is no disabled access, this also causes accessibility issues for parents with pushchairs (there is a nursery within a 200m walk from the station) and cyclists wishing to use the train as part of a sustainable commute.

Station Facilities

- 2.4.3 There are currently no customer toilets available and no customer information screen. Staffing is limited to Monday-Friday (06:00-11:00) and Saturday mornings (08:00-13:00).

Station Awareness

- 2.4.4 The development of an improved station access and the new Park and Ride will change Winnersh Triangle into an effective Parkway, where onward trips that might have been made by car can be taken by bus or train. It is important to ensure that commuters are aware of this convenient access.

Impact of not changing

- 2.4.5 This following considers the impacts of not implementing any station improvements.
- Passenger demand will continue to increase regardless of station improvements, exacerbating issues currently experienced by station users;
 - Potential disabled passengers will continue to be restricted from any use of the station, with passenger numbers likely to increase in future years, the number of potential disabled passengers will increase;
 - Station facilities will continue to be lacking with limited staffing, no customer toilets and no customer information screen;
 - The opportunity to establish Winnersh Triangle station as a parkway transport interchange to increase the uptake of sustainable modes of transport, therefore reducing demand on the local road network, would be lost.

2.5 STRATEGIC TRANSPORT OBJECTIVES

2.5.1 The options that are identified will be measured based on the following objectives outlined in **Table 2.3** below:

Table 2-3: Strategic Objectives

STRATEGIC OBJECTIVES	POTENTIAL OUTCOME
1) Ensuring sustainable transport is accessible for all types of users.	<ul style="list-style-type: none"> → Ensuring public transport is inclusive of everyone. → Increase public transport usage.
2) Enabling a variety of transport choices for the public.	<ul style="list-style-type: none"> → Reduce the environmental impact of travel. → Reduce congestion. → Improve car journey times through a reduced mode share of people using the private car.
3) Promoting sustainable transport as an alternative to the car.	<ul style="list-style-type: none"> → Increase public transport usage. → Congestion reduction. → Air quality improvements and noise reduction. → Improved journey times to key destinations.
4) Promoting economic development in Wokingham to support the production of jobs in the local area.	<ul style="list-style-type: none"> → Support employment and housing in Winnersh.

3 STRATEGIC OPTIONS APPRAISAL

3.1 INTRODUCTION

- 3.1.1 This section provides a high level analysis of the strategic options that are available for the Winnersh Triangle Station development. These will be assessed against a range of indicators including the strategic objectives, relevant objectives in the Thames Valley Berkshire LEP – Strategic Economic Plan and a deliverability and affordability assessment.
- 3.1.2 The completed analysis determines the most favourable option, with the recommendation to focus a future full business case in order to support this.

3.2 STRATEGIC APPRAISAL METHODOLOGY

- 3.2.1 A qualitative approach has been selected to enable a 'sifting' of strategic options to find a preferred strategic option based on a range of indicators and analyses.

3.3 STRATEGIC OPTIONS

- 3.3.1 In total four options have been considered and these are outlined below in **Table 4.1**.

Table 3-1: Strategic Options

OPTION NAME	DESCRIPTION
Do Minimum	<ul style="list-style-type: none"> → Name change to include Parkway; and → extended ticket office opening hours.
Do Minimum + car park expansion	<ul style="list-style-type: none"> → Name change to include Parkway; → extended ticket office opening hours; and → car park expansion (i.e. decked).
Do Minimum + new station building/lifts to platform	<ul style="list-style-type: none"> → Name change to include Parkway; → construct accessible toilets → construction of new station building; and → lifts to platforms.
Full Station Redevelopment	<ul style="list-style-type: none"> → Name change to include Parkway; → construct accessible toilets; → construction of new station building; → lifts to platforms; and → expanded car park (i.e decked).

3.4 ASSESSMENT AGAINST STRATEGIC TRANSPORT OBJECTIVES

3.4.1

This section will assess the options that have been derived against the strategic transport objectives, through qualitative analysis and then assignment of a score to enable comparison between options. An example of this assessment is shown below in **Table 1.3**. Options will be measured on a scale of impact from - - - (negative) to +++ (positive).

Table 3-2: Assessing Options against Strategic Objectives

STRATEGIC OBJECTIVE	Do MINIMUM	Do MINIMUM + CAR PARK EXPANSION	Do MINIMUM + NEW STATION BUILDING/LIFTS TO PLATFORM	FULL STATION REDEVELOPMENT
1) Promoting economic development in Wokingham to support the production of jobs in the local area.	<ul style="list-style-type: none"> → During the consultation with South West Trains, it was suggested that a name change to 'Parkway' had a positive impact on the number of passengers using the station, due to an increased awareness of the range of sustainable transport options available associated with the 'Parkway' name, providing economic benefits. 	<ul style="list-style-type: none"> → The car park at Winnersh Triangle station is owned by WBC, an expansion of this would increase the revenue generated through the pay and display machines. → The increase in parking spaces will enable an increase in train passengers and provide further economic benefits in the area. → This would include the benefits described in the 'do minimum' option. 	<ul style="list-style-type: none"> → The development of a new station building would increase the attractiveness of the station and the location for potential businesses occupying Winnersh Business Park, this would fully support the production of local jobs in the area and through the increase of jobs promote local economic development in Wokingham. → The increased accessibility that would be enabled through the construction of new lifts will enable more types of users to access the station and will increase opportunities for economic development. 	<ul style="list-style-type: none"> → The full station redevelopment will include all of the benefits described in the previous three options
Score	+	+	++	+++
2) Ensuring sustainable transport is accessible for all types of users.	<ul style="list-style-type: none"> → The name change to include Parkway and extended ticket office opening hours may encourage more users at the station, as the use of the Parkway name is typically 	<ul style="list-style-type: none"> → The disadvantages highlighted in the 'do minimum' option would still apply for this option. → The car park expansion would enable greater parking capacity 	<ul style="list-style-type: none"> → This option will allow disabled passengers to utilise the constructed disabled toilets. → The construction of lifts to the platforms would enable access for multiple types of 	<ul style="list-style-type: none"> → A full station redevelopment would also enable all of the benefits that were described in the previous option. → A new station building could attract new types of users as a

	associated with a 'transport interchange' offering a range of transport modes, however without lift construction, this will not allow access for all types of users.	at the station, this would increase the number of car drivers able to use the station. This does not increase the different types of users that are able to access the station.	users at the station including disabled people, cyclists and parents with push chairs → This would ensure that the station would be accessible for multiple types of users.	result of the range of facilities made available.
Score	---	--	++	+++
3) Enabling a variety of transport choices for the public.	→ This option will not increase the number of transport choices available at the station.	→ A car park expansion would increase the transport choices for people that would not normally travel by train and travel only by car and could be encouraged by the increased parking capacity at the station.	→ New lifts at the station would enable disabled people, cyclists and parents with pushchairs to utilise the station and therefore enable access to sustainable transport choices that were previously unavailable.	→ The full station redevelopment will include all of the benefits described in the previous three options
Score	---	+	++	+++
4) Promoting sustainable transport as an alternative to the car.	→ During the consultation with South West Trains, it was suggested that a name change to 'Parkway' had a positive impact on the number of passengers using the station and through this name association there is a promotion of sustainable transport as an alternative to the car.	→ Whilst a car park expansion would typically promote an increase in car usage, at a station it can also promote an increase of passengers driving to the station and then using the train as part of a wider journey. → The benefits of the 'do minimum' option would apply here.	→ New lifts at the station would enable parents with pushchairs to use the station that were previously unable to. → Notice boards/ customer information screens in a new station building could also promote other local public transport options that are available.	→ The full station redevelopment will include the benefits described in the previous three options
Score	+	++	+	+++
AVERAGE SCORE	-	+	++	+++

3.4.2

After assessing the options against the strategic objectives, the option that had the most positive score was the full station redevelopment. Providing this level of development would meet all of the strategic objectives and convert the station to be accessible for all types of users. The option with the least positive score was 'do minimum'.

3.5 ASSESSMENT AGAINST THAMES VALLEY BERKSHIRE (LEP) STRATEGIC ECONOMIC PLAN (2015/16-2020/21)

3.5.1 This section assesses the options that have been derived against the key LEP economic objectives, through qualitative analysis and then assignment of a score to enable comparison between options. An example of this is shown in **Table 1.4** below. Options will be measured on a scale of impact from --- (negative) to +++ (positive).

Table 3-3: Assessing options against LEP Packages

STRATEGIC OBJECTIVE	Do MINIMUM	Do MINIMUM + CAR PARK EXPANSION	Do MINIMUM + NEW STATION BUILDING/LIFTS TO PLATFORM	FULL STATION REDEVELOPMENT
1) Unlocking housing development	<ul style="list-style-type: none"> → The name change to include 'Parkway' as reviewed in the previous analysis, through the increase of train usage could encourage modal shift from the local road network onto the trains. → From any resultant spare capacity on the local road network this could unlock local housing development. 	<ul style="list-style-type: none"> → The increased car parking capacity generated through expansion will encourage drivers to alter commuting habits. → Drivers that would normally be travelling into central Reading on the local road network could then choose to take advantage of the increased parking capacity. → This would create an increased positive impact than described in the 'Do Minimum' option. 	<ul style="list-style-type: none"> → This would also have the benefits described in the 'Do Minimum' option. 	<ul style="list-style-type: none"> → A full station redevelopment would have all of the benefits previously described. → A 'full' redevelopment would make housing development in the area more attractive.
Score	+	++	+	+++
2) Enhancing urban connectivity	<ul style="list-style-type: none"> → This option through failing to add any transport infrastructure will disadvantage urban connectivity for future growth. 	<ul style="list-style-type: none"> → The increased car parking capacity at the station would provide more space for local residents to use the station as part of a longer commuter journey and provide simple and efficient access to the station, enhancing urban connectivity and reducing journey times. 	<ul style="list-style-type: none"> → The construction of new lifts at the station will directly enhance urban connectivity for disabled people, cyclists that need to take a pedal cycle on the train and people with push chairs that would normally use alternative modes of transport. → A new station building would be equipped with 	<ul style="list-style-type: none"> → A full station redevelopment would have a combination of all of the benefits previously described in the other options and would provide a complete package of urban connectivity enhancements.

STRATEGIC OBJECTIVE	Do MINIMUM	Do MINIMUM + CAR PARK EXPANSION	Do MINIMUM + NEW STATION BUILDING/LIFTS TO PLATFORM	FULL STATION REDEVELOPMENT
			customer service screens showing the latest bus and train times improving urban connectivity and synthesis with a range of sustainable transport options.	
Score	-	+	++	+++
3) Encouraging vibrant town centres	→ This option will not have a significant impact on this objective.	→ This option will not have a significant impact on this objective.	→ A new station building will improve public perception of the area around Winnersh and through this improved perception contribute towards encouraging a vibrant town centre.	→ A full station redevelopment would be both modern and aesthetically pleasing. → In combination with Winnersh Triangle Business Park, future housing growth and development encourage a vibrant town centre.
Score	Neutral	Neutral	+	++
4) Positioning TVB for a digital future	→ The 'Do minimum' option would be unlikely to have a significant impact on this objective.	→ This option will not have a significant impact on this objective.	→ A new station building could be equipped with the latest customer service information screens that could be a combination of local bus information as part of the park and ride and the train times to all available destinations. → The integration of technology and public transport information will support the positioning of TVB for a digital future.	→ A full station redevelopment would have all of the benefits described in the previous options.
Score	Neutral	Neutral	++	++
5) Foundations for future growth – housing, transport,	→ The Parkway name and extended ticket office hours	→ The increased car parking capacity will provide space for	→ In the future there will be greater demand for the local transport	→ This would include all of the benefits of the

STRATEGIC OBJECTIVE	Do MINIMUM	Do MINIMUM + CAR PARK EXPANSION	Do MINIMUM + NEW STATION BUILDING/LIFTS TO PLATFORM	FULL STATION REDEVELOPMENT
utilities	would provide the first steps for future growth, however this would be required to be part of a larger station redevelopment to provide the capacity and foundations for future growth in the area.	<p>future development growth at Winnersh.</p> <p>→ The increased future residential growth will generate vehicles that would have otherwise used the strategic road network whilst commuting and will be able to instead use the expanded car park.</p> <p>→ This would include the benefits described in the 'do minimum' option.</p>	network , through construction of lifts and a new station building this will prepare for future growth at the station .	previous options.
Score	Neutral	++	+	++
6) Enhancing the strategic growth network	→ The 'Do minimum' option would be unlikely to have a significant impact on this objective.	→ The construction of a car park will encourage an increased modal shift to the train service, this would reduce the number of vehicles that are using the strategic road network and through an increase in spare capacity, enhance the strategic growth network.	→ This option would be unlikely to have a significant impact on this objective.	→ A full station redevelopment would include the benefits from the 'Do Minimum and Car Park Expansion'.
Score	Neutral	+	Neutral	+
AVERAGE SCORE	Neutral	+	+	++

3.5.2

Following this assessment the 'full station redevelopment' has been assigned the most positive score on average across the packages outlined in the SEP, this option would fully or partially meet these. A fully accessible transport interchange can have a wide range of benefits for local communities as shown in the above analysis. The 'do minimum' option has the least positive score for a second time.

3.6

ASSESSMENT OF DELIVERABILITY AND FEASIBILITY AGAINST KEY CRITERIA

The focus of this assessment will be to consider the overall feasibility of various factors through qualitative analysis. The factors to be considered are set out below in **Table 1.5**. Options will be ranked against each factor. The 'do minimum' option has been scored least positively over the previous two sections and as a result of this has been 'sifted' from this analysis as it is considered not to be a suitable option as it does not meet strategic transport or SEP objectives.

Table 3-4: Evaluation Criteria

EVALUATION CRITERIA	DESCRIPTION
Infrastructure Feasibility	This will consider any transport infrastructure measures that would be required as a result of the development.
Operational Feasibility	This will consider the operational challenges for the local train operators for each option.
Property / Land Take Requirements	This will consider any additional land or property issues.
Environmental Impact (Local)	This will assess the local environmental impacts.
Complexity of Delivery	This will assess the potential difficulties and complexities of delivering each option.
Stakeholder acceptance / support	This will outline potential stakeholder acceptance and support.
Cost	This will provide an estimation of cost for each option.
Benefits	This will consider the key benefits of each option
Affordability	This will consider the affordability of each option. Including estimating potential usage and benefits against cost.
Overall Rank	Following the evaluation criteria an overall rank will be assigned for each option.

