REPORT N^O 1

BRACKNELL TOWN CENTRE INFRASTRUCTURE IMPROVEMENTS

MAJOR SCHEME BUSINESS CASE

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BRACKNELL TOWN CENTRE INFRASTRUCTURE IMPROVEMENTS

MAJOR SCHEME BUSINESS CASE

Bracknell Forest Council

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1 EXECUTIVE SUMMARY

- 1.1.1 Bracknell town centre is located in the heart of Bracknell Forest, approximately 45km west of central London and 16km east of Reading. The A329(M) / A322 corridor between Reading and the M3 at Bagshot passes 0.5km to the south of the town centre and the M4 passes within 7km with access via junction 10.
- 1.1.2 The town is a major employment centre within the South East, and it's Southern Industrial Area and Western Business Park are home to numerous large firms, including Waitrose, Hewlett Packard, Dell, 3M and Fujitsu.
- 1.1.3 Regenerating the Town's retail centre is of vital economic importance for maintaining the long term viability of this employment base through supporting the Borough Councils growing residential population and associated housing growth both of which underpin economic growth.
- 1.1.4 The highway changes, improved public realm, new and enhanced walk / cycle connections and the improved transport information technologies proposed all aid in underpinning this economically important regeneration of the retail centre.
- 1.1.5 Economic, distributional, environmental and social appraisals have been conducted in conjunction with the Department for Transport's (DfT) WebTAG guidance. These appraisals consider the impacts associated with the highway schemes proposed. The strategic, commercial, financial and management cases of the scheme have also been considered in this report.
- 1.1.6 The value for money (BCR) assessment has been prepared in accordance with the DfT's 'Value for money assessment: advice note for local transport decision makers'.
- 1.1.7 The scheme will also provide benefits socially through:
 - → Reduced Mortality benefit of cycling £62,000 per year
 - → HEAT Walking Economic Benefits of approximately £646,000 average per year
 - → Reduced Absenteeism annual benefit of approximately £58,800 per year
- 1.1.8 There are highway infrastructure benefits of £6,035,000 (PVB) with costs of £3,032,000 (PVC) giving a BCR of **1.990**.

ITEM VALUE (£000S)

Infrastructure improvements:	
Met Office signalised roundabout	0.436
Station Way signalised roundabout	8.130
Millennium Way signalised junction	-2.531
Reduced mortality benefit from Cycling	1.325
HEAT walking economic benefits	13.802

Reduced absenteeism	1.256
Present Value of Benefits (PVB)	22.418
Broad Transport Budget	6.140
Present Value of Costs (PVC)	6.140

OVERALL IMPACTS

Net Present Value (NPV)	16.278
Initial Benefit to Cost Ratio (BCR)	3.651

- 1.1.9 This information shows that the initial BCR (benefit cost ratio) of the scheme, based on standard monetised values, is <u>3.651</u>. This represents the benefits for the core elements of the scheme, and is considered high value for money according to DfT guidance.
- 1.1.10 An assumption has been made of the number of housing and employment sites that would be impacted by the scheme which are:

→ number of units: 1,050

→ square feet of employment land: 885,000 sq feet

- 1.1.11 The GVA from the town centre re-development is £276,947,580.
- 1.1.12 An updated Appraisal Summary Table (AST) provides a summarised breakdown of the final impact assessments for the scheme. This can be found in **Appendix A**.
- 1.1.13 Extensive work has been undertaken to ensure that the mechanisms for delivering the scheme are in place, and that the scheme is overseen by a steering group (Project Board). The key milestones of the project following the submission of this Transport Business Case are:
 - → Conditional approval sought from Berkshire Local Transport Body (BLTB): November 2015
 - → Tendering process date: this was completed following the reserved matters planning consent
 - → Construction work begins on site: this commenced in July 2015
 - → Completion of highway works date: July 2016
 - → BFC delivering VMS, RTPI and UTMC during 2016-2017, subject to funding approval
 - Monitoring of works: this is still to be negotiated with Bracknell Forest Council (BFC) and the developer but would be expected in 2017 and 2018
- 1.1.14 The total scheme cost, on which this Business Case is based, is £6.382million. The LEP contribution is requested to be **£2million**.

2 PROJECT BACKGROUND

2.1 INTRODUCTION

- 2.1.1 WSP | Parsons Brinckerhoff have been commissioned by Bracknell Forest Council (BFC) to undertake modelling and analysis of the economic, distributional, social and environmental impacts of the public realm and junction improvements that are part of the Bracknell town centre Redevelopment scheme. This will provide the evidence base for the Transport Business Case.
- 2.1.2 Bracknell town centre is currently undergoing a major scheme of redevelopment comprising the demolition of buildings and the redevelopment of the area for a mix of uses, including retail, food and drink, leisure, residential, community and business uses.
- 2.1.3 Following the redevelopment scheme, the 2007 TA forecasts that there will be a 70% increase in trips in the AM, 108% increase in the PM and a 41% increase on a Saturday Peak. As such, improvements are required on the local highway network and to the town centre's public realm to support the additional trips and footfall that the town centre improvements are projected to attract.
- 2.1.4 This Transport Business Case sets out the strategic, economic, financial, commercial and management case for the improvements to the local highway network and public realm that are due to be delivered as part of the Bracknell town centre redevelopment scheme. The local highway network and public realm improvements consist of:
 - Millennium Way signal controlled junction
 - → Weather Way realignment
 - → Met Office Rbt and Station Rbt Capacity/Operational Improvements
 - Bond Way drop-off / collection point
 - Conventional highway signage
 - Variable message signing
 - Real Time Bus Information (RTI)
 - → Urban Traffic Management Control (UTMC) system
 - Cycle improvements
 - Pedestrian improvements
 - → Charles Square service yard / multi-storey car park / hotel entrance improvements.

2.2 KEY OBJECTIVES

- 2.2.1 The proposal to implement public realm and junction improvements as part of the Bracknell Town Centre Redevelopment will:
 - → Improve journey times, reliability and journey quality for all road users
 - Improve accessibility to Bracknell town centre for pedestrians, cyclists and road users
 - Reduce congestion and its environmental impacts
 - Improve access to Bracknell train station
 - → Enhance the viability of the town centre, support Economic Development and other key areas.

2.3 BACKGROUND TO BUSINESS CASE

PLANNING APPLICATION

- 2.3.1 In November 2004, BFC submitted an application for Outline Planning Permission (OPP) for the redevelopment of Bracknell town centre, and consent was granted in December 2006. In 2007, an application was made to amend the conditions placed on the original OPP due to a change in scope and content of the development. In November 2010, an application to extend the validity of the 2007 OPP, due to the scheduled expiry of the extant permission, was consented.
- 2.3.2 In June 2012, a new application was submitted which took account of all the additional changes in development proposals and parameter plans that have taken place since the 2010 planning consent.
- 2.3.3 The Bracknell town centre scheme comprises the demolition of buildings and the redevelopment of the area for a mix of uses, including retail, food and drink, leisure, residential, community and business uses. To support the redevelopment, the planning application proposed a number of transport improvements including the public realm and junction improvements which this Transport Business Case supports.

BUSINESS CASE DEVELOPMENT

- 2.3.4 Following the devolution of major transport scheme funding from Department for Transport, BFC as part of the Berkshire Local Transport Body (BLTB) and the Thames Valley Berkshire (TVB) Local Enterprise Partnership (LEP) were asked to prepare business cases for proposed schemes which would deliver the transport infrastructures which are identified in the Core Strategy.
- 2.3.5 The process of a business case through BLTB is described below.