Table 3-5: Assessing Options against Deliverability and Feasibility

STRATEGIC OBJECTIVE	DO MINIMUM + CAR PARK EXPANSION	DO MINIMUM + NEW STATION BUILDING/LIFTS TO PLATFORM	FULL STATION REDEVELOPMENT
Infrastructure Feasibility	→ The car park expansion would be decked and is a fairly significant piece of infrastructure.	→ The new lifts and station building would be a significant piece of new infrastructure. The lifts could be fairly complex due to the high position of the station, would need to ascertain level of complexity.	→ This would involve all of the transport infrastructure improvements.
Rank	1	2	2
Operational Feasibility	→ A car park expansion would need to be planned so that there would be no impact on the long term day to day operation of the train network, the main impact of this would be during the construction period and drivers may need to park elsewhere.	→ The new lifts and station building would be a significant piece of new infrastructure, further investigation would need to be completed to assess the feasibility levels as SWT expressed concern over the station platform widths.	→ This option would include all of the operational challenges of the previous options.
Rank	1	2	2
Property / Land Take Requirements	→ This would require no further land take due to the decked nature of the car	→ This would require no further land take.	→ This would require no further land take.

	park proposals.		
Rank	1	1	1
Environmental Impact (Local)	<ul style="list-style-type: none"> → Local to the station there will be an increase in the number of cars and therefore increased emissions and environmental impact. → An appropriate sustainable drainage system to mitigate any environmental impacts may be required, if implemented correctly this option would be unlikely to have a significant environmental impact. 	<ul style="list-style-type: none"> → Appropriate environmental considerations would need to be made before construction would begin. 	<ul style="list-style-type: none"> → This option would include all of environmental considerations of the previous options
Rank	2	1	2
Complexity of Delivery	<ul style="list-style-type: none"> → Delivery of the car park expansion will require more planning than the 'do minimum' option and will be fairly complex in comparison. 	<ul style="list-style-type: none"> → Delivery could potentially be quite complex due to the short width of the platforms. This option requires the construction of a new station building that would need to be designed to accommodate the infrastructure. 	<ul style="list-style-type: none"> → The delivery would have all of the complexities of the previous option.
Rank	1	2	2
Stakeholder acceptance / support	<ul style="list-style-type: none"> → This option would be likely to get a similar level of stakeholder support as the 'do minimum' option. 	<ul style="list-style-type: none"> → Patrizia would be likely to accept and support this option as a new station building would be attractive and the increased accessibility would be likely to fit their needs. → SWT support and acceptance would depend on the funding available in the future. 	<ul style="list-style-type: none"> → Patrizia would be likely to accept and support this option as it includes a full station redevelopment. → SWT support and acceptance would depend on the funding available in the future.
Rank	3	2	1
Cost	<ul style="list-style-type: none"> → The cost of expanding the car park TBC 	<ul style="list-style-type: none"> → To convert Winnersh Triangle to a fully accessible station with toilets, SWT estimate that this would cost 	<ul style="list-style-type: none"> → To convert Winnersh Triangle to a fully accessible station with toilets, SWT estimate that this would cost approximately

		<p>approximately £1.5m</p> <p>→ The costs included in the 'do minimum' option would be an additional cost.</p> <p>→ The total cost for this option would be approximately £1.7m.</p>	<p>£1.5m.</p> <p>→ The cost of a car park TBC</p>
Rank	1	2	3
Benefits	<p>→ The increased car parking capacity at the station will protect against future population growth and usage of the park and ride facilities.</p> <p>→ This option would include all of the benefits of the 'do minimum' scenario.</p>	<p>→ The fully accessible station building will allow all types of users to have access to the rail network and the new facilities at the station.</p> <p>→ The new station building will improve the attractiveness of the station and the business park to new tenants.</p> <p>→ This option would include all of the benefits of the 'do minimum' scenario.</p>	<p>→ This option would include all benefits in the previous options and would be a truly parkway station.</p>
Rank	2	3	1
Affordability	<p>→ This option would likely to be both affordable and is likely to have limited benefits.</p>	<p>→ This would be one of the more expensive options but will provide many benefits. Affordability would be a result of the funding opportunities available.</p>	<p>→ This would be the most expensive option and affordability would be a result of the funding opportunities available. There are a large range of benefits that would result from this however, therefore this should affect the affordability rank.</p>
Rank	3	2	1
OVERALL RANK	1	2	1

3.6.1 The 'do minimum and car park expansion' and the 'full station redevelopment' have resulted on average as being the preferred options when being compared against the deliverability and feasibility factors. This differs from the previous two sections where the full station redevelopment was the only preferred option.

4 CONCLUSION

4.1.1 This section summarises the each of the options and reasons for selection or non-selection as a preferred option.

- **Do Minimum** – This option scored the least positively over the first two sections of analysis. Without introducing any physical infrastructure measures to the station all of the issues that were previously identified in Section 2 will still remain and are likely to be exacerbated by future growth. Future occupiers at Winnersh Triangle Business park could be discouraged due to the station condition.
- **Do Minimum and car park expansion** – This is considered to be a secondary preferred option as it offers a range of benefits. When compared against deliverability and feasibility scoring joint highest with the full station redevelopment. A new car park will provide increased capacity for future growth and a partial solution to the issues highlighted.
- **Do Minimum and new station building/lifts to platform:** This option scored positively during the first two sections of analysis, however scoring slightly lower in the final section. This option, whilst bringing a range of benefits and enable a greater variety of users at the station, would likely not provide capacity for future growth.
- **Full Station Redevelopment** – This is considered to be the main preferred option as it scored highest on the first two sections of analysis and joint highest in the final analysis. A full station redevelopment will ensure that Winnersh Triangle station is well placed for future growth, accessible for all types of users and a true parkway transport interchange.

4.1.2 The '**Full Station Redevelopment**' is recommended to be taken further to a full business case to assess all aspects of the redevelopment, but it should be noted that '**Do Minimum and car park expansion**' scores as well as Full Station Redevelopment against Deliverability and Feasibility.

Appendix A

MEETING MINUTES

MEETING NOTES



Job Title	Winnersh Parkway Study
Project Number	70012747
Date	21 May 2015
Time	10.00am
Venue	Management Suite, 1000 Eskdale Road, Winnersh Triangle, RG41 5TS
Subject	Winnersh Parkway Study
Client	WBC
Present	Tom Beck, Luke Bacon, Beverly Harrison (Patrizia) and Will Laurie (Patrizia)
Apologies	
Distribution	As above.

Mountbatten House
Basing View
Basingstoke
Hants
RG21 4HJ

Tel: +4 (4) 1256 318 800
Fax: +4 (4) 1256 318 800

www.wspgroup.com
www.pbworld.com

MATTERS ARISING	ACTION
1.0 INTRODUCTION	
1.1 TB introduced WSP Parsons Brinckerhoff role in the Winnersh Parkway Study project.	
2.0 CURRENT STATION CONDITION	
2.1 Patrizia stated the following regarding the station conditions “ <i>The presentation of the park is hugely important to us. We are constantly marketing the park, both to new and existing tenants, as a high quality centre for business. For those travelling to the park by train, the poor and dated condition of the station creates a disappointing first impression, which does us a disservice. Having a modern, well-presented train station, with appropriate facilities and access, and one that’s consistent with the quality of our estate, would enhance the arrival experience at Winnersh Triangle and therefore assist in us attracting and retaining dynamic businesses.</i> ”	
2.2 Patrizia outlined the issues with the current station condition including the following: <ul style="list-style-type: none">→ There is no disabled access at the station.→ There is often a rat and rubbish problem around the station.→ The condition of the platform and the benches is currently unsuitable.→ The footways do not take the quickest route to the station leading pedestrians to take a shortcut along the road.→ They are aiming to attract new tenants and Winnersh Triangle station currently lets down the business park.	
3.0 SUMMARY OF STUDY OBJECTIVES	
3.1 TB set out the end state of the project and provided the definition of a parkway station and stated that the vision for a parkway station at this location is a transport interchange offering access to a variety of transport modes not just the train.	
3.2 The study objective is to ensure that Winnersh Triangle Station is prioritised on	

Meeting Notes

MATTERS ARISING

ACTION

any future funding rounds, including Thames Valley Berkshire LEP.

4.0 SCHEME SUPPORT

- 4.1 Patrizia are generally supportive of the scheme to upgrade the station. A new station upgrade could be positive to working life and they pitched support towards a station improvement bid two years ago. Patrizia would like to be involved in discussions in the future.
- 4.2 Patrizia could potentially be opposed to a station name change which did not include "Winnersh Triangle" as it currently fits well with the business park name.

5.0 FUTURE BUSINESS PARK UTILISATION

- 5.1 Patrizia are currently building one new office offering 60,000sqft of office space and capacity for up to 500 staff, construction is expected to be completed in Q1 2016
- 5.2 An additional site will offer 105,000sqft of office space and is currently awaiting a tenant before proceeding.
- 5.3 A further site is planned for the future and will offer up to 150,000sqft with capacity for 1100 staff and would be the largest office at the business park.
- 5.4 If all of these new offices were constructed it could result in an increase of 2600+ staff at the business park.

6.0 EXISTING BUSINESS PARK PARKING SITUATION

- 6.1 Currently there is strong competition for car parking spaces within the business park. There is capacity for approximately one space per two employees.
- 6.2 There are some ongoing difficulties with people parking in spaces that they have not been allocated to them. TB raised the need to discourage any new spaces at the Station being used by business park employees.
- 6.3 Retail parking at the business park is currently used as an unofficial visitors parking area.

7.0 FUNDING

- 7.1 Patrizia are currently involved in planning obligation s106 discussions with the objective to restructure the agreement with WBC. Patrizia would potentially be willing to commit some funding as part of a group of stakeholders depending on the results of the discussions.

NEXT MEETING

An invitation will be issued if an additional meeting is required.

MEETING NOTES



Job Title	Winnersh Parkway Study
Project Number	70012747
Date	04 June 2015
Time	10am
Venue	Clapham Junction Office
Subject	Winnersh Parkway Study
Client	WBC
Present	Tom Beck (WSP), Luke Bacon (WSP), Malcolm Page (SWT) and Phil Dominey (SWT)
Apologies	-
Distribution	As above.

Mountbatten House
Basing View
Basingstoke
RG21 4HJ

Tel: 01256 318800
Fax: 01256 318700

www.wspgroup.com
www.pbworld.com

MATTERS ARISING	ACTION
1.0 INTRODUCTION	
1.1 TB introduced the project and discussed the history of the project.	
1.2 TB discussed the options that were considered previously including lifts or ramps. (Note: car park is owned and operated by WBC, not SWT)	
2.0 POTENTIAL FUNDING	
2.1 SWT outlined areas of potential funding for Station improvements: <ul style="list-style-type: none">→ NSIP (would not be available until the beginning of Control Period 5 in 2019);→ SCPF (would not be available as work must be completed 18 months before the end of the control period, therefore there is too much risk for the rail company;→ LEP (potentially available).	
2.2 SWT stated that they would be unlikely to currently commit funding and that this should be sought from alternative sources, suggesting that there should be a Masterplan with a phased approach, seeking to show that there is an increased demand following each phase.	
3.0 OPTIONS / SCALE OF COST	
3.1 SWT used the Virginia Water Station redevelopment as an example with a £1.2m-£1.3m overall cost to replace the existing station building with a booking hall, toilet, ticket office and associated facilities.	
3.2 SWT stated that to build two lifts and a footbridge this would cost in the region of £1.8m.	
3.3 SWT noted that the electrical mast would potentially need to be relocated and the power upgrade, adding approximately £600k to the project.	
3.4 SWT stated that typically they would prefer to build a ramp instead of lifts, however this may be challenging due to height of the station platform.	
3.5 SWT predicted to implement lifts at Winnersh Triangle station would cost approximately £1m as a footbridge would not be required (both platforms could be accessed from the subway level).	

MATTERS ARISING	ACTION
4.0 CURRENT STATION CONDITIONS	
4.1 There are currently poor shelters on the platform and this may result in the requirement to extend the platform far enough to enable disabled access. SWT to provide current dimensions for Winnersh Triangle.	SWT
5.0 CURRENT AND FUTURE STATION USAGE	
5.1 TB asked for any statistics that could show the current proportion of passengers travelling from Winnersh Triangle to Reading or London.	SWT
5.2 TB outlined that approximately 12% of the business park employees currently use Winnersh Triangle Station to commute to work.	
5.3 Network Rail are looking at options including four trains per hour throughout the day between Reading and London Waterloo, however these could be potentially be diverted via Ascot dependent upon which route greater supports the service as a whole.	
5.4 SWT noted that Winnersh Triangle Station could become more attractive dependent upon which airport is selected for an additional runway.	
6.0 SWT CONSIDERATIONS WHEN IMPROVING STATION ACCESSIBILITY	
6.1 SWT outlined the categories that they would consider when deciding whether or not to upgrade a station's accessibility, these include the following: <ul style="list-style-type: none"> → current and future predictions of footfall; → geographic spread of residents; → location of key local facilities including schools, hospitals and specialist rehabilitation centres; → connectivity to other modes of transport and operators; → number of potential users of the improved accessible facilities (as part of supporting this case, consider companies supporting their corporate responsibilities); and → calculation of a benefit cost ratio. 	
7.0 STATION BUILDING	
7.1 The station building would not get money for restoration under life expiry grounds as it is within the design life.	
7.2 To help staff the building beyond current morning only opening a contribution of approximately £100k would be required. (~£30k a year for a new staff member)	
7.3 To add toilets approximately £100k would be required.	
7.4 Customer Information Screens ~ £7.5k-£10k	
7.5 SWT estimates to convert Winnersh Triangle to a fully accessible station with toilets would cost approximately £1.5m.	
8.0 OTHER	
8.1 SWT suggested that a shared use waiting area could be considered, using a contribution for additional staff. Staff could be trained to cover tickets for both the Park & Ride service and train service.	
9.0 PARKWAY STRATEGY	
9.1 MP and PD recommend that the station be renamed to Parkway as soon as possible to gain the most from the enhance car park provision. This could then make the case for decked parking in the future. Clear signage on the roads could	

Meeting Notes

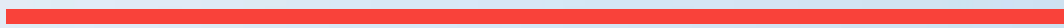
MATTERS ARISING	ACTION
further encourage increased uptake of train usage.	
9.2 Survey information has already shown that there are a significant proportion of staff already using the train that are employed at the Business Park. Passenger usage has increased significantly over the last few years at the Station, this could be potentially due to businesses being made more aware in the Travel Plan.	
9.3 MP suggested the following strategy:	
→ Predict future usage.	
→ Change Name and promotion.	
→ Show the growth after the name change.	
→ Rebranding could improve the likelihood of the station being allocated funding in CP6.	

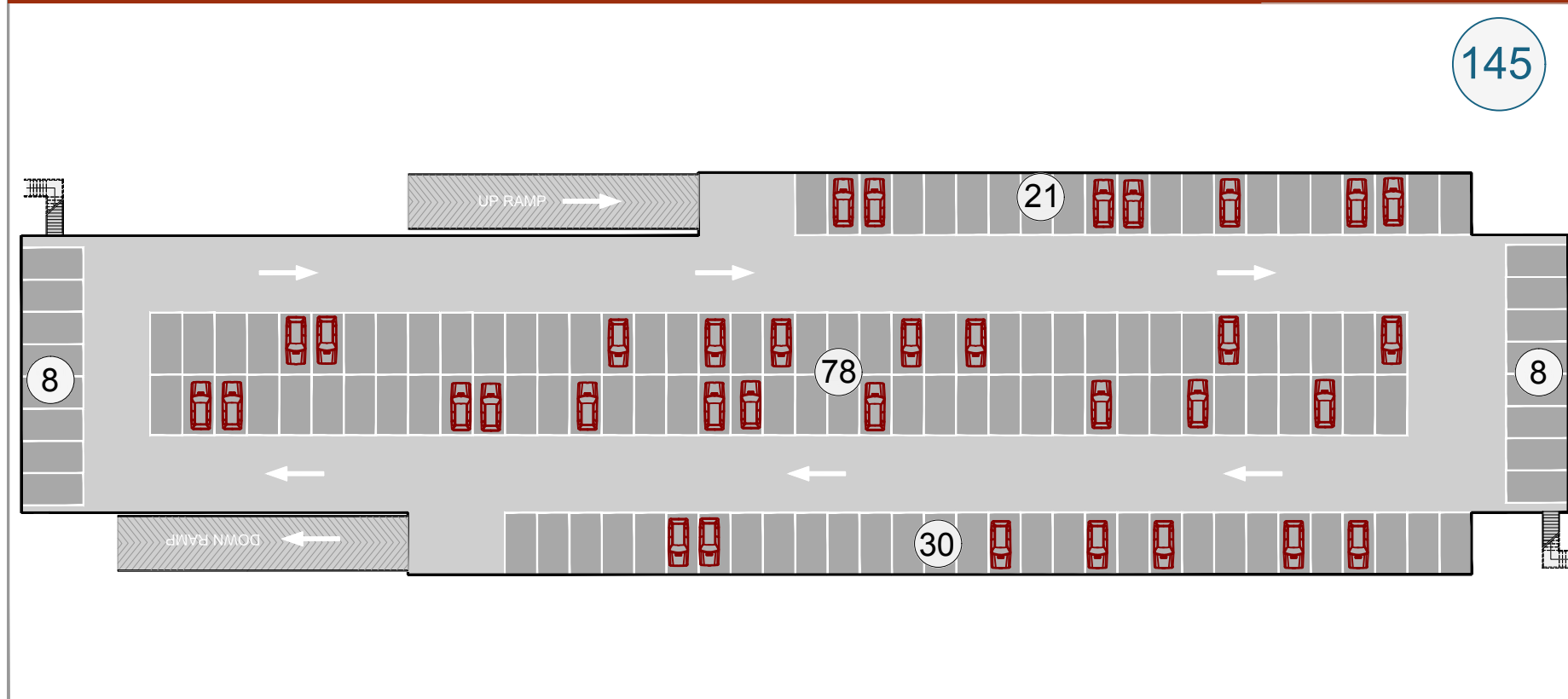
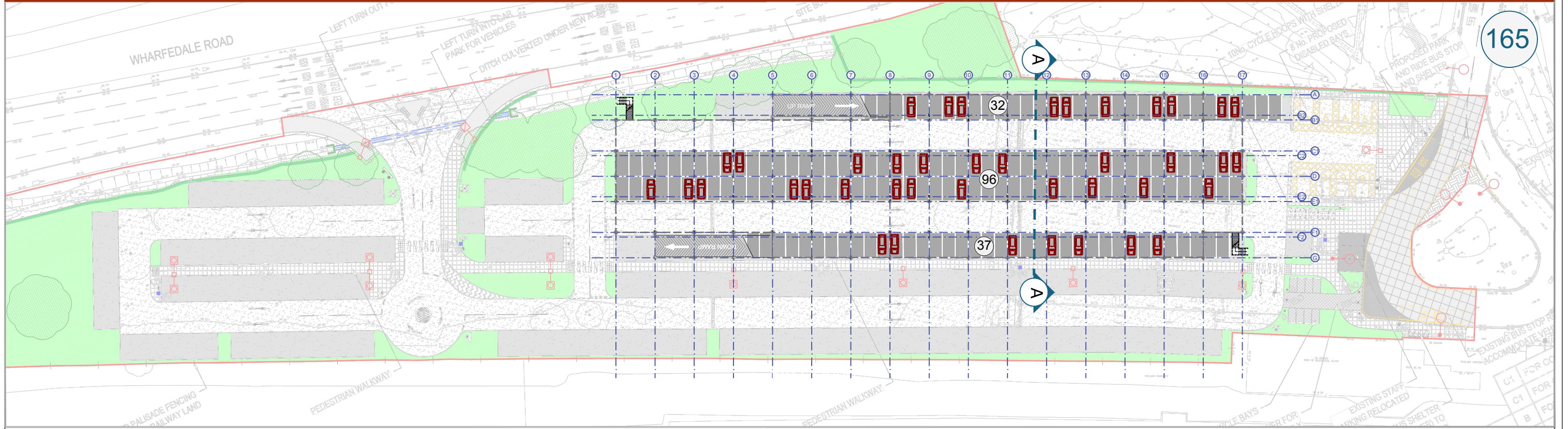
NEXT MEETING

An invitation will be issued if an additional meeting is required.