Table 2.1: Business Case Process

FOUNDING DOCUMENT PROCESS

1	Unapproved or Long List Schemes. BLTB will invite councils and the LEP to submit unapproved schemes for consideration.
2	If approved this means it will be taken into further consideration. A full Transport Business Case in line with current Department for Transport guidance including WebTAG and this will be subject to independent assessment and public scrutiny before approval.
3	(Optional)- In appropriate circumstances, a scheme may be given conditional approval (conditional on securing a financial contribution)
4	If a scheme demonstrates high value for money and receives a positive assessment by the independent appraisal it can become an Approved Scheme. Otherwise it could be deleted or referred back for development.
5	Approved Schemes are subject to formal agreement about roles, responsibilities, reporting and auditing between the BLTB and the Local Transport Authority promoting the scheme.

2.4 BACKGROUND OF SUPPORT

2.4.1 The regeneration of Bracknell Town Centre has been a local priority with business leaders and residents for at least 20 years. The Council has undertaken many studies and consultations in this time where the public has consistently support the regeneration. The scheme received planning permission and is included in the Council's Local Plan, which also underwent substantial consultation

2.5 STRUCTURE OF DOCUMENT

- 2.5.1 The chapters of this report are set out as follows:
 - → Chapter 3: Summary of AST
 - → Chapter 4: Scheme Description
 - → Chapter 5: Strategic Case
 - → Chapter 6: Economic Case
 - → Chapter 7: Financial Case
 - → Chapter 8: Commercial Case
 - → Chapter 9: Management Case
 - → Chapter 10: Conclusion
 - → Appendices including AST, worksheets, maps and management case information.

3 APPRAISAL SUMMARY TABLE (AST)

- 3.1.1 All of the required economical, distributional, environmental and social appraisals have been undertaken for the highway and public realm improvements in Bracknell town centre. The assessments have been produced using Lower Level Super Output Area data as well as Local Authority Level data. Lower Level Super Output Area (LSOA) data was considered to be the appropriate level of data due to it providing a useful radius around the sites to accurately analyse data of different social groups. This was gathered from the guidance produced by Department for Transport which states the mapping at Lower Super Output Area is preferable.
- 3.1.2 The full appraisal of impacts through the worksheets provides an assessment score. These assessment scores range from Highly Beneficial to Highly Adverse on a seven point scale. The overall assessment of these impacts is recorded in the AST along with supporting information. A copy of the final AST can be found in **Appendix A**.
- 3.1.3 All the worksheets are located in **Appendix B** and are attributed to the final AST in **Appendix A**.
- 3.1.4 This AST is an updated version from the one assessed by WYG Report No. RT-A087383-14 to address comments and items raised in that review. Changes are highlighted in yellow backgrounds.
- 3.1.5 The Bracknell Town Centre Regeneration project has a **Planning Consent** and thus wherever possible the MSBC and AST / worksheet assessments are based on the approved approaches taken from the approved Environmental Assessment and Transport Assessment (in terms of traffic data and junction designs and any subsequent updates).
- 3.1.6 WSP | Parsons Brinckerhoff and BFC are not able to make changes to the general principles set out and agreed in the planning documents. This relates especially to junction layouts and the traffic data that underpinned the design at the time the scheme was approved by The Council.
- Junction design was guided by BFC on the basis of a 'nil-detriment' impact of the development traffic on the highway network. This is reflected in the low BCR for the Met Office roundabout which is an existing fully signalised junction where minor marking changes and signal timings have been used to accommodate increased growth. In addition, MOVA will be applied to the junction to improve traffic flow (see explanatory note in Appendix H).

4 SCHEME DESCRIPTION

4.1 BRACKNELL TOWN CENTRE REDEVELOPMENT WORKS

- 4.1.1 The Bracknell town centre scheme comprises the demolition of buildings and the redevelopment of the area for a mix of uses, including retail, food and drink, leisure, residential, community and business uses. The aim of the redevelopment works is to make Bracknell town centre a focus for living, working and playing, for all social groups.
- 4.1.2 The Bracknell town centre works is split into four zones: North Development Zone, North West Development Zone, Central Development Zone, and South Development Zone. The sections below provide a summary of the land uses planned for each of these zones.
- **Appendix C** contains the proposals for the highway and urban realm improvements.

NORTH DEVELOPMENT ZONE

4.1.4 The plans for the North Development Zone comprise up to 45,000m² of new retail, a cinema and up to 7,000 m² of A2-A5 land use, which includes financial / professional services, restaurants / cafes, drinking establishments and hot food takeaways. The zone will also house areas with new residential units, and a car park to serve the town centre.

NORTH WEST DEVELOPMENT ZONE

- 4.1.5 The North West Development Zone will comprise approximately 7,500m² of business / office space, a food store of between 3-4,000m², a public car park with up to 250 spaces, and new residential units. The area will also have small amounts of new retail, A2-A5 and leisure land uses.
- 4.1.6 Within the North West zone, there is also a new Waitrose supermarket, which became operational in November 2011.

CENTRAL DEVELOPMENT ZONE

4.1.7 The Central Development Zone will comprise up to 6,200m² of new retail and up to 1,000m² of A2-A5 land uses.

SOUTH DEVELOPMENT ZONE

4.1.8 The plans for the South Development Zone include up to 15,500m² of new residential units, up to 18,600m² of office space, up to 3,125m² of new retail space and up to 3,125m² of A2-A5 land uses.

4.2 KEY INFRASTRUCTURE ELEMENTS

4.2.1 The following sections provide summaries of each of the key infrastructure elements that will be provided using the funding sought as by this Business Case (8952-GEN-001 Rev A)

MILLENNIUM WAY SIGNAL CONTROLLED JUNCTION

4.2.2 The provision of a new all-movement signal controlled junction serving the multi-storey car park and retail service / delivery access associated with the northern development zone and incorporating a new pedestrian / cycle crossing facility that forms part of a new route between Bull Lane and the Met Office Roundabout, as shown in 8952-MILL-101 Rev H.

WEATHER WAY REALIGNMENT

4.2.3 The re-alignment of The Ring (north) to provide access to the northern retail quarter, as shown in 8952-GEN-001 Rev A.

BOND WAY DROP-OFF / COLLECTION POINT

4.2.4 The provision of a new drop-off / collection point and taxi rank on Bond Way, as shown on.8952-GEN-001 Rev A.

MET OFFICE ROUNDABOUT

4.2.5 The upgrading of an all-movement signal controlled junction as shown in 8952-MET-101.

STATION ROUNDABOUT

4.2.6 The provision of an all-movement signal controlled junction as shown in 8952-STA-101 Rev C. This junction is currently an uncontrolled roundabout.

CONVENTIONAL HIGHWAY SIGNAGE

4.2.7 New highway signage to show revisions to surrounding network routing, including car parks and service yards, improving movement and reducing delay on the network.

VARIABLE MESSAGE SIGNING

4.2.8 Further Urban Traffic Control capability applying to Variable Message Signing for town centre car parks, enabling greater co-ordination and management and maximising car park occupancy.

REAL TIME BUS INFORMATION (RTI)

4.2.9 The provision of further RTI displays at key bus stops linked to the town centre.

URBAN TRAFFIC MANAGEMENT CONTROL (UTMC)

4.2.10 Expansion of the UTMC system to provide further Urban Traffic Control capability at key traffic signal junctions relating to the town centre and enabling greater co-ordination, control and congestion management.

CYCLE IMPROVEMENTS

4.2.11 The provision of a contra-flow cycleway, planting, lighting, resurfacing of cycleway and adjacent cycleway to provide a new route into the heart of the town centre with enhanced links to the Rail and Bus Stations for pedestrians and cyclists, as shown on. 8952-GEN-001 Rev A.

PEDESTRIAN IMPROVEMENTS

4.2.12 A new pedestrian / cycle crossing as a continuation of the new pedestrian / cycle route by crossing The Ring and linking with recent improvements at the bus and rail station.

CHARLES SQUARE SERVICE YARD / MULTI-STOREY CAR PARK / HOTEL ENTRANCE IMPROVEMENTS

4.2.13 A new junction providing access to key services including a new toucan crossing across The Ring, connecting to the existing pedestrian / cycle network serving the town centre and wider area, as shown on 8952-GEN-001 Rev A.