Appendix D

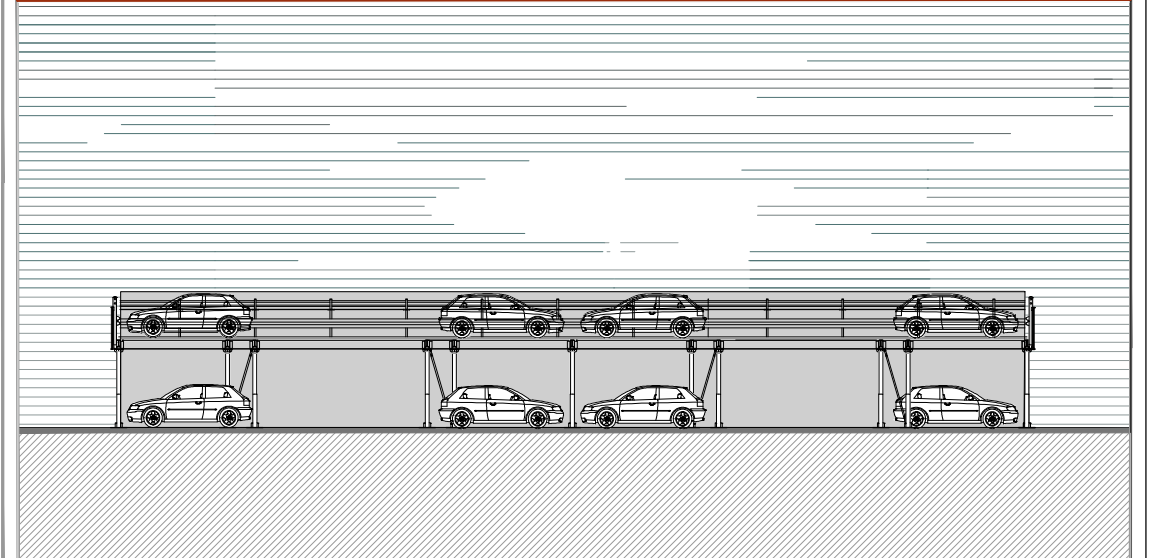
DECKING DRAWING





145

Floor	Places
GF	165
FF	145
TOT	310



LOCATION UK - Winnersh Triangle

DRAWING Ground floor, first floor and section

DATE	SCALE	ORDER
15 01 2019	Varies	562_UK_RG41_01a_00

DRAFT

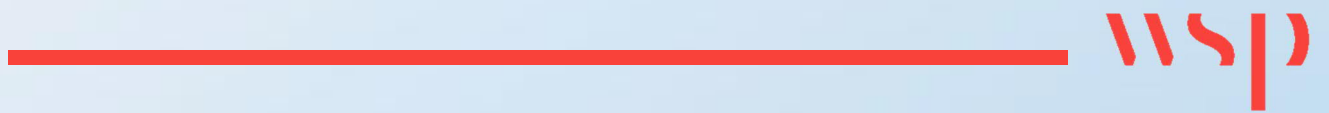
Copyright © and IP rights - SIDERPARK LTD 2016
 The copyright and all intellectual property rights in this document referred hereinafter as "Protected content" is owned by Siderpark Ltd. Siderpark Ltd grants to you a non-exclusive royalty-free revocable license to view on a computer or mobile device the Protected content for your own [personal and non-commercial] use; print pages of the Protected content for your own [personal and non-commercial] use. Siderpark Ltd does not grant you any other rights in relation to the Protected content. All other rights are reserved to Siderpark Ltd. For the avoidance of doubt, you are not authorized and must not adapt, edit, change, transform, copy, download, save, publish, republish, distribute, redistribute, broadcast, rebroadcast or show or play in public (in any form or media) the Protected content without Siderpark Ltd's prior written permission. The Protected content is intended solely for use -as above granted- of the person or entity that it is addressed to. You are not authorized and must not offer, communicate, pass, share, or otherwise transmit to third parties the Protected content.



SIDERPARK S.R.L.
 Loc. Le Campora
 67060 Oricola (AQ) - Italy
 Tel (D): (+49) 711 965 893 27
 www.siderpark.com; info@siderpark.com

Appendix E

ASR

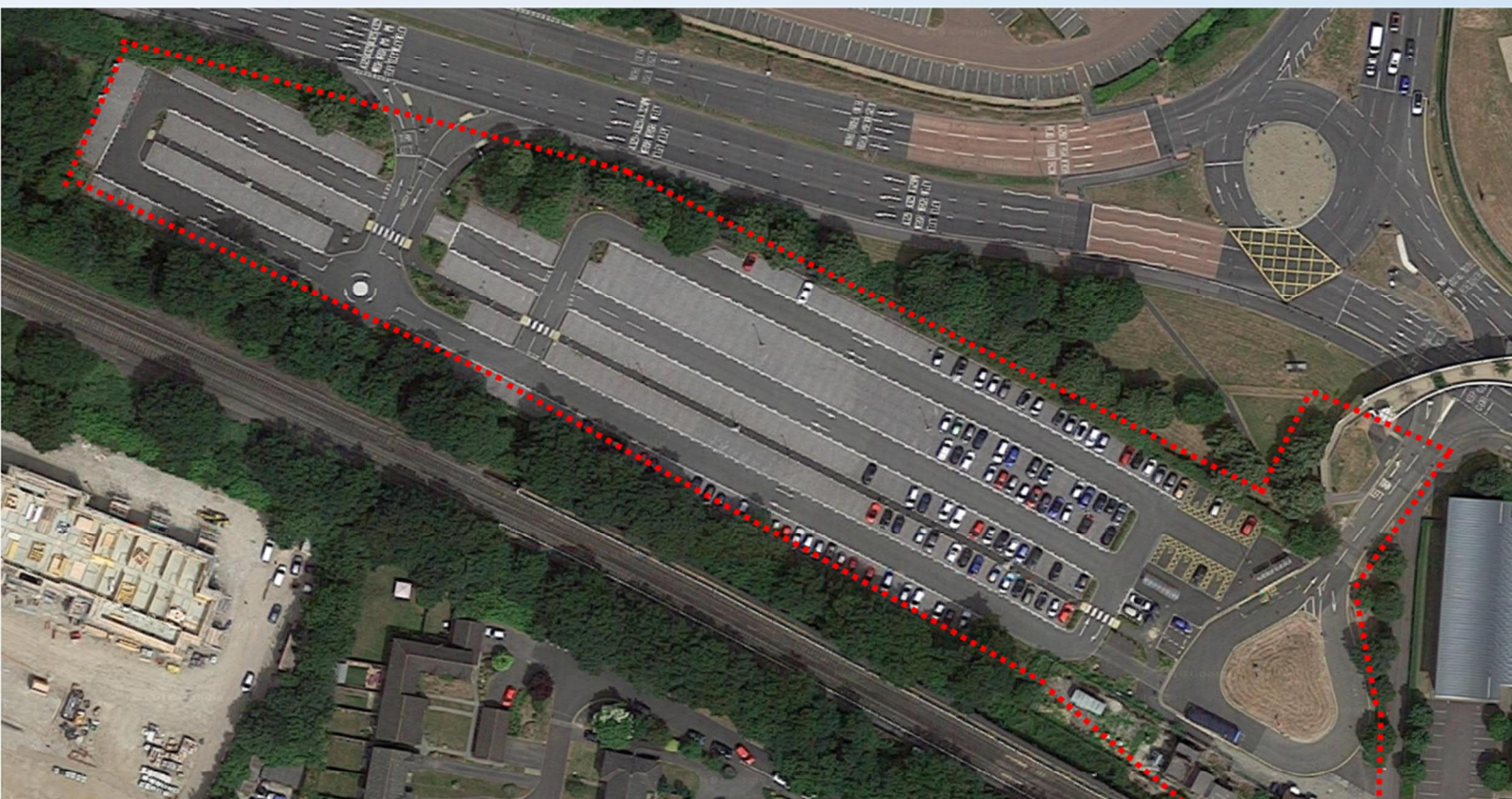




Wokingham Borough Council

WINNERSH TRIANGLE PARKWAY

Appraisal Specification Report (ASR)





Wokingham Borough Council

WINNERSH TRIANGLE PARKWAY

Appraisal Specification Report (ASR)

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70042838

OUR REF. NO. DRAFT

DATE: DECEMBER 2018

WSP

2 London Square

Cross Lanes

Guildford, Surrey

GU1 1UN

Phone: +44 148 352 8400

WSP.com



QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	1 st Draft			
Date	17 December 2018			
Prepared by	Oliver Stone-Houghton			
Signature				
Checked by	Rohan McGinn			
Signature				
Authorised by	Nidhish George			
Signature				
Project number	70042838			
Report number	70042838-Winnersh Triangle-ASR			
File reference	\\uk.wspgroup.com\central data\Projects\700428xx\70042838 - Wokingham-Winnersh Tr Parkway\02 WIP\TP Transport planning\03 Document\1. ASR			

CONTENTS

1	INTRODUCTION	1
1.1	PURPOSE OF THE REPORT	1
1.2	SCHEME SUMMARY	1
1.3	SCHEME OBJECTIVES	2
1.4	LOCATION PLAN	3
2	CHALLENGES AND ISSUES	5
2.1	KEY ISSUES	5
2.2	OUTCOMES OF THE SCHEME	5
2.3	EXPECTED OUTCOMES	6
2.4	DELIVERABILITY AND RISKS	7
3	MODELLING AND APPRAISAL METHODOLOGY	9
3.1	ECONOMIC ASSESSMENT	9
3.2	APPRAISAL OF THE DECKED CAR PARK	10
3.3	APPRAISAL OF STATION IMPROVEMENTS	12
3.4	RELIABILITY	12
3.5	WIDER ECONOMIC IMPACTS	13
3.6	SOCIAL / DISTRIBUTIONAL ASSESSMENT	13
3.7	ENVIRONMENTAL ASSESSMENT	13
4	APPRAISAL SPECIFICATION SUMMARY TABLE	14

TABLES

Table 1-1 - Scheme objectives	2
Table 2-1 – Options considered	6



Table 2-2 - Risks and Mitigations	7
Table 4-1 – Appraisal Specification Summary Table (ASST)	15

FIGURES

Figure 1-1 - Existing Winnersh Park & Ride site	2
Figure 1-2 - Location plan	3
Figure 1-3 - Aerial photo	4

1 INTRODUCTION

1.1 PURPOSE OF THE REPORT

- 1.1.1. WSP has been commissioned by Wokingham Borough Council to produce a full transport business case in support of the Winnersh Triangle Park and Ride scheme.
- 1.1.2. This document is intended to enable agreement between Hatch Regeneris, who are acting as the Independent Technical Evaluator (ITE) on behalf of Thames Valley Berkshire Local Enterprise Partnership (TVB LEP), and WSP, on the scope of appraisal work to be undertaken in relation to the transport business case.
- 1.1.3. The Department for Transport's (DfT) 'The Transport Appraisal Process' states that an Appraisal Specification Report (ASR) should be submitted. This document should detail the:
- proposed approach to modelling and forecasting
 - the proposed methodology for assessing each of the sub-impacts presented within the Appraisal Summary Table (AST)
 - proposed level of design or specification which will inform the cost estimation, and how better cost information will be obtained
 - evidence that views on the appraisal methodology have been sought from the statutory environmental bodies and others.
- 1.1.4. This report is the ASR and provides the above information.

1.2 SCHEME SUMMARY

- 1.2.1. The scheme will comprise:
- Development of a 150-space single deck car park over the existing Winnersh Triangle surface Park and Ride site, thereby improving the Park and Ride offer.
 - Improvements to the station building interior by revamping the passenger waiting area, ticketing office and the toilet.
 - Improvements to the pedestrian amenities in the station forecourt area by providing dropped kerbs and tactile paving at a key crossing location, as well as improving the access between the park and ride bus shelter.
- 1.2.2. The scheme will be located on a 1.76 ha of Wokingham Borough Council site, on the western fringe of the Winnersh Triangle Business Park and adjacent to the Winnersh Triangle railway station. A location plan of the scheme is provided at Figure 1-2. The existing Park and Ride site consists of around 390 car parking spaces, which will be increased by 150 car parking spaces by installation of the proposed deck above the existing surface level car park.
- 1.2.3. The scheme enhanced Park and Ride provision would be predominantly used by employment trips during weekdays, and leisure trips during weekends, into central Reading, thereby reducing overall road congestion along the A329(M) corridor into Reading town centre. The existing Park and Ride patronage comprises 70% bus and 20% rail park and ride users as well as 10% bus concessionaires, who are entitled to the bus Park and Ride usage after 9:30AM. It is anticipated that the proportional split in the type of users at the expanded Park and Ride will be consistent with current patterns. The

enhanced Park and Ride facility will continue to be served by Reading Buses that currently operate a service every 15 minutes into central Reading.

Figure 1-1 - Existing Winnersh Park & Ride site



1.3 SCHEME OBJECTIVES

1.3.1. The scheme objectives identified within the Options Assessment Report (OAR) dated September 2015, are still considered to be valid and are summarised at Table 1-1 below. The desired outcomes for each objective are also detailed within the table.