4.3 MANAGING THE IMPACT OF CONSTRUCTION

4.3.1 The construction of the highway and pedestrian / cycle improvements to Bracknell town centre is being controlled through the project Construction Environmental Management Plan (CEMP) which is a condition of planning approval. This document includes working times, equipment to be used, delivery and construction routes and temporary traffic management arrangements.

5 STRATEGIC CASE

5.1 AREA DESCRIPTION

- 5.1.1 Bracknell town centre is located in the heart of Bracknell Forest, approximately 45km west of central London and 16km east of Reading. The A329(M) / A322 corridor between Reading and the M3 at Bagshot passes 0.5km to the south of the town centre. Junction 10 of the M4 is located 7km to the east and can be reached via the A329(M), providing access to London and Slough in the east, and Reading and the West Country in the west. Heathrow International Airport is located 20km to the north east of the area.
- Bracknell is a major employment centre within the South East, and it's Southern Industrial Area and Western Business Park is home to numerous large firms, including Waitrose, Hewlett Packard, Dell, 3M and Fujitsu. At the time of the 2011 Census, approximately 40% of the people working in Bracknell lived in the borough, with residents from Wokingham (13%) and Reading (5%) being other key contributors to the workforce.
- 5.1.3 There are currently nearly 6,000 homes proposed to be built in Bracknell Forest, with a further 3,000 required to fulfil the council's allocation by 2026. The improved pedestrian and cyclist accessibility, and additional highway capacity, will support residents from these developments who need to access Bracknell town centre and train station. Key developments which will benefit are Amen Corner in the west of Bracknell (1,125 units) and Warfield (2,200 units).

5.2 SOCIO-ECONOMIC CHARACTERISTICS OF STUDY AREA

- 5.2.1 At the time of the 2011 Census, Bracknell Forest had a population of 113,205, of which 16,666 were in the LSOAs surrounding the site. The socio-economic distribution of the area will be based upon 2011 Census Data for Wildridings and Central, Priestwood and Garth, and Bullbrook wards. Key statistics for these areas include:
 - → Over 24% of residents in the wards analysed do not have access to a car or van, which is higher than the Bracknell Forest average (14%)
 - → The average number of cars owned per household in the area is 1.2 and across the wider Bracknell Forest area is 1.5
 - → The average household size in the wards is 2.33 people, which is lower than the borough average of 2.47
 - → Over 69% of the population between 16 and 74 years old are in employment, which is lower than the borough average of over 72%
 - → Almost 17% of residents in the wards either walk or cycle to work, which is higher than the borough average of 10%
- Analysis of the 2010 English Index of Multiple Deprivation (IMD), using Lower Super Output Area for Central Bracknell (E01016249) as a proxy for the area, shows that it is the most deprived in the borough. However, the area is not classed among the 5% most deprived in Berkshire.

5.3 BUSINESS STRATEGY: NATIONAL TRANSPORT PRIORITIES

5.3.1 The Government's 2014 National Infrastructure Plan outlines the Government's approach to identifying and delivering infrastructure that is required. The plan states that there is a strong economic case for infrastructure investment as it is shown to have a significant positive effect on output, productivity and growth rates.

- 5.3.2 The National Planning Policy Framework (NPPF) states that plans should help to build a strong and competitive economy through the creation of jobs and prosperity. The Bracknell town centre infrastructure improvements would improve access for all modes to the town centre area, encouraging sustainable growth. The NPPF also states that planning should ensure the vitality of town centres. The town centre is undergoing a redevelopment scheme and the improvements are necessary to provide access to this area and encourage people to spend time there.
- 5.3.3 A key point mentioned in the NPPF relates to the promotion of sustainable transport as a method of facilitating sustainable development and contributing to wider sustainability and health objectives. The improvements proposed will improve access to the town centre by cycle and on foot from the wider Bracknell area. This will encourage visitors to walk or travel by bicycle, benefiting both their health and the wider economy.

5.4 BUSINESS STRATEGY: REGIONAL TRANSPORT PRIORITIES

- 5.4.1 The TVB LEP submitted their Strategic Economic Plan (SEP) in March 2014, which outlines the case for necessary investment to infrastructure, enterprise and employment that is required for the Thames Valley regions economic growth.
- It states that the TVB area is ranked second, behind London for Business birth rate (12.4%) and in economic output per head which is valued at £32.8k. To keep up these standards, infrastructure will need to continually improve and grow.
- 5.4.3 The growth of TVB economy is reliant upon transport and communications infrastructure and the SEP states that currently 'it is threatening to undermine our intrinsic growth potential'. It has therefore deemed important to focus on creating new networks and encouraging local sustainable transport networks to allow people to travel easily by foot, bicycle or by bus.
- The TVB SEP states that the 'biggest single risk to the future economic contribution of TVB concerns our transport and communications infrastructure'. The public realm and junction upgrades aim to improve the walking and cycling infrastructure to and within the centre, and provide additional capacity on key sections of the highway network around the town centre. These improvements will support benefit existing users of the network and support the increase in trips that are projected as part of the Bracknell town centre redevelopment.

5.5 BUSINESS STRATEGY: LOCAL TRANSPORT PRIORITIES

BRACKNELL FOREST COUNCIL CORE STRATEGY

- Bracknell Forest Council's Core Strategy was adopted in 2008 and is divided into six themes: sustainable growth, quality of life, the environment, somewhere to live, somewhere to work and shop, and transport. The infrastructure improvements in the town centre support a number of the policies outlined in the document, including:
 - → **Policy CS3** specifically relates to Bracknell town centre and states that development will be permitted which contributes to the vitality of the area in a number of ways, including:
 - Contributing to the comprehensive delivery of the town centre;
 - Contributing to the town centre role as a transport hub for the borough; and
 - Creating a high quality distinctive well designed environment.
 - → Policy CS7 relates to the design of developments, and states that developments will be permitted that:
 - Aid movement through accessibility, connectivity, permeability and legibility; and
 - Provide high quality usable open spaces and public realm.

- → **Policy CS21** concerns retail development in town centres and suggests that retail development should demonstrate that the development is accessible by a choice of means of transport and will not result in congestion.
- → Policy CS23 states that transport in the borough will:
 - Increase the safety of travel;
 - Maintain and where possible improve the local road network;
 - Provide improved access to key services and facilities; and
 - Promote alternative modes of travel.

BRACKNELL FOREST COUNCIL LOCAL TRANSPORT PLAN (LTP3)

- 5.5.2 Bracknell Forest's most recent Local Transport Plan (LTP3) was adopted in 2011. The town centre infrastructure improvements support a number of the policy aspirations within the LTP3:
 - → **TP1** Accessibility to maintain high levels of accessibility to key services such as employment, local centres, healthcare, supermarkets, education and leisure through:
 - Improving walking and cycling infrastructure
 - Implementing key road capacity improvements
 - → **TP7** Smarter Choices the council will improve and promote walking and cycling options, especially for short local trips
 - TP8 Walking and Cycling the council will promote walking and cycling in the borough through:
 - Improving green infrastructure to make walking and cycling more attractive
 - Improving safety for pedestrians and cyclists
 - → TP12 Traffic Management the council will regulate traffic, where necessary, by improving the reliability of journey times
 - → TP13 Congestion Management the council will seek to reduce the impact of congestion through works and measures to improve the capacity and functionality of junctions and route corridors

5.6 PROBLEM IDENTIFIED

The key transport challenges for Bracknell Forest (although not quantified), as identified by the Local Transport Plan, and how the infrastructure improvements benefit these are identified in Table 5.1:

Table 5.1: Transport Challenges in LTP3 and Benefits of Town Centre Improvements

TRANSPORT CHALLENGE IDENTIFIED	IMPROVEMENTS HELP RESOLVE THIS?	DESCRIPTION
To reduce delays associated with traffic congestion and improve reliability of journey times	✓	The capacity improvements to the Met Office and Station roundabouts will reduce congestion and delay
To maintain and improve, where feasible, the local transport network	✓	The highway, pedestrian and cycle infrastructure improvements will contribute to an overall improvement in