Table 1-1 - Scheme objectives

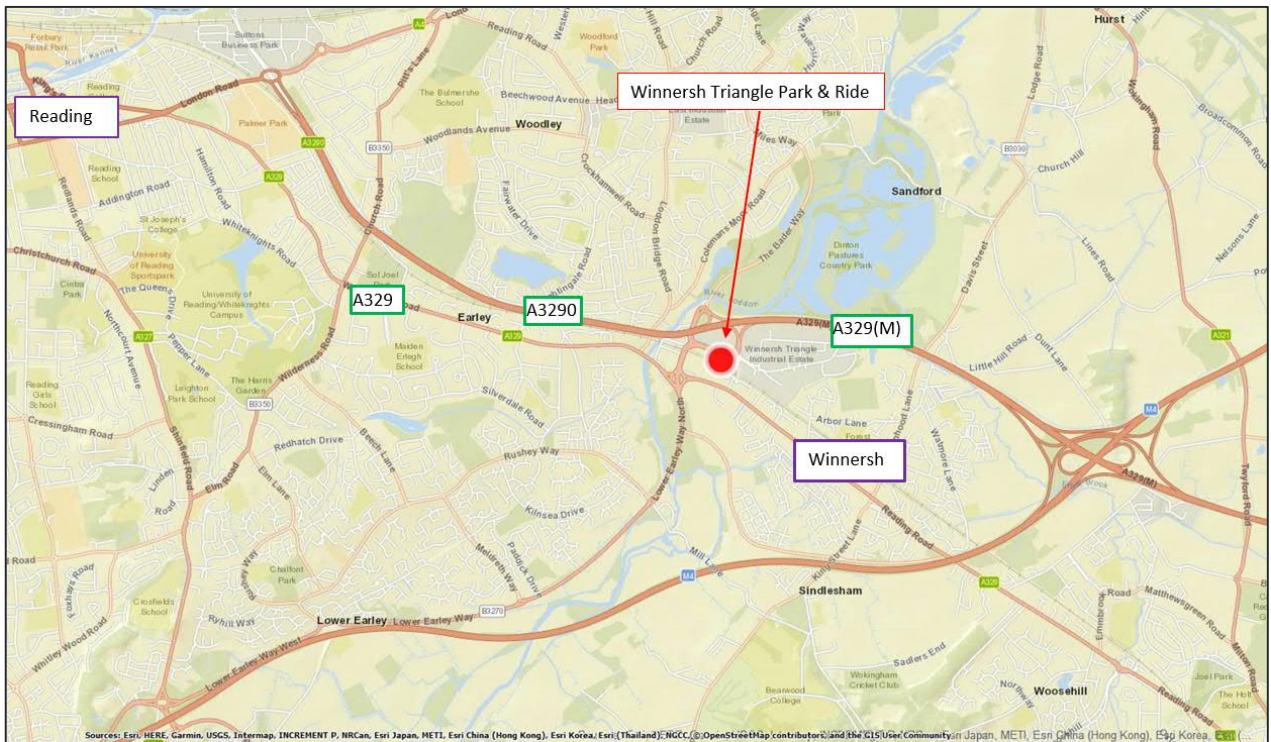
Objective	Desired outcome
1) Ensuring sustainable transport is accessible for all types of users.	<ul style="list-style-type: none"> ■ Ensuring public transport is inclusive of everyone. ■ Increase public transport usage.
2) Enabling a variety of transport choices for the public.	<ul style="list-style-type: none"> ■ Reduce the environmental impact of travel. ■ Reduce congestion. ■ Improve car journey times through a reduced mode share of people using the private car.

Objective	Desired outcome
3) Promoting sustainable transport as an alternative to the car.	<ul style="list-style-type: none"> ■ Increase public transport usage. ■ Congestion reduction. ■ Air quality improvements and noise reduction. ■ Improved journey times to key destinations.
4) Promoting economic development in Wokingham to support the production of jobs in the local area.	<ul style="list-style-type: none"> ■ Support employment and housing in Winnersh.

1.4 LOCATION PLAN

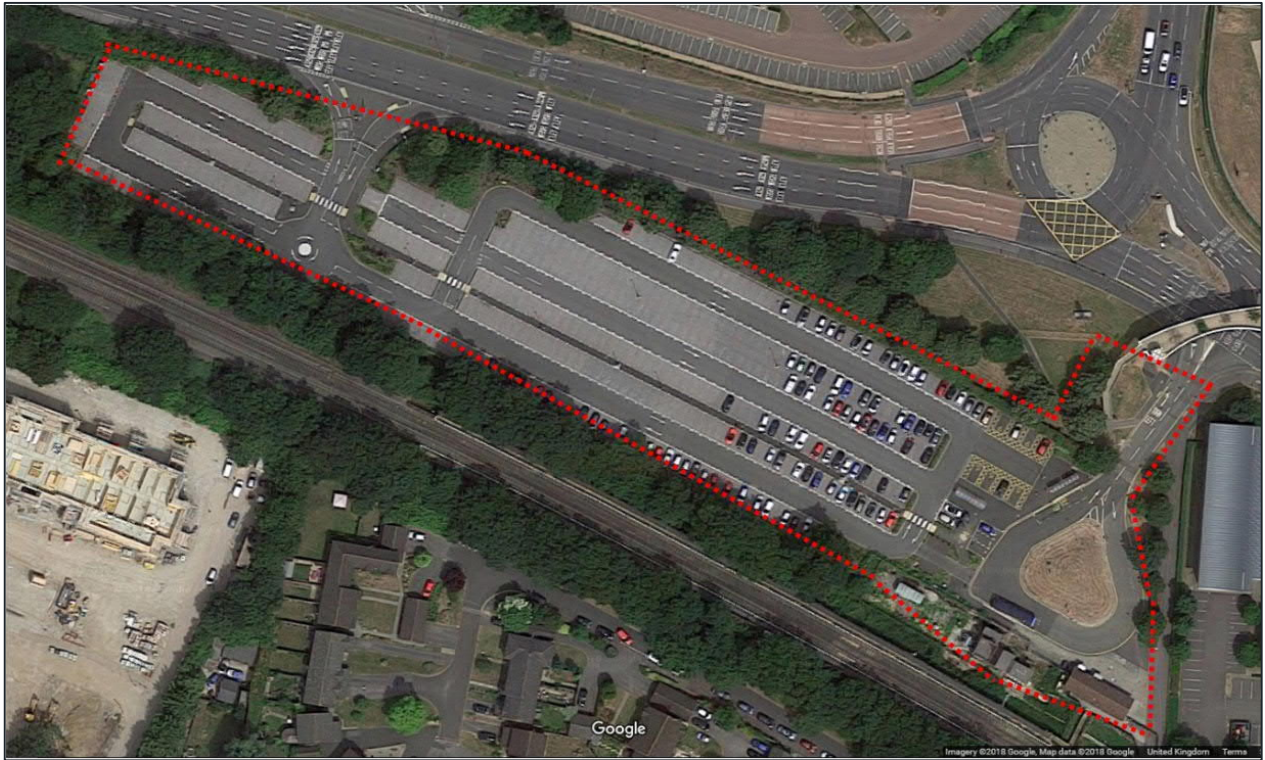
1.4.1. A location plan of the scheme is provided at Figure 1-2.

Figure 1-2 - Location plan



1.4.2. An aerial photo of the site is provided at Figure 1-3.

Figure 1-3 - Aerial photo



2 CHALLENGES AND ISSUES

2.1 KEY ISSUES

CURRENT CONGESTION AND PLANNED HOUSING GROWTH

- 2.1.1. The A329 (M) / A329 corridor is a key route for local traffic, pedestrian and bus movements. The A329 corridor comprising the A329 and the A3290, between Winnersh and Reading, experienced an average two-way daily traffic flow of approximately 78,000 vehicles in 2017¹. The corridor suffers from routine congestion and an ensuing deterioration of network resilience.
- 2.1.2. Wokingham Borough Council is set to deliver 13,000 new homes by 2026, of which 4,450 are located surrounding the A329 corridor in Winnersh (450 units), North Wokingham (1,500) and (South Wokingham (2,500).

PASSENGER GROWTH

- 2.1.3. Passenger demand at the station is set to increase further over the next few years, due to a number of factors including:
- Aspiration for more trains to stop at Winnersh Triangle
 - Planned expansion of the Winnersh Triangle Business Park
 - Future committed developments in the area
 - The general trend of increased station utilisation over the last five years
- 2.1.4. The facilities that are available do not reflect this intensification of use.

STATION FACILITIES

- 2.1.5. There are currently no customer toilets available and no customer information screen. Staffing is limited to Monday-Friday (06:00-11:00 hours) and Saturday mornings (08:00-13:00 hours).
- 2.1.6. As part of the consultation of the proposed schemes at Winnersh Triangle, Patrizia, the owners of the Winnersh Triangle Business Park, has emphasised that having a well-presented train station with appropriate facilities and access, and one that is consistent with the quality of their estate, would enhance the arrival experience at Winnersh Triangle and therefore assist in the business park attracting and retaining dynamic businesses. Apart from the lack of amenities within the station building, one of the issues highlighted by Patrizia was the lack of a direct, coherent and safe pedestrian route between the forecourt and the station building and platform.

2.2 OUTCOMES OF THE SCHEME

CONSEQUENCE OF 'DOING NOTHING'

- 2.2.1. Specific outcomes of a 'Do Nothing' case include:

¹ <https://www.dft.gov.uk/traffic-counts/>

- Without the introduction of the scheme, congestion along the A329/A329(M)/A3290 will remain and become intensified by future traffic growth planned residential developments, as well as employment areas.
- The opportunity to establish Winnersh Triangle station as a key transport interchange to increase the uptake of sustainable modes of transport, therefore reducing demand on the local road network, would be lost.
- Station facilities will continue to be lacking with limited staffing, no customer toilets, no customer information screen and poor pedestrian access facilities.

OPTIONS CONSIDERED

2.2.2. The need to deliver and retain Park and Ride facilities at four locations to “*complement the high quality express bus services or mass rapid transit along the A4 or A329 corridors into central Reading*” has been well established and enshrined in policy within Wokingham Borough Council’s Local Transport Plan. Alternative options to a Park and Ride facility have not therefore been considered as part of the options appraisal process. However, a number of sub-options were considered within the Options Assessment Report and these are summarised in Table 2-1.

Table 2-1 – Options considered

Objective	Desired outcome
Do minimum	<ul style="list-style-type: none"> ■ Name change to include Parkway; and ■ Extended ticket office opening hours.
Do Minimum + car park expansion	<ul style="list-style-type: none"> ■ Name change to include Parkway; ■ Extended ticket office opening hours; and ■ Car park expansion (i.e. decked).
Do Minimum + new station building/lifts to platform	<ul style="list-style-type: none"> ■ Name change to include Parkway; ■ Construct accessible toilets ■ Construction of new station building; and ■ Lifts to platforms.
Full Station Redevelopment	<ul style="list-style-type: none"> ■ Name change to include Parkway; ■ Construct accessible toilets; ■ Construction of new station building; ■ Lifts to platforms; and ■ Expanded car park (i.e. decked).

2.2.3. Prohibitive costs and engineering challenges, particularly with the delivery of step free access to the platform, has resulted in the Council’s decision to proceed with the development of a decked car park and the improvements to station buildings and surrounding land.

2.3 EXPECTED OUTCOMES

2.3.1. The scheme will enhance access into Reading, including its key shopping, leisure and employment areas. In combination with the existing park and ride facility at Moreoak, and the planned facility at the Thames Valley Business Park, it would potentially encourage people who currently drive into central

Reading to switch and use the park and ride instead, thereby contributing to a reduction in traffic volumes.

- 2.3.2. The scheme will support the forecast housing and employment growth within Wokingham by offering a wider range of sustainable travel opportunities for commuters and leisure travellers alike.
- 2.3.3. The enhanced amenities and increased parking at the Winnersh Triangle station would improve the perception of the station as a key transport interchange, which in turn would strengthen the case for increasing the number of services calling at the station as well as providing step free access to the platforms and revamping the existing platforms, which are in poor state of repair. The Council is proactively seeking alternative funding opportunities for these longstanding aspirations.
- 2.3.4. The scheme would contribute towards delivering the expansion plans for the Winnersh Triangle Business Park by improving the station amenities.

2.4 DELIVERABILITY AND RISKS

- 2.4.1. There are no major risks associated with the deliverability of the scheme. The land required for the scheme is owned by Wokingham Borough Council, thereby eliminating any risk associated with land acquisition. The scheme is essentially a stand-alone scheme, which can be designed, costed and constructed regardless of whether other schemes are progressed. No other schemes have been identified which may have a direct bearing on the successful delivery of the scheme.
- 2.4.2. The delivery of the scheme is contingent on securing the necessary planning approvals. However, no significant risks are envisaged that could affect a favourable planning application outcome. The site is an existing transport interchange with no known environmental sensitivities. Need for any potential off-site highway mitigation measures would be explored as part of the modelling process by examining the change in levels of service at the junctions in the vicinity of the park and ride. Costs for any highway mitigation will be robustly captured through a Quantified Risk Assessment (QRA).

PRINCIPAL RISKS AND MITIGATION ACTIONS

- 2.4.3. Risks associated with the scheme are summarised at Table 2-2. As stated, all risks will be quantified through a Quantified Risk Assessment (QRA) process.

Table 2-2 - Risks and Mitigations

Risks	Mitigations
Planning Approval	
Objections through the planning and consultation process	Key surveys have been undertaken and partners such as South-Western Railway, Network Rail, Frazer CenterPoint, and National Amusements Ltd. are on board.
Costs	
Need to increase the bus service provision to meet the additional demand	Analysis of the current bus utilisation levels has revealed that buses that currently serve the Winnersh Triangle P&R have spare capacity to accommodate the predicted increase in the P&R patronage. In addition, the option of obtaining a letter of undertaking from Reading Buses to secure assurances

	regarding enhanced provision. Reading Buses have verbally agreed to run double decker buses if the need arises.
Allocated budget does not cover the cost to design and implement the scheme	Capital programme allocation within the council should be used to supplement delivery where possible
Significant amendments to the existing drainage system to accommodate the decked parking	Initial conversation with a leading deck supplier has indicated that there are unlikely to be any engineering constraints in connecting the proposed deck to the existing drainage system. Woking Borough Council have requested the supplier to include the cost for any additional work to be included in their quote for the business case preparation.
Significant relocation of statutory utilities within the existing car park	Early C2 collation and adjustment to design as required plus C3 stats design processes.
Traffic impact on the junctions adjacent to the Winnersh Triangle P&R not fully understood until a transport assessment is undertaken. There is a risk of mitigation measures required at these junctions with cost implications.	Need for any potential off-site highway mitigation measures will be explored as part of the modelling process by examining the change in levels of service at the junctions in the vicinity of the park and ride. Costs for any highway mitigation will be robustly captured through a Quantified Risk Assessment (QRA).
Poor accuracy of cost estimates	Costs estimates are being obtained from various suppliers specialising in the provision of decked parking. This would eliminate any cost uncertainty associated with the most expensive scheme component.
Delivery	
Identification of a temporary parking location to accommodate displaced cars during construction	Around 100 bus Park & Ride spaces will be temporarily relocated to the Showcase Cinema car park to facilitate the construction of the deck. Prior to commissioning the current P&R, the Showcase Cinema car park was used as the P&R location.
Impact of temporary TM restrictions greater than expected	Early involvement with Technical Officers, discussions with Emergency Services, detailed TM plans when contractor in place
Supply chain insolvencies	Local Term Contractor to be used for delivery, existing contract in place

3 MODELLING AND APPRAISAL METHODOLOGY

3.1 ECONOMIC ASSESSMENT

- 3.1.1. The economic appraisal will mainly consider guidance in WebTAG Units A1 and A2 (Cost-Benefit Analysis and Economic Impacts, respectively). Transport for London's (TfL) Business Case Development Manual techniques for estimating benefits through Willingness to Pay assessments will also be consulted on to assess station refurbishments.
- 3.1.2. Due to the scale of the pedestrian crossing scheme, no quantitative appraisal will be undertaken; however, a qualitative narrative will be provided, setting out its potential benefits.

SCENARIOS APPRAISED

Do minimum scenario

- 3.1.3. The Do Minimum scenario will represent the existing highway infrastructure with forecast growth in 2021 and 2036.

Core scenario

- 3.1.4. The Core Scenario for the economic case will be the preferred option as identified in Section 2.2, i.e., expanded Park and Ride offer, station building refurbishment and pedestrian access improvements.

Alternative scenarios

- 3.1.5. Whilst the business case will present only one Do Something scenario, a range of alternative scenarios will be considered to demonstrate the resilience of the scheme. Given that majority of the benefits are likely to be generated by the decked car park, it is proposed that the alternative scenarios would apply to the car park element only. Such an approach would also be consistent with the proportionality guidance outlined by the DfT. Therefore, apart from the core scenario, low and high growth scenarios will also be established in line with guidance provided under section 4 of TAG Unit M4, Forecasting and Uncertainty. The resulting increase and decrease in the background car trips, in relative terms, will also be applied to the predicted patronage levels at the expanded car park. This will also be reflected in the revenue differential between low and high growth scenarios.

APPRAISAL PERIOD

- 3.1.6. For the decked parking, it is currently proposed that a steel structure be provided, as construction disruption can be minimised by prefabrication off site. As per a leading pre-fabricated steel parking deck supplier, the minimum lifespan of a steel parking deck is 30 years; hence, benefits will be calculated over a 30-year assessment period rather than the typical 60-year period for concrete multi-storeyed car parks.
- 3.1.7. Schemes involving station refurbishments are typically assessed over a shorter period as asset lives are in some cases limited and longer-term forecasts become more uncertain. The appraisal period for both benefits and costs of the station refurbishment has therefore been set at 15 years.

3.2 APPRAISAL OF THE DECKED CAR PARK

MODELLING APPROACH

3.2.1. A strategic traffic model exists which encompasses the location of the scheme, called the Wokingham Strategic Transport Model 4 (WSTM4). This has been created using the strategic traffic modelling software package Visum. Version 4 of the WSTM model is the latest version of the model and is essentially a fixed demand model. The Local Model Validation Report and the Traffic Forecasting Report can be made available, if required.

3.2.2. The WSTM4 is calibrated and validated to a base year of 2015, with forecast years of 2021, 2026 and 2036.

Forecast years

3.2.3. The scheme opening year is likely to be 2020, given the relatively short duration of the deck construction. Therefore, it is considered that forecast years of 2021 and 2036 would be appropriate for the scheme appraisal.

Constraining trip generation

3.2.4. The existing WSTM4 models have been developed to inform Local Plan and infrastructure scheme assessment. In these models, trip generation is produced by multiplying the trip rates agreed between developers and WBC by development size. The resultant trip generation is different to the trip generation forecast by DfT's National Trip End Model (NTEM), accessible via TEMPro, and therefore the overall trips in the demand matrices need to be constrained to the NTEM forecasts, in line with the DfT's requirements for business case development.

Inter-peak time period

3.2.5. The analysis for the modelling and economics will only include benefits associated with the AM and PM peaks only. Currently there is no forecast interpeak model and it is considered that the benefits accrued for this time period will be minimal when compared to the AM and PM peaks, therefore there are no proposals to create an inter-peak model.

Journey time savings

3.2.6. To calculate the journey time savings as a result of the scheme, trips currently travelling to / from Reading town centre will be diverted to the new P&R site. These trips will be identified by undertaking flow bundle analysis for selected zones in Reading Town Centre and also links travelling on routes that pass in the vicinity of the P&R site.

Logit model for establishing the Park and Ride mode share

3.2.7. Indicative generalised costs for driving all the way to Reading town centre and driving to the Park and Ride first and then taking the bus to the town centre will be considered, when establishing how many trips would switch from the car to the Park and Ride. It is proposed that a logit model used for the Thames Valley Park and Ride business case will be utilised to estimate the proportionate split between the P&R users and car user. The following criteria will be applied to trips assessed using the logit model.

- Consideration of trips travelling to paid town centre car parks. This will be established by selecting the appropriate town centre zones within WSTM4.

- Use of trips solely representing business and commuter trips. In reality, the Park and Ride would capture leisure trips during weekends. However, given that the model does not represent weekend peak periods, weekend benefits will be excluded from the assessment.
- Various components of generalised cost will be weighted in order to reflect the perceived time spent at each stage of the public transport journey. Values of walk time and wait time will be weighted in line with guidance given in Tag Unit M3.2 – Public Transport Assignment Modelling.
- An additional ‘Mode Constant’ of 10 minutes and a Lambda of 0.04 will be used based on local calibration undertaken by Reading BC for East Reading MRT. This is consistent with the approach adopted on the Thames Valley Park, Park and Ride.
- Given that WSTM4 is a peak hour model, an appropriate ‘peak hour to peak period’ conversion factor will be established based on the arrival pattern of cars at the existing park and ride.

Skim matrices

- 3.2.8. Skim matrices will be extracted from the model for both the Do Minimum and Do Something scenario which will then be input into Transport Users Benefits Analysis (TUBA) to monetise the time saving benefits.

Time periods and annualisation factors

- 3.2.9. The model time periods will be as follows, with no inter-peak.
- AM period (07:00 to 08:00 hours)
 - PM period (17:00 to 18:00 hours)
- 3.2.10. When calculating annualisation factors to apply to the AM and PM peak periods, consideration will be given to the differing temporal distribution of Park and Ride traffic in the AM and PM peaks. For example, in the AM peak, vehicle might arrive at the Park and Ride much earlier than 08:00 hours, and similarly for the PM peak. Logs from the existing Park and Ride facility will be analysed to ascertain when vehicles arrive and depart throughout the day.

APPRAISAL METHODOLOGY

- 3.2.11. The calculation of economic benefits will be undertaken using DfT’s Transport Users Benefit Appraisal (TUBA) program. TUBA compares the costs for the Do-Something situation with the costs for the Do-Minimum situation to establish the value of forecast savings in travel time and vehicle operating costs.
- 3.2.12. TUBA calculates the user benefits in time (decongestion benefits), fuel vehicle operating costs (VOC), non-fuel VOC and charge; operator and government revenues, discounted to the present value year. Values calculated from input model data will be interpolated and extrapolated to cover the full appraisal period.
- 3.2.13. Decongestion benefits refers to the monetised benefit of reduced congestion from cars removed from the network. The value of vehicle operating cost savings represents the savings for Park and Ride users who are no longer using their car along the corridor being analysed. These costs include fuel and non-fuel costs, where non-fuel costs include oil, tyres, vehicle maintenance and mileage-related depreciation.

External Benefits

- 3.2.14. As a result of a reduction in car traffic on the corridor, it is assumed that there will be a series of external, non-user benefits resulting from the decongestion. These external benefits relate to a reduction in an improvement in local air and noise quality, a reduction in greenhouse gases, and

changes to indirect taxation and infrastructure. The monetary benefits of these factors will be generated by TUBA.

- 3.2.15. The enhanced Park and Ride scheme is anticipated to generate accident benefits since a reduction of traffic flow on links between Winnersh Triangle and Reading town centre is likely to result in a reduced number of accidents. This in turn would translate to savings in accident costs. However, given the relatively low scheme costs, it is anticipated that the transport user benefits would be sufficient to put the scheme in a 'high' value for money category. A COBALT assessment is therefore discounted at this stage. However, in the event that the TUBA benefits are insufficient, consideration will be given to its inclusion.

Revenue

- 3.2.16. An assessment of the estimated revenue and costs generated by the scheme will be included. As per the current arrangement, £1 from the sale of every bus Park and Ride ticket goes towards Wokingham Borough Council for the maintenance of the car park. Proceeds from the rail parking revenue are retained by the Council in full. These assumptions will be applied to the project increase in revenue over the assessment period.

3.3 APPRAISAL OF STATION IMPROVEMENTS

- 3.3.1. Benefits from the enhanced station amenities will be based on TfL's business case development manual (BCDM) – a rigorous framework for estimating a comprehensive range of impacts and benefits to ensure consistency of appraisal. BCDM, which attributes monetary values to facilities of varying levels of quality and provision, is based on extensive market research and an ongoing continuing programme of extensive mystery shopper surveys of transport users to determine 'willingness to pay' values for a full range of features and facilities forming transport infrastructure across all modes.
- 3.3.2. To calculate benefits of the proposed station improvements, the 'rule of half' approximation using the baseline rail passenger numbers and the forecast demand uplift will be employed. In other words, current rail passengers who use Winnersh Triangle Station will benefit fully from the station facilities upgrades. New passengers drawn to the station in future will gain some benefit from using the upgraded facilities, but not to the same degree. Hence, the benefit will be approximated by the 'rule of half' i.e., applied to new passengers only.
- 3.3.3. Benefits arising from station facilities that improve levels of 'security', CCTV for example, will be estimated using factors given in the Passenger Demand Forecasting Handbook (PDFH7) – a rail-industry standard guidance document held by the Association of Train Operating Companies. User benefits from upgraded station security are factored as demand uplifts (a reflection of suppressed demand, for example among people who would travel, but choose not to because of security concerns). Passenger demand is then monetised through changes in rail fare revenue.

3.4 RELIABILITY

- 3.4.1. The purpose of the scheme is to encourage the switch from car to bus for journeys into Reading and Wokingham. As such, the impacts of the scheme on car journey times are expected to be positive due to reduced levels of congestion and reduced journey times. However, on the basis of proportionality, only a qualitative description of the benefits will be included with regards to reliability.

3.5 WIDER ECONOMIC IMPACTS

- 3.5.1. The scheme will support (but not directly create) local development and have a positive impact on businesses and transport operators, which may result in wider economic impacts associated with the scheme. On the basis of proportionality, only a qualitative description of the benefits will be included with regards to wider benefits.

3.6 SOCIAL / DISTRIBUTIONAL ASSESSMENT

- 3.6.1. Social and Distributional Impact assessments are used to evaluate a transport interventions social impacts and how they vary across the different social groups. On the grounds of proportionality, a qualitative assessment of each social indicator will be undertaken, discussing the expected impacts of the scheme on all parts of the population. Furthermore, analysis of census and inequality data will be undertaken to understand if there will be any impact on vulnerable groups within the population. The qualitative assessment will be summarised within the AST.

3.7 ENVIRONMENTAL ASSESSMENT

- 3.7.1. Considering that the scheme is located at an existing car park which is not in an environmentally sensitive area, detailed environmental assessments are not deemed necessary as part of the business case preparation. It is also worth noting that the scheme is not a trip attractor in its own right, but rather a means to capture trips that would already be on the network. Nevertheless, for each of the eight environmental indicators typically assessed (noise, air quality, greenhouse gases, landscape, townscape, historic environment, biodiversity and water environment) a qualitative appraisal of the scheme will be undertaken to identify whether significant beneficial or adverse environmental effects are likely to arise.
- 3.7.2. In order to ensure a consistency of approach in assessing the environmental indicators, due regard will be given to the standalone environmental reports submitted as part of planning application for the existing surface Park and Ride site. The outcome of the environmental assessment will be summarised within the AST.

4 APPRAISAL SPECIFICATION SUMMARY TABLE

- 4.1.1. The Appraisal Specification Summary Table (ASST) summarising the methodologies for the appraisal of the scheme, set out against each of the challenges or sub-impacts in the AST, is provided at Table 4-1.

Table 4-1 – Appraisal Specification Summary Table (ASST)

Impacts	Sub-impacts	Estimated Impact	Level of Uncertainty	Proposed proportionate appraisal methodology	Reference to evidence and rationale in support of proposed methodology	Type of Assessment Output
Economy	Business users & transport providers	Positive	Medium	WSTM4- Visum Strategic Model	A calibrated and validated model is available for assessing schemes within WBC	Qualitative: Commentary on overall impacts Quantitative: Net journey time changes (£) Monetary: £ NPV
	Reliability impact on Business users	Not assessed	Not assessed	Not assessed	Not assessed	Qualitative
	Regeneration	Not assessed	Not assessed	Not assessed	Not assessed	Not assessed
	Wider Impacts	Not assessed	Not assessed	Not assessed	Not assessed	Qualitative
Environmental	Noise	Slight negative	Low	Not assessed	Not assessed	Qualitative
	Air Quality	Slight negative	Low	Not assessed	Not assessed	Qualitative
	Greenhouse gases	Slight positive	Low	TUBA	A calibrated and validated model is available for assessing schemes within WBC	Monetary/Quantitative
	Landscape	Slight negative	Low	Visual Desktop Assessment	Landscape assessment undertaken as part of the existing P&R planning application	Qualitative
	Townscape	Assumed neutral	Low	Visual Desktop Assessment	The scheme proposals are located within the existing P&R and therefore no impact on townscape	Qualitative
	Heritage of Historic resources	Assumed neutral	Low	Visual Desktop Assessment	The scheme proposals are located within the existing P&R and therefore no impact on heritage	Qualitative
	Biodiversity	Assumed neutral	Low	Visual Desktop Assessment	Previous planning application documents	Qualitative

Impacts	Sub-impacts	Estimated Impact	Level of Uncertainty	Proposed proportionate appraisal methodology	Reference to evidence and rationale in support of proposed methodology	Type of Assessment Output
	Water Environment	Assumed neutral	Low	Survey Data Collation and Desktop Assessment	Provided through original constraints mapping and further refinement investigation which will support planning application.	Qualitative: Commentary on overall impacts
Social	Commuting and Other users	Slight positive	Medium	WSTM4- Visum Strategic Model	A calibrated and validated model is available for assessing schemes within WBC	Qualitative: Commentary on overall impacts. Quantitative: Net journey time changes (£) Monetary: £ NPV
	Reliability impact on Commuting and Other users	Not assessed	Not assessed	Not assessed	Not assessed	Qualitative
	Physical activity	Not assessed	Not assessed	Assessment not applicable for this scheme	Not assessed	Not assessed
	Journey quality	Slightly Positive	Low	Qualitative	WebTAG guidance and past experience	Qualitative
	Accidents	Slightly Positive	Low	Qualitative	WebTAG guidance and past experience	Qualitative
	Security	Slightly Positive	Low	Qualitative	WebTAG guidance and past experience	Qualitative
	Access to services	Assumed neutral	Low	Qualitative	WebTAG guidance and past experience	Qualitative
	Affordability	Assumed Neutral	Low	Qualitative	WebTAG guidance and past experience	Qualitative
	Severance	Assumed neutral	-	Qualitative	WebTAG guidance and past experience	Qualitative/Distributional
	Option values	Not assessed	Not assessed	Not assessed	Not assessed	Not assessed
Public Accounts	Cost to Broad Transport Budget	Moderate negative	Medium	Calculation through PA table	WebTAG guidance	Monetary (Quantitative)



Impacts	Sub-impacts	Estimated Impact	Level of Uncertainty	Proposed proportionate appraisal methodology	Reference to evidence and rationale in support of proposed methodology	Type of Assessment Output
	Indirect Tax Revenues	Slightly negative	Medium	TUBA	WebTAG guidance. A calibrated and validated model is available for assessing schemes within WBC.	Monetary (Quantitative)





2 London Square
Cross Lanes
Guildford, Surrey
GU1 1UN

wsp.com

PUBLIC

Appendix F

LOGIT MODEL PARAMETERS



2021 Forecast Year P&R to Reading TC

Weightings

Parameter	Comment	08:00 - 09:00
Car Journey Time (mins)	Based on 2021 WSTM4 journey time from Winnersh Triangle to Broad Steet Mall	22
Journey time to final destination (mins)	N/A	0
Average Speed (km/h)	Calculated from Distance and Journey Time	23
VOC (pence/km)	Calculated from WebTAG Figures	16.55
Distance (km)	Taken from Google Maps	8.3
Distance to final destination (km)	N/A	0
Total VOC (pence)	Calculated from VOC and Distance	137
Parking Cost 'Commuting' (pence)	0.5 x Current Parking Charges - Based on monthly season ticket (Broad Street Mall) for 20 working days @ £138	345
Parking Cost 'Other' (pence)	0.5 x Current Parking Charges - Based on 3 hours of parking @ £6	300
Parking Cost 'Employers business' (pence)	0.5 x Current Parking Charges - Based on half day of parking @ £8.00	400
Egress Time	Walk time from Car Park to destination (Friar Street) (Google maps)	10
Car Generalised Time 'Commuting' (mins)		57.81
Car Generalised Time 'Other' (mins)		83.28
Car Generalised Time 'Employers business' (mins)		48.18
Transfer Time (mins)	Journey time by car from A329(M) to P&R (Google Maps)	2
Bus Fare 'Commuting' (pence)	Based on monthly ticket for 20 working days @ £82	205
Bus Fare 'Other' and 'Employers business' (pence)	Based on Reading Buses day return @ £4.70	235
Parking Cost, pence	Included within bus fare	0
Access Time (mins)	Walk time to bus stop within P&R site (Google maps) (weighted x2)	6
Bus Travel Time (mins)	Public transport journey using bus from bus stop (Google maps)	12
Bus Wait Time (mins)	0.5 x Assumed headway (weighted x2)	15
Egress Time (mins)	Walk time from bus stop to final destination - based on walk from central Reading bus stop to Friar Street (Google Maps) (weighted x2)	2
Mode Constant (mins)		10
P&R Generalised Time 'Commuting'		57.97
P&R Generalised Time 'Other'		74.55
P&R Generalised Time 'Employers business'		54.08
Value of Time 'Commuting' (£/hour)	WebTAG Figure	11.21
Value of Time 'Other' (£/hour)	WebTAG Figure	5.12
Value of Time 'Employers business' (£/hour)	WebTAG Figure	19.93
Value of Time 'Commuting' (pence/min)	Calculated	18.69
Value of Time 'Other' (pence/min)	Calculated	8.53
Value of Time 'Employers business' (pence/min)	Calculated	33.21
Car Occupancy Level 'Commuting'	WebTAG Figure	1.171
Car Occupancy Level 'Other'	WebTAG Figure	1.675
Car Occupancy Level 'Employers business'	WebTAG Figure	1.195
Logit Model Calculations		
Lambda		0.04
Mode Share All purposes - Car		48%
Mode Share All purposes - P&R		52%