DO THE

		the local transport network
To reduce greenhouse gas emissions from transport	✓	The junction improvements will reduce congestion and the level of greenhouse gas emissions
To encourage and promote accessibility by sustainable modes of transport	√	Improvements to walking and cycling infrastructure will improve accessibility and encourage more people to travel sustainably
To protect and enhance the quality of natural resources including water, air quality and the natural environment	√	The junction improvements will reduce congestion and the level of greenhouse gas emissions, resulting in improved air quality
To enhance the street environment	✓	The public realm improvements provide
To reduce causalities and improve safety on the local transport network	√	A number of new pedestrian crossings and cycle lanes will be installed, providing improved facilities for vulnerable road users and helping to reduce road casualties
To secure necessary transport infrastructure and services to support development	✓	The improvements are required to provide vital vehicular access to the northern development zone and pedestrian / cycle access across the town centre

- The challenges above, although not quantified in terms of fatalities, queues, low accessibility to cyclists which could be seen as being "important" for Government intervention, do not recognise that the main justification for **LEP intervention** and partial funding of the highway, transport and public realm improvements focuses on:
 - supporting the economic development of Bracknell Town Centre and creating jobs and new housing as set out in the GVA calculations
 - → improving access to the Town Centre through improved walk and cycle routes.
 - → Allowing early delivery of highway, transport and public realm improvements through the LEP Growth funding arrangements

5.7 THE IMPACT OF NOT CHANGING

- 5.7.1 Without the implementation of the junction, transport and public realm improvements the redevelopment work taking place in Bracknell town centre and the significant number of additional trips forecast to be generated by the new shops, restaurants, business and residential areas, would intensify the strain on the already saturated local highway network. Furthermore, the decision not to implement the public realm improvements would restrict the accessibility and desirability of the town centre to pedestrians and cyclists.
- 5.7.2 Specific outcomes of a 'Do Nothing' scenario include:
 - → The risk of restricting the economic benefits associated with the town centre redevelopment due to reduced levels of accessibility;

- → Increased congestion and noise on the A329, A3095 and the wider highway network in the vicinity of the town centre;
- → A decline in air quality on the A329 and A3095 in the vicinity of the town centre;
- Failure to encourage visitors to access the town centre area by walking and cycling; and
- → Risk of not achieving the transport policy aspirations set out in Section 3.1.

5.8 DRIVERS FOR CHANGE

- 5.8.1 The key drivers for change have been identified as the following:
 - → Run down and economically stagnant town centre, impacting on job creation and retention of shoppers
 - → Aging buildings and infrastructure, unable to meet modern standards
 - → Local Stakeholder pressure to redress the above
 - Need for improved and expanded retail and services offer for the town centre to match growing demand for new housing within and surrounding the town centre
 - → Need to improve overall accessibility to the town centre through improved linkages and removing barriers

5.9 OBJECTIVES

5.9.1 The objectives the town centre infrastructure improvements are to support the viability of the town centre and improve access to services. The high level objectives are (by main user group):

CAR USERS

- > No worse or improve journey times, reliability and journey quality at key junction entry points;
- Improved access to town centre car parks, including "live" variable message signing for car parks

PUBLIC TRANSPORT USERS

- → Improved public realm and access between Town Centre and main bus and rail interchanges to encourage more users
- > Improved Real Time Passenger information "on-street" and through mobile devices

PEDESTRIANS AND CYCLE USERS

- → Improve accessibility to Bracknell town centre for pedestrians and cyclists
- Improvements to the public realm areas to enhance journey quality and ambience
- → Improved "way marking" and signing to key transport and service facilities