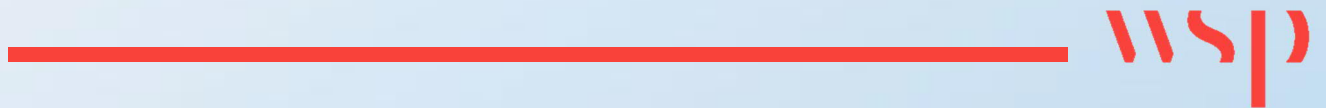
2036 Forecast Year P&R to Reading TC

Weightings

Parameter	Comment	08:00 - 09:00
Car Journey Time (mins)	Based on 2036 WSTM4 journey time from Winnersh Triangle to Broad Street Mall	23
Journey time to final destination (mins)	N/A	0
Average Speed (km/h)	Calculated from Distance and Journey Time	22
VOC (pence/km)	Calculated from WebTAG Figures	16.55
Distance (km)	Taken from Google Maps	8.3
Distance to final destination (km)	N/A	0
Total VOC (pence)	Calculated from VOC and Distance	137
Parking Cost 'Commuting' (pence)	0.5 x Current Parking Charges - Based on monthly season ticket (Broad Street Mall) for 20 working days @ £138	345
Parking Cost 'Other' (pence)	0.5 x Current Parking Charges - Based on 3 hours of parking @ £6	300
Parking Cost 'Employers business' (pence)	0.5 x Current Parking Charges - Based on half day of parking @ £8.00	400
Egress Time	Walk time from Car Park to destination (Friar Street) (Google maps)	10
Car Generalised Time 'Commuting' (mins)		53.18
Car Generalised Time 'Other' (mins)		73.06
Car Generalised Time 'Employers business' (mins)		45.65
Transfer Time (mins)	Journey time by car from A329(M) to P&R (Google Maps)	2
Bus Fare 'Commuting' (pence)	Based on monthly ticket for 20 working days @ £82	205
Bus Fare 'Other' and 'Employers business' (pence)	Based on Reading Buses day return @ £4.70	235
Parking Cost, pence	Included within bus fare	0
Access Time (mins)	Walk time to bus stop within P&R site (Google maps) (weighted x2)	6
Bus Travel Time (mins)	Public transport journey using bus from bus stop (Google maps)	12
Bus Wait Time (mins)	0.5 x Assumed headway (weighted x2)	15
Egress Time (mins)	Walk time from bus stop to final destination - based on walk from central Reading bus stop to Friar Street (Google Maps) (weighted x2)	2
Mode Constant (mins)		10
P&R Generalised Time 'Commuting'		55.58
P&R Generalised Time 'Other'		68.53
P&R Generalised Time 'Employers business'		52.53
Value of Time 'Commuting' (£/hour)	WebTAG Figure	14.34
Value of Time 'Other' (£/hour)	WebTAG Figure	6.55
Value of Time 'Employers business' (£/hour)	WebTAG Figure	25.49
Value of Time 'Commuting' (pence/min)	Calculated	23.90
Value of Time 'Other' (pence/min)	Calculated	10.92
Value of Time 'Employers business' (pence/min)	Calculated	42.48
Car Occupancy Level 'Commuting'	WebTAG Figure	1.171
Car Occupancy Level 'Other'	WebTAG Figure	1.675
Car Occupancy Level 'Employers business'	WebTAG Figure	1.195
Logit Model Calculations		
Lambda		0.04
Mode Share All purposes - Car		51%
Mode Share All purposes - P&R		49%

Appendix G

TEE, PA AND AMCB TABLES



Analysis of Monetised Costs and Benefits

	Core scenario	
Noise		(12)
Local Air Quality		(13)
Greenhouse Gases		(14)
Journey Quality	£178,640	(15)
Physical Activity		(16)
Accidents		(17)
Economic Efficiency: Consumer Users (Commuting)	£7,311,000	(1a)
Economic Efficiency: Consumer Users (Other)	-£1,133,000	(1b)
Economic Efficiency: Business Users and Providers	£147,565	(5)
Wider Public Finances (Indirect Taxation Revenues)	£811,000	(11) - sign changed from PA table, as PA table represents costs, not benefits
Present Value of Benefits (see notes) (PVB)	£7,315,205	$(PVB) = (12) + (13) + (14) + (15) + (16) + (17) + (1a) + (1b) + (5) - (11)$
Broad Transport Budget	£1,666,965	(10)
Present Value of Costs (see notes) (PVC)	£1,666,965	$(PVC) = (10)$
OVERALL IMPACTS		
Net Present Value (NPV)	£5,648,240	$NPV = PVB - PVC$
Benefit to Cost Ratio (BCR)	4.4	$BCR = PVB / PVC$

Note 1: The PVB comprises £108,009 (discounted to 2010 and market prices correction factor applied) by way of additional revenue from the station improvements.

Note 2: The PVB also includes £178,640 (discounted to 2010 and market prices correction factor applied), which accounts for the user benefits enjoyed by the forecast baseline users. The value is entered against 'Journey quality' as a proxy.

Note 3: This table includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions.

Public Accounts (PA) Table

Core Scenario

	ALL MODES	ROAD	BUS and COACH	RAIL	OTHER
Local Government Funding	TOTAL	INFRASTRUCTURE			
Revenue	-£569,600	-			-
Operating Costs	£176,579	-			-
Investment Costs	£2,467,430	-			-
Developer and Other Contributions	-£407,444	-	-	-	-
Grant/Subsidy Payments		-	-	-	-
NET IMPACT	£1,666,965 (7)	-	-	-	-
Central Government Funding: Transport					
Revenue	£0	-			-
Operating costs	£0	-			-
Investment Costs	£0	-			-
Developer and Other Contributions	£0	-	-	-	-
Grant/Subsidy Payments	£0	-	-	-	-
NET IMPACT	£0 (8)	-	-	-	-
Central Government Funding: Non-Transport					
Indirect Tax Revenues	-£811,000 (9)	-	-	-	-
TOTALS					
Broad Transport Budget	£1,666,965 (10) = (7) + (8)				
Wider Public Finances	-£811,000 (11) = (9)				

Notes: Costs appear as positive numbers, while revenues and 'Developer and Other Contributions' appear as negative numbers.

All entries are discounted present values in 2010 prices and values.

Economic Efficiency of the Transport System (TEE)

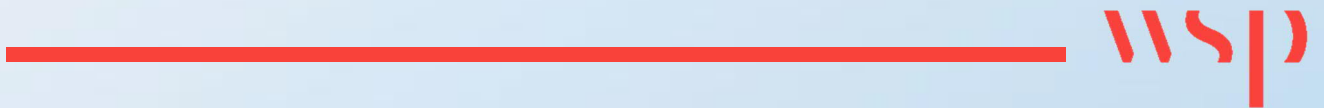
Core Scenario

Non-business: Commuting		ALL MODES	ROAD	BUS and COACH	RAIL	OTHER	
<u>User benefits</u>		TOTAL	Private Cars and LGVs	Passengers	Passengers		
Travel time	£5,283,000			-	-	-	
Vehicle operating costs	£2,028,000					-	
User charges				-	-	-	
During Construction & Maintenance				-	-	-	
COMMUTING	£7,311,000	(1a)	£0	-	-	-	
Non-business: Other		ALL MODES	ROAD	BUS and COACH	RAIL	OTHER	
<u>User benefits</u>		TOTAL	Private Cars and LGVs	Passengers	Passengers		
Travel time	£-490,000.00			-	-	-	
Vehicle operating costs	£-643,000.00					-	
User charges				-	-	-	
During Construction & Maintenance				-	-	-	
NET NON-BUSINESS BENEFITS: OTHER	£-1,133,000	(1b)	£0	-	-	-	
Business			Goods Vehicles	Business Cars & LGVs	Passengers	Freight	Passengers
<u>User benefits</u>							
Travel time	£-70,000.00				-	-	-
Vehicle operating costs	£517,000.00						-
User charges					-	-	-
During Construction & Maintenance					-	-	-
Subtotal	£447,000	(2)	£0	£0	-	-	-
Private sector provider impacts					Freight	Passengers	
Revenue	£108,009				-	-	-
Operating costs					-	-	-
Investment costs					-	-	-
Grant/subsidy					-	-	-
Subtotal	£108,009	(3)			-	-	-
Other business impacts							
Developer contributions	£-407,444	(4)	-		-	-	-
NET BUSINESS IMPACT	£147,565	(5) = (2) + (3) + (4)					
TOTAL							
Present Value of Transport Economic Efficiency Benefits (TEE)	£6,325,565	(6) = (1a) + (1b) + (5)					

Notes: Benefits appear as positive numbers, while costs appear as negative numbers.
All entries are discounted present values, in 2010 prices and values

Appendix H

DETAILED FARE REVENUE
CALCULATIONS



Calculation of additional fare revenue from passenger uplift due to the station improvements

Step 1 – Calculation of average peak and off-peak fares from Winnersh

Fares applying to commuter and business/leisure users are based on peak and off-peak return fares to main destinations from Winnersh Triangle Station, obtained from MOIRA data. Average peak and off-peak fares for each of the destinations were calculated by weighting the peak and off-peak fares by the proportion of passengers travelling from Winnersh Triangle station to the respective destinations, and then adding up the weighted values. The resulting average peak fare is £14.71 and the off-peak fare is £10.84.

Destination	% of passengers	Peak Price	Off Peak	Peak Average	Off-Peak Average
Reading	35.6%	£4.30	£4.20	£1.53	£1.50
London BR	28.2%	£31.70	£20.90	£8.93	£5.89
Wokingham	6.6%	£3.70	£3.60	£0.25	£0.24
Bracknell	6.3%	£5.30	£5.20	£0.33	£0.33
Slough	2.7%	£12.00	£11.50	£0.32	£0.31
Basingstoke	2.3%	£11.10	£9.50	£0.25	£0.22
Didcot Parkway	1.9%	£11.60	£8.10	£0.22	£0.15
Richmond London	1.6%	£26.00	£19.60	£0.42	£0.32
Martins Heron	1.6%	£5.50	£5.40	£0.09	£0.09
Clapham Junction	1.4%	£28.00	£19.60	£0.38	£0.27
Newbury	1.2%	£10.90	£8.10	£0.13	£0.10
Twickenham	1.0%	£25.00	£19.50	£0.25	£0.20
Sandhurst Berks	1.0%	£5.20	£5.10	£0.05	£0.05
Croydon BR	0.9%	£31.10	£24.50	£0.27	£0.21
Oxford	0.8%	£18.10	£12.00	£0.15	£0.10
Ascot Berks	0.8%	£6.80	£6.60	£0.06	£0.06
Guildford	0.8%	£14.00	£10.20	£0.12	£0.09
Staines	0.8%	£19.60	£15.10	£0.16	£0.12
Farnborough	0.7%	£6.80	£6.60	£0.05	£0.04
Egham	0.6%	£17.10	£13.80	£0.11	£0.09
Feltham	0.6%	£22.40	£18.70	£0.13	£0.11
Reading West	0.6%	£4.30	£4.20	£0.02	£0.02
Willesden Jn	0.5%	£30.70	£23.10	£0.15	£0.11
Earley	0.5%	£3.30	£3.10	£0.02	£0.01
Crystal Palace	0.4%	£31.10	£24.50	£0.12	£0.09
Peckham Rye	0.4%	£31.90	£19.60	£0.11	£0.07
Putney	0.3%	£26.00	£19.60	£0.08	£0.06
Average Fares				£14.71	£10.84

Step 2 – Calculation of uplift in passengers and the corresponding revenue

Estimated total number of entries and exits made at the station in 2017-18 = 431,402

Assuming that an entry and an exit constitute a trip, numbers of passengers = 431,402/2 = 215,701

Uplifts Applied (Source – PDFH)	London and South East	
	Business/Leisure	Commute
Poor condition seats → Good condition seat provided, but no waiting room	1.7%	1%
CCTV in station only → CCTV in station and surrounding area	0.5%	0.4%
No information screens → Information screens	0.0%	0.0%
Wind shelters in some places, providing some protection → Waiting room, providing all round protection	0.2%	0.1%
	2.4%	1.5%

Split between commuter and business/leisure = 76:24 (From MOIRA, by assuming that all season ticket and full price ticket sales constitute peak hour trips and all reduced-price trips relate to business/leisure trips).

Yearly background growth = 0.58%

Year	No. of Passengers	Uplift in Business / Leisure passengers	Uplift in Commuter passengers	Fare revenue business / leisure (off peak)	Fare revenue commuter (peak)	Total Fare Revenue in 2018 Prices	Total Fare Revenue in 2010 Prices
2017	215,701						
2018	216,945						
2019	218,196						
2020	219,454						
2021	220,720	633	1260	£6,862	£18,536	£25,399	£22,233
2022	221,993	637	1267	£6,862	£18,536	£25,399	£22,233
2023	223,273	640	1274	£6,862	£18,536	£25,399	£22,233
2024	224,560	644	1282	£6,862	£18,536	£25,399	£22,233
2025	225,855	648	1289	£6,862	£18,536	£25,399	£22,233
2026	227,158	651	1297	£6,862	£18,536	£25,399	£22,233
2027	228,468	655	1304	£6,862	£18,536	£25,399	£22,233
2028	229,785	659	1312	£6,862	£18,536	£25,399	£22,233
2029	231,110	663	1319	£6,862	£18,536	£25,399	£22,233
2030	232,443	667	1327	£6,862	£18,536	£25,399	£22,233
2031	233,784	670	1334	£6,862	£18,536	£25,399	£22,233
2032	235,132	674	1342	£6,862	£18,536	£25,399	£22,233
2033	236,488	678	1350	£6,862	£18,536	£25,399	£22,233

Year	No. of Passengers	Uplift in Business / Leisure passengers	Uplift in Commuter passengers	Fare revenue business / leisure (off peak)	Fare revenue commuter (peak)	Total Fare Revenue in 2018 Prices	Total Fare Revenue in 2010 Prices
2034	237,852	682	1358	£6,862	£18,536	£25,399	£22,233
2035	239,223	686	1365	£6,862	£18,536	£25,399	£22,233
				£102,934	£278,045	£380,978	£333,490

Uplift in business/leisure passengers = 50% x 24% x 2.4% x No of passengers

Uplift in commuter passengers = 50% x 76% x 1.5% x No of passengers

Fare revenue (business/leisure) = Uplift in business/leisure passengers x £10.84

Fare revenue (commuter) = Uplift in commuter passengers x £14.71

The resulting fare revenue over the 15-year period is £380,978 in 2018 prices

Step 4 - Appraisal

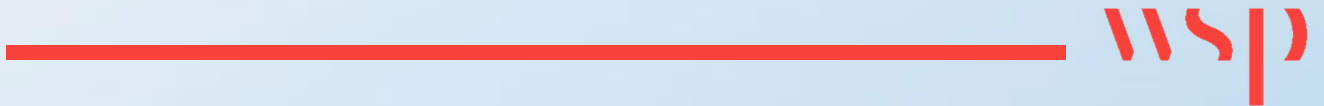
For appraisal purposes, 2018 prices have been rebased to 2010, which gives a total of £333,490 in 2010 prices. It is then assumed that the revenue will remain constant over the 15-year period.

	Discount Factor	Fare Revenue in 2010 prices	PVB (Revenue/Discount factor)
2021	1.4600	£22,233	£15,228
2022	1.5111	£22,233	£14,713
2023	1.5640	£22,233	£14,216
2024	1.6187	£22,233	£13,735
2025	1.6753	£22,233	£13,270
2026	1.7340	£22,233	£12,822
2027	1.7947	£22,233	£12,388
2028	1.8575	£22,233	£11,969
2029	1.9225	£22,233	£11,564
2030	1.9898	£22,233	£11,173
2031	2.0594	£22,233	£10,796
2032	2.1315	£22,233	£10,430
2033	2.2061	£22,233	£10,078
2034	2.2833	£22,233	£9,737
2035	2.3632	£22,233	£9,408
		£333,490	£90,764
In market prices (multiply by a factor of 1.19)			£108,008

The PVB of the fare revenues from the station uplift is £108,008. This has been entered in the TEE table under the 'private sector revenue impacts' section.

Appendix I

DETAILED PARKING REVENUE
CALCULATIONS



Calculation of local government funding – Revenue

This relates solely to the revenues generated by the 130 additional parking spaces. A parking revenue of £41, 935 (in 2018 prices) is calculated as per the methodology set out in paragraphs 3.5.19-3.5.22 of the Winnersh Triangle Full Business Case. It has been assumed that the same revenue will be generated on an annual basis over the 30-year appraisal period.

Annual revenue in 2010 prices = £36,708

	Discount Factor	Car Park Revenue in 2010 prices	PVB – Car park revenue
2021	1.4600	£36,708	£25,143
2022	1.5111	£36,708	£24,292
2023	1.5640	£36,708	£23,471
2024	1.6187	£36,708	£22,677
2025	1.6753	£36,708	£21,910
2026	1.7340	£36,708	£21,169
2027	1.7947	£36,708	£20,454
2028	1.8575	£36,708	£19,762
2029	1.9225	£36,708	£19,094
2030	1.9898	£36,708	£18,448
2031	2.0594	£36,708	£17,824
2032	2.1315	£36,708	£17,221
2033	2.2061	£36,708	£16,639
2034	2.2833	£36,708	£16,076
2035	2.3632	£36,708	£15,533
2036	2.4460	£36,708	£15,007
2037	2.5316	£36,708	£14,500
2038	2.6202	£36,708	£14,010
2039	2.7119	£36,708	£13,536
2040	2.8068	£36,708	£13,078
2041	2.9050	£36,708	£12,636
2042	3.0067	£36,708	£12,209
2043	3.1119	£36,708	£11,796
2044	3.2209	£36,708	£11,397
2045	3.3336	£36,708	£11,011
2046	3.4503	£36,708	£10,639
2047	3.5710	£36,708	£10,279
2048	3.6960	£36,708	£9,932
2049	3.8254	£36,708	£9,596
2050	3.9401	£36,708	£9,316
		£1,101,228	£478,656
In market prices (multiply by a factor of 1.19)			£569,600

The Present Value of Benefits (PVB), from the car park revenue, of £569,600 has been entered as a negative value in the PA table under the local government funding – revenue section.

Appendix J

INVESTMENT COST BREAKDOWN



Breakdown of the calculation of investment costs in the PA table

Scheme Element	Cost in £		
	2019-20	2020-21	Total
Station improvements and pedestrian crossing	£264,488	£0	£264,488
Decked Parking	£0	£2,645,192	£2,645,192
Design and supervision	£9,257	£92,582	£101,839
Total Cost (Excluding Quantified Risk and Optimism Bias)	£273,745	£2,737,773	£3,011,518
Risk	£32,999.50	£330,034	£363,034
Risk-adjusted Total Cost (Excluding Optimism Bias)	£306,744	£3,067,808	£3,374,552
Optimism Bias (15%)	£46,012	£460,171	£506,183
Total Cost @2018 prices	£352,756	£3,527,979	£3,880,734
Total Cost @2010 prices	£308,785	£3,088,217	£3,397,001

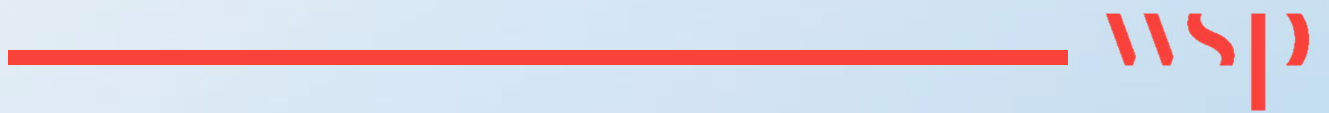
2018 Prices	2019-20	2020-21	Total
LGF Funds	£302,761	£3,027,973	£3,330,734
S106 Contributions	£49,995	£500,005	£550,000
	£352,756	£3,527,979	£3,880,734

2010 Prices	2019-20	2020-21	Total
LGF Funds	£265,022	£2,650,537	£2,915,559
S106 Contributions	£43,763	£437,680	£481,443
	£308,785	£3,088,217	£3,397,001

	Discount Factor	Costs (2010 prices)			Present Value of costs (2010 prices)		
		Developer Contributions	Government Investment	Operating Cost (over 30 years)	Developer Contributions	Government Investment	Operating Cost (over 30 years)
2019	1.3629	£43,763	£265,022		£32,110	£194,455	
2020	1.4106	£437,680	£2,650,537		£310,279	£1,879,015	
		£481,443	£2,915,559	£341,387	£342,390	£2,073,470	£148,386
In market prices (multiply by a factor of 1.19)					£407,444	£2,467,430	£176,579

Appendix K

AST



Appraisal Summary Table		Date produced:	19	2	2019	Contact:			
Name of scheme:		Winnersh Triangle Parkway - Park & Ride scheme.				Name:		Nidhish George	
Description of scheme:		Improvements to the current provision of the Winnersh Triange Parkway - Park & Ride scheme Provision of an additional 130 car parking spaces, via decking. Improvements to train station building. Improvements to pedestrian facilities. The scheme aims to transfer trips, into Reading town centre, from car to bus/train.				Organisation:		WSP	
						Role:		Promoter	
Impacts	Summary of key impacts	Assessment							
		Quantitative			Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp		
Economy	Business users & transport providers	The scheme aims to transfer trips, into Reading, from car to bus/train, thereby reducing congestion. There will therefore be journey time savings for business users as a result of the scheme.		Value of journey time changes(£)		-£0.07m	Economic Efficiency £448,000		
			Net journey time changes (£)						
			0 to 2min	2 to 5min	> 5min				
	Reliability impact on Business users	The scheme aims to reduce congestion, as a result reliability of journey time should increase, and this would be applicable to business users.					slight positive		
	Regeneration								
	Wider Impacts	The scheme will not lead directly to the creation of long-term employment. However, by improving sustainable modes of transport, it is considered that it will support the ambitions of the Local Plan in terms of employment					slight positive		
Environmental	Noise	Temporary noise during construction, planning considerations over time of operation may be required. The scheme aims to transfer trips, into Reading, from car to bus/train. Overall, noise impacts are considered neutral.					neutral		
	Air Quality	A preliminary assessment of air quality concluded there will be an insignificant impact as a result of the scheme. The scheme does not increase traffic by more than 1,000 AADT or 200 HDVs, the established thresholds above which an air quality impact assessment is considered to be necessary. The scheme aims to transfer trips, into Reading, from car to bus/train. Overall impact considered neutral.					neutral		
	Greenhouse gases	The scheme transfers existing trips travelling on A329 / A329M to Reading Town Centre by car to bus/train mode. The reduction in trip length for these trips results in a decrease in greenhouse gases		Change in non-traded carbon over 30y (CO2e)		-4266	NPV £183,000		
			Change in traded carbon over 30y (CO2e)		-35				
		Landscape	The overall impact on the landscape has been appraised as minimal, and unlikely to cause offence. The Landscape Assessment undertaken for the existing Park and Ride had confirmed that at the most distant viewpoints, successive layers of vegetation, landform and built-form prevented the location of the site being identified. Therefore, there is no visual impact from distance. Glimpsed views into the site were only possible at close range, which were almost adjacent to the site. 3The magnitude of the views into the site from the surrounding landscape is either negligible, or low within a close range of the development, although for the greater part of the surrounding area the proposed development site is not visible at all. The overall impact on landscape has therefore been appraised as neutral.					neutral	
		Townscape	overall impact considered neutral					neutral	
		Historic Environment	An Archaeological Desk-Based Assessment has been undertaken of the site to inform the proposed development. The impact on the surrounding historical environment was appraised to be unlikely to have a significant archaeological impact due to the extent of impact from past development and Post-Medieval ploughing. The overall impact on historic environment has therefore been appraised as neutral.					neutral	
		Biodiversity	overall impact considered neutral					neutral	
	Water Environment	The Flood Risk Assessment (FRA) which was prepared in support of the planning application for the existing park and ride site indicated that: * The western half of the site lies within the 1 in 100 annual probability flood plain and is therefore Flood Zone 3a 'high probability' * The eastern half of the site lies outside the 1 in 100 annual probability flood plain and is therefore Flood Zone 2 'medium probability' The FRA showed that the existing floodplain levels and extent are respected within the proposed scheme and so this is not exacerbated by the proposals. The FRA concluded that the proposed development is safe, it does not increase flood risk and also does not detrimentally affect third parties, in accordance with the objectives of the NPPF. The scheme is unlikely to increase flood risk or significantly affect water features. The overall impact on the water environment has therefore been appraised as neutral.					neutral		
Social	Commuting and Other users	The scheme aims to transfer trips, into Reading, from car to bus/train, thereby reducing congestions. There will therefore be journey time savings for commuters and other users as a result of the scheme.		Value of journey time changes(£)		£4.792m	Economic Efficiency £6,177,000		
			Net journey time changes (£)						
			0 to 2min	2 to 5min	> 5min				
		Reliability impact on Commuting and Other users	The scheme aims to reduce congestion, as a result reliability of journey time should increase, and this would be applicable to commuters and other users					slight positive	
		Physical activity	It is considered unlikely that the scheme will result in a significant impact on the amount of walking and cycling trips undertaken within the vicinity of the scheme extents and as such there would be limited or negligible impact on physical activity.					neutral	
		Journey quality	Journey Quality (Proxy for benefits to forecast baseline station users from the station improvements)					slight positive	£178,640
		Accidents	Detailed accident assessment using DfT's Cost and Benefits to Accidents – Light Touch (COBALT) programme was considered disproportionate to the scale of the scheme and has therefore been excluded. It is, however, envisaged that the increase in capacity at the existing Park and Ride would result in congestion benefits on key routes between Winnersh Triangle and Reading, which in turn would result in accident benefits along these road sections. Overall it is expected that the impact of the scheme on safety will be positive.					slight positive	PVB
		Security	Security will be improved by the provision of additional CCTV at the proposed cycle storage					slight positive	
		Access to services	Access will be improved by the provision of an improved pedestrian crossing.					slight positive	
	Affordability	Not assessed		Not assessed			Not assessed	Not assessed	
	Severance	The scheme provides improved pedestrian crossing facilities. The provision of a greater number of park and rider car parking spaces, and thereby greater opportunity to change mode of transport to bus or train, will improve access into Reading town centre.					slight positive		
	Option and non-use values	The scheme does not involve the loss or introduction of a new mode of transport and as such Option Values are unaffected.		N/A			N/A	N/A	
Public Accounts	Cost to Broad Transport Budget						PVC £1,666,965		
	Indirect Tax Revenues	Indirect Tax Revenues against Public Accounts (i.e. sign needs to be flipped on the ITR TUBA output. Eg if a project results in an increase in indirect tax revenue, this would appear as a negative number in the PA table, but as a positive number in the AST).					£811,000		

Appendix L

SECTION 151 LETTER



Thames Valley Local Enterprise Partnership

Bill Hicks

25 February 2019



**WOKINGHAM
BOROUGH COUNCIL**

Place Based Services

P.O. Box153

Shute End, Wokingham

Berkshire RG40 1WL

Tel: (0118) 974 6000

Fax: (0118) 974 6770

Minicom No: (0118) 9746991

Winnersh Triangle Parkway – Section 151 Officer Letter

Dear Mr Hicks,

As deputy Section 151 Officer for Wokingham Borough Council, I am able to declare that the scheme cost estimates quoted in the Winnersh Triangle Parkway are accurate to the best of my knowledge and that Wokingham Borough Council has both the intention and the means to deliver the related scheme on the basis of its proposed funding contribution. The Council also undertakes to meet any ongoing revenue requirements on the understanding that no further increase in major transport scheme funding will be considered beyond the maximum contribution requested.

We have a robust budget setting process and have agreed the funding as per the budget. We have an element of central contingency and a process for adding new budget to the programme if approved by Council.

Yours sincerely,

Bob Watson
Lead Specialist - Finance (deputy s.151 officer)
Finance Specialist Team
Business Services
Wokingham Borough Council
Civic Offices, Shute End
Wokingham, RG40 1BN
Tel 0118 9746000



Appendix M

MODEL NOTE - IMPACT ON LHN





MEMO

TO	Click here to enter recipient	FROM	Click here to enter sender
DATE	06 February 2019	CONFIDENTIALITY	
SUBJECT	Winnersh P&R - Model Outputs		

This memo summarises the impact on the local highway network of the reassigning trips associated with the additional level of parking provided at the Winnersh Park and Ride (P&R) site.

The outputs presented in this memo are from the modelling that was undertaken using the WSTM4 model runs.

LINK FLOW

Table 1 and Table 2 compare link flows for the scenario ‘with the park and ride adjusted trips’ against the scenario ‘without the adjusted P&R trips’ for the 2021 and 2036 forecast years respectively. In the tables, the scenario ‘without the park and ride adjusted trips’ will be referred to as the Do Minimum (DM) and the scenario ‘with the park and ride adjusted trips’ will be referred to as the Do Something (DS).

Table 1 – 2021 Forecast year comparison of vehicle flows between ‘with P&R adjusted trips’ and ‘without P&R adjusted trips’ scenarios for AM and PM peaks

Link No.	Link Description	Dir.	AM Peak (0800-0900)			PM Peak (1700-1800)		
			2021 DM	2021 DS	Difference	2021 DM	2021 DS	Difference
1	Wharfedale Road (east of P&R access)	EB	898	922	24	242	233	-9
		WB	1439	1555	116	2135	2107	-28
2	Wharfedale Road (west of P&R access)	EB	898	922	24	242	233	-9
		WB	1249	1227	-22	2369	2467	98
3	A3290 (north of Wharfedale Road)	NB	1986	1983	-3	2313	2365	52
		SB	299	308	9	506	490	-16
4	A3290 (south of Wharfedale Road)	NB	2248	2263	15	1280	1256	-24
		SB	912	893	-19	1600	1613	13
5	A329M WB off-slip	WB	1675	1751	76	1374	1346	-28
6	A329M WB on-slip	WB	369	353	-16	125	117	-8

The above table shows the flow impact on the local highways network of the additional trips travelling to the P&R site for the 2021 forecast year. In the AM peak the largest increase in flow occurs on Wharfedale



Road (east of P&R access), for the westbound direction, which shows a flow increase of 116 vehicles. In the PM peak the largest flow increase occurs on Wharfedale Road (west of P&R access), for the westbound direction, which shows a flow increase of 98 vehicles.

Table 2 - 2036 Forecast year comparison of flows between 'with P&R adjusted trips' and 'without P&R adjusted trips' scenarios for AM and PM peaks

Link No.	Link Description	Dir.	AM Peak (0800-0900)			PM Peak (1700-1800)		
			2036 DM	2036 DS	Difference	2036 DM	2036 DS	Difference
1	Wharfedale Road (east of P&R site)	EB	917	957	40	315	335	20
		WB	1647	1757	110	2261	2233	-28
2	Wharfedale Road (west of P&R site)	EB	917	957	40	315	335	20
		WB	1451	1426	-25	2504	2644	140
3	A3290 (north of Wharfedale Road)	NB	1874	1864	-10	2374	2261	-113
		SB	230	239	9	507	467	-40
4	A3290 (south of Wharfedale Road)	NB	2316	2354	38	1397	1295	-102
		SB	1139	1127	-12	1712	1759	47
5	A329M WB off-slip	WB	1892	1962	70	1459	1462	3
6	A329M WB on-slip	WB	375	373	-2	190	240	50

The flows differences detailed in Table 2 for the 2038 forecast year show a similar pattern to that seen in the 2021 forecast year. In the AM peak the largest increase in vehicle flow occurs on Wharfedale Road (east of P&R site) for the westbound direction which shows an increase of 110 vehicles. For the PM peak the largest changes in flow occur on Wharfedale Road (west of P&R access), for the westbound direction, which shows a flow increase of 140 vehicles.

In the AM peak there are also flow increases on Wharfedale Road for the eastbound direction and on the A3290 (south of Wharfedale Road) in the northbound direction. This is traffic reassigning from the A329, now travelling to the Winnersh P&R site.

For the PM peak there are flow increases on A329M WB on-slip and on A3290 (south of Wharfedale Road) southbound of 50 and 47 vehicles respectively.

LEVEL OF SERVICE

Level of Service (LoS) is commonly used to describe how well a junction or a turn is performing. LoS is related to the mean delay experienced per vehicle. Table 3 sets out the mean delay thresholds that are attributed for each Level of Service category.

Table 3 - Junction Level of Service interpretation

LoS	Mean delay/ vehicle	
	Un-signalised junction	Signalised junction
A	0 – 10 sec	0 – 10 sec
B	10 – 15 sec	10 – 20 sec
C	15 – 25 sec	20 – 35 sec
D	25 – 35 sec	35 – 55 sec
E	35 – 50 sec	55 – 80 sec
F	50 + sec	80 + sec

Table 3 shows that the LoS thresholds differ for un-signalised and signalised junctions. One reason for this is that delay at a signalised junction is more 'acceptable' because drivers expect to be delayed at traffic lights.

If the volume exceeds the capacity for a particular turn, LoS F will be allocated to that turn regardless of the delay. Figure 1 shows the junctions that have been identified for LoS assessment.

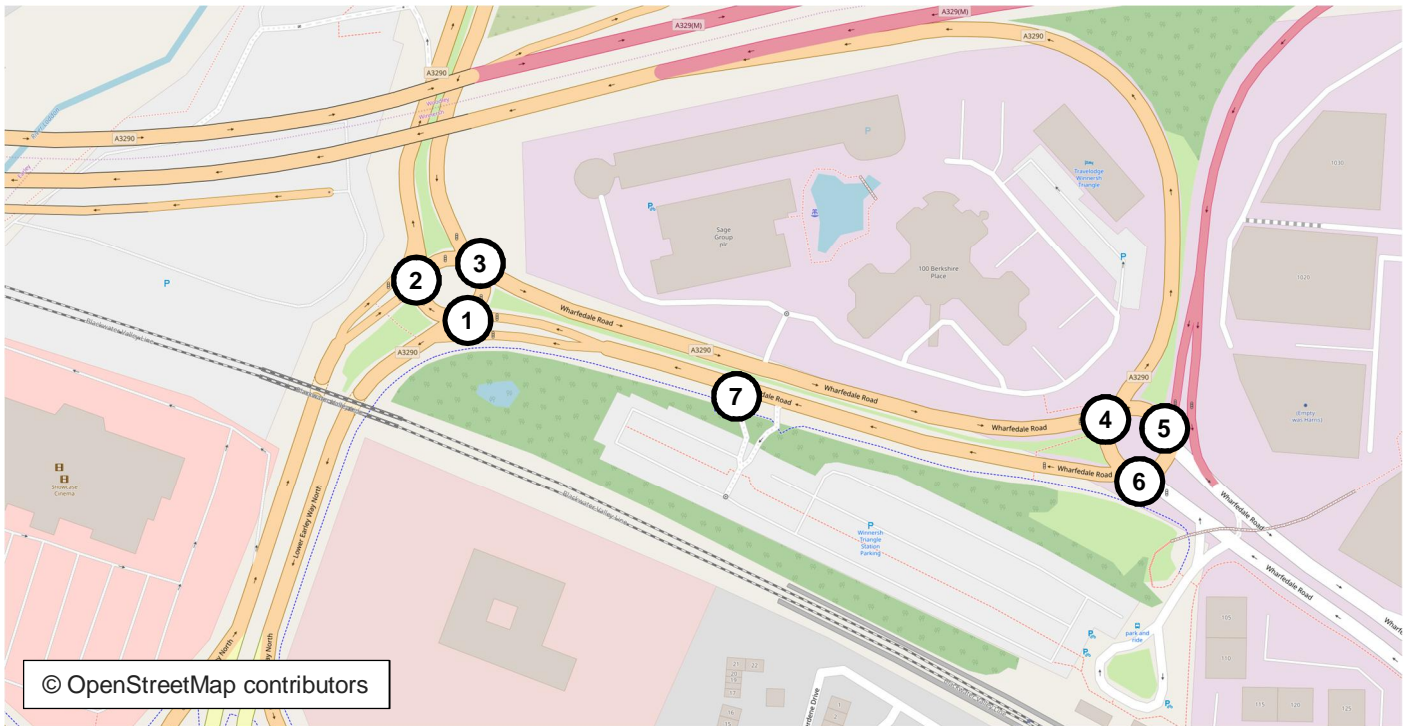


Figure 1 - Junctions identified for LoS assessment

Table 4 and Table 5 compare the LoS for the roundabouts located at each end of Wharfedale Road between the A3290 & A329M slips and also the priority junction for the main P&R car access.

Table 4 – 2021 Forecast year comparison of junction LoS between ‘with P&R adjusted trips’ and ‘without P&R adjusted trips’ scenarios for AM and PM peaks

Junction No.	Junction Description	Level of Service (LoS)			
		AM Peak (0800-0900)		PM Peak (1700-1800)	
		2021 DM	2021 DS	2021 DM	2021 DS
1		B	B	B	B
2	Wharfedale Road / Lower Earley Way north roundabout	D	D	D	D
3		C	C	C	C
4	Wharfedale Road / A329(M) slips roundabout	B	B	B	B
5		B	B	C	C
6		B	B	C	C
7	P&R site access	A	A	B	C

For the 2021 forecast year there are no changes in the LoS at the identified junctions when comparing the scenario ‘with the adjusted P&R trips’ against the scenario ‘without the P&R adjusted trips’ for the AM peak. For the PM peak the P&R access junction changes from a category B to a category C.

Table 5 - 2036 Forecast year comparison of junction LoS between 'with P&R adjusted trips' and 'without P&R adjusted trips' scenarios for AM and PM peaks

Junction No.	Junction Description	Level of Service (LoS)			
		AM Peak (0800-0900)		PM Peak (1700-1800)	
		2036 DM	2036 DS	2036 DM	2036 DS
1	Wharfedale Road / Lower Earley Way north roundabout	B	B	C	C
2		D	D	D	D
3		B	B	C	C
4	Wharfedale Road / A329(M) slips roundabout	B	B	B	B
5		B	C	C	C
6		B	C	C	C
7	P&R site access	A	A	C	D

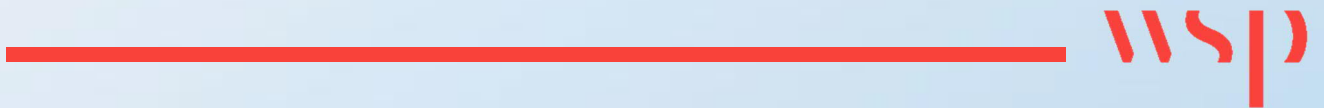
In the 2036 forecast year the Wharfedale Road / A329(M) slips roundabout (Junction 5 & 6) changes from LoS category B to category C in the AM peak. For the PM peak the P&R access junction changes from a category C to a category D. Whilst this shows that there is some additional experienced at this junction, these impacts on the operation of the local road network are considered to be minimal.

SUMMARY

Based upon the analysis that has been undertaken on the model outputs, the provision of additional spaces at the Winnersh P&R site, and the associated redistribution of trips, will not have a significant impact on the local highway network.

Appendix N

LETTER OF SUPPORT FROM
READING BUSES



Our Ref: CFIO/WinnershP&R/31012019 let

Tom Beck
Highways and Transport (Transport Planning)
Wokingham Borough Council
P.O. Box 153
Shute End
Wokingham RG40 1WL

31 January 2019

Dear Tom

Winnersh Triangle Park & Ride

Reading Buses has operated the bus service linking the Park & Ride site at Winnersh Triangle with Reading town centre on a commercial basis since the inception of the current site. I am pleased to report that it is a fully viable route in our network and has seen steady growth in patronage over the last two years. We recognise the longer-term potential of this route and the opportunities to develop contra-flow traffic in conjunction with adjacent business park and welcome the proposals to increase capacity at the car park by around 150 spaces.

I can confirm that Reading Buses would not anticipate any issues in catering for increased usage of the services. The current frequency and capacity are adequate for the existing peak flows, with full seated loads on some journeys into Reading between 07:55 and 08:40 (with a minor peak around 09:30 when concessions become available) and returns between 16:33 and 17:38. There is an option to provide larger vehicles at current frequencies or to introduce an additional bus into the cycle to cater for any additional demand. Reading Buses is fully committed to supporting the provision of this facility and will, in line with its usual approach, continue to monitor loadings and invest in successful and growing services.

Please keep me informed of your progress with the proposed expansion.

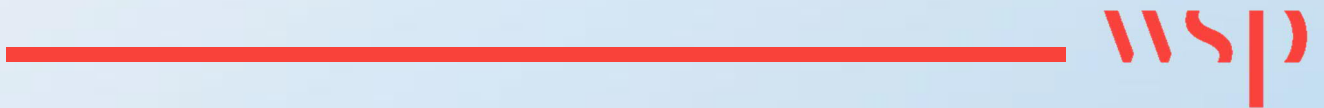
Yours sincerely



Tony Pettitt
Chief Finance & Information Officer

Appendix O

RISK REGISTER



Risk Register Ref	Hazard/Risk Name	Initial Risk Exposure								Spreadsheet Construction Risk Value			
		Probability			Cost Impact (£k)					Risk Rank	£240,093	£360,403	£480,714
		Rank		%	Cat		Min	Most Likely	Max	(P x CI)	Min	Most Likely	Max
1	Failure to achieve planning	2	L	13%	3	M	90,346	143,047	195,749	6	11,745	18,596	25,447
2	Allocated budget does not cover the cost to design and implement the scheme	3	M	36%	4	H	195,749	286,094	376,440	12	69,491	101,563	133,636
3	Significant relocation of statutory utilities within the existing car park	2	L	13%	5	VH	376,440	564,660	752,880	10	48,937	73,406	97,874
4	Significant amendments to the existing SUDS to accommodate the decked parking	2	L	13%	4	H	195,749	286,094	376,440	8	25,447	37,192	48,937
5	Traffic impact on the junctions adjacent to the Winersh Triangle P&R not fully understood until a transport assessment is undertaken. There is a risk of mitigation measures required at these junctions with cost implications.	2	L	13%	3	M	90,346	143,047	195,749	6	11,745	18,596	25,447
6	Lack of commitment from Elected Members and senior officers	1	VL	3%	4	H	195,749	286,094	376,440	4	4,894	7,152	9,411
7	Opposition from key stakeholders	2	L	13%	4	H	195,749	286,094	376,440	8	25,447	37,192	48,937
8	Identification of a temporary parking location to accommodate displaced cars during construction	2	L	13%	3	M	90,346	143,047	195,749	6	11,745	18,596	25,447
9	Impact of temporary TM restrictions greater than expected	2	L	13%	2	L	22,586	56,466	90,346	4	2,936	7,341	11,745
10	Supply chain insolvencies	2	L	13%	4	H	195,749	286,094	376,440	8	25,447	37,192	48,937
11	Ecology and environmental impacts	1	VL	3%	3	M	90,346	143,047	195,749	3	2,259	3,576	4,894

The Risk Matrix

		PROBABILITY →								
		Negligible	Unlikely	Possible	Probable	Almost Certain				
		Very Low	Low	Medium	High	Very High				
		<5%	6-20%	21-50%	51-80%	>80%				
		①	②	③	④	⑤				
		Overall Risk = Impact x Probability								
IMPACT ↑	> 5%	> 20%	Major	Very High / Showstopper	⑤	5	10	15	20	25
	3 to 5%	10 to 20%	Large	High	④	4	8	12	16	20
	1 to 3%	5 to 10%	Moderate	Medium	③	3	6	9	12	15
	0.5 to 1%	1 to 5%	Minor	Low	②	2	4	6	8	10
	< 0.5%	< 1%	Minimal	Very Low	①	1	2	3	4	5
	Cost as % of Project cost (not just fees)		Time	Quality	Overall IMPACT	Score	Cost / time and quality may be affected differently by a single risk. If overall risk is required, use the most severe affected component or give consideration to managing each separately.			

Quality Definitions for Risk Register

- 1 Minimal - meets or exceeds mandatory requirements
- 2 Minor - a few minor shortfalls, some small changes required to rectify
- 3 Moderate – some shortfalls requiring moderate changes to rectify but not impacting on delivery of an objective
- 4 Large - a large shortfall with an objective not being met, significant change required to rectify
- 5 Major - a major shortfall with more than one objective not being met and requiring significant changes to rectify

Other Impacts.

Also consider other aspects which might affect the project. e.g. reputation, safety (e.g. loss of life)

The measure of these risks can be subjective but will frequently have an associated cost which makes their quantification simpler.

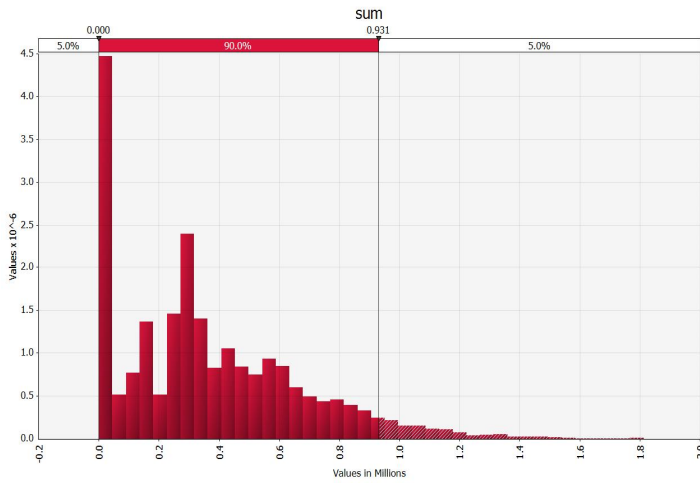
COST MATRIX						
Rank	Prob	Min Cost	Most Likely	Max Cost	Time Impact (%)	
-1	N/A	0%	0	0	0	0
0	Nil	0%	0	0	0	0
1	VL	3%	3,012	12,799	22,586	< 1%
2	L	13%	22,586	56,466	90,346	1 to 5%
3	M	36%	90,346	143,047	195,749	5 to 10%
4	H	66%	195,749	286,094	376,440	10 to 20%
5	VH	90%	376,440	564,660	752,880	> 20%

Cost matrix using combined likely risk cost & time % factors

Scheme costs incl fees & future inflation #####

@RISK Output Report for sum U22

Performed By: Martyn Whittaker
Date: 07 February 2019 16:37:58



Cell	Value
Minimum	0.00
Maximum	1,812,756.50
Mean	363,037.80
90% CI	+ 5,004.40
Mode	0.00
Median	266,129.32
Std Dev	304,217.63
Skewness	0.8456
Kurtosis	3.5013
Values	30000
Errors	0
Filtered	0
Left P	0.00
Left P	5.0%
Right P	951,093.33
Right P	95.0%
Diff. X	951,093.33
Diff. P	96.0%
1%	0.00
5%	0.00
10%	0.00
15%	0.00
20%	41,303.53
25%	129,029.48
30%	161,495.29
35%	211,683.45
40%	266,129.32
45%	287,008.48
50%	306,556.32
55%	336,503.76
60%	383,352.36
65%	435,484.44
70%	493,136.46
75%	554,544.22
80%	608,135.63
85%	663,130.69
90%	794,124.99
95%	951,093.33
99%	1,227,337.67

Simulation Summary Information

Workbook Name	Copy of Winneresh triangle PR alternative QRA Risk Register jan19 rev2 07022019.xlsx
Number of Simulations	1
Number of Iterations	10000
Number of Inputs	22
Number of Outputs	12
Sampling Type	Monte Carlo
Simulation Start Time	07/02/2019 16:37
Simulation Duration	00:00:58
Random # Generator	Mersenne Twister
Random Seed	

Summary Statistics for sum

Statistics	Percentile
Minimum	5% 0
Maximum	10% 0
Mean	15% 363,034
Std Dev	20% 304,218
Variance	25% 92548370000
Skewness	30% 0.845645
Kurtosis	35% 3.501522
Median	40% 266,124
Mode	45% 287,008
Left X	50% 306,550
Left P	55% 336,504
Right X	60% 383,352
Right P	65% 435,484
Diff X	70% 489,199
Diff P	75% 554,544
#Errors	80% 608,136
Filter Min	85% 683,121
Filter Max	90% 794,125
#Filtered	95% 931,093

Output Statistic for each Risk(Ranking)

Risk no	Rank	Name	based On 'Probability'		based On 'Most likely cost'	
			Mean	Rank	Mean	Risk no
2	1	Allocated budget does not cover the cost to design and implement the scheme	103,275	1	103,275	2
3	2	Significant relocation of statutory utilities within the existing car park	73,531	2	73,531	3
4	3	Significant amendments to the existing SUDS to accommodate the decked parking	38,081	3	38,081	4
7	4	Opposition from key stakeholders	37,182	4	37,182	7
10	5	Supply chain insolvencies	36,697	5	36,697	10
5	6	traffic impact on the junctions adjacent to the Wineresh Triangle P&R not fully understood until a transport assessment is undertaken. There is a	18,804	6	18,660	1
1	7	Failure to achieve planning	18,660	7	18,804	5
8	8	Identification of a temporary parking location to accommodate displaced cars during construction	18,391	8	18,391	8
6	9	Lack of commitment from Elected Members and senior officers	7,596	9	7,533	9
9	10	Impact of temporary TM restrictions greater than expected	7,533	10	7,596	6
11	11	Ecology and environmental impacts	3,284	11	3,284	11



2 London Square
Cross Lanes
Guildford, Surrey
GU1 1UN

wsp.com