ENVIRONMENTAL IMPACTS

Minimising air quality and noise impacts during construction and in operation

5.10 MEASURES OF SUCCESS

- A programme of local travel movement monitoring will be put in place prior to evaluate the town centre regeneration impact, from a highway and transport perspective. Monitoring will include:
 - > Traffic congestion and journey times on the town centre access routes;
 - Road safety (through monitoring Stats 19 data) for town centre routes;
 - > Pedestrian and cycle counts on key routes into and around the town centre.
 - → Car park usage, distribution of parking and user feedback surveys
 - → Public transport user surveys
- 5.10.2 It is likely, but not confirmed, that the Council, in conjunction with the local Chamber of Commerce, will monitor employment growth in the regenerated town centre as well as retail footfall.
- 5.10.3 Housing completions and occupancy are normally surveyed by the Council as part of monitoring housing delivery and this would be reported separately to the MSBC.
- 5.10.4 Overall measures of success of the schemes would be:

CAR USERS

- → Queues and delays at Met Office and Station Roundabout junctions match predicted levels in LinSig;
- → Car parking surveys show reduction in car park space search time (through user feedback) and increase in user positive experience of car parking in the Town Centre

PUBLIC TRANSPORT USERS

→ Users surveys indicate an improving picture of experience of using PT to access the Town Centre

PEDESTRIANS AND CYCLE USERS

- Increase in walking and cycling in line with predictions (2.2% and 10% respectively) for accessing the Town Centre
- → Positive experience of user feedback on public realm improvements

ENVIRONMENTAL IMPACTS

- → BFC monitoring of Air Quality shows no or minimal increases in key contaminants and AQ remains within The Coucnil's Air Quality Objectives (as set out in the ES)
- BFC monitoring of Noise shows no increases as set out in the ES

5.11 SCOPE

5.11.1 The scope of the project is set out in sections 4.1 and 4.2 in terms of the redevelopment areas and the infrastructure interventions which support this and are included within this business case.

5.12 CONSTRAINTS

5.12.1 The scheme has a number of potential constraints, and these have been dealt with, or have planned mitigation, throughout scheme development, key items being:

- → Statutory Utility protections, diversions and reinforcements (impacts to programme and costs)
- → Environmental (noise, dust etc.) during construction (managed through planning conditions and Construction Environmental Management Plan (CEMP))
- → Construction Access (managed within CEMP)
- Maintaining access to existing facilities and services (including rail and bus stations), these will be managed through agreed traffic management plans between the developers, their contractors and the Council Highway Officers

5.13 INTER-DEPENDENCIES

- 5.13.1 A comprehensive list of risks has been prepared as part of the management case (Chapter 9). The delivery of the Bracknell town centre highway and public realm improvements is dependent on these risks either not arising or being sufficiently mitigated so that the scheme remains unaffected.
- A total of 7 key risks have been identified. In most cases, the impact is so low that the scheme cannot be defined as dependent upon their negation.
- 5.13.3 The key inter-dependencies can be summarised as follows:
 - → Reaching agreement on the Section 278 design and adoption areas of the highway. This is highlighted in the risk register with mitigation proposals.
 - → Unknown or unidentified Statutory Utilities Plant in and around the junction to be altered. This is highlighted in the risk register with mitigation proposals.
- 5.13.4 Overall, the risks on the project stay with the developer including all those listed in the risk sheet plus, construction cost inflation, variable ground conditions, weather impacts on delivery programme and contractor failure as typical examples.

5.14 STAKEHOLDERS

- 5.14.1 The stakeholders who have been consulted as part of the scheme development and planning application are listed below:
 - → Bracknell Forest Council conservation, environmental health, ecology, landscape, planning
 - Wokingham Borough Council
 - Runnymede Borough Council
 - Surrey Heath Borough Council
 - Highways Agency
 - → Thames Water
 - Wildridings and Central Parish Council
 - → Veolia Water
 - Royal Berkshire Fire and Rescue Services
 - Chamber of Commerce

5.15 OPTIONS APPRAISAL

- 5.15.1 Option assessment was undertaken prior to the scheme receiving planning permission. As the scheme is consented, and is therefore fixed, there has been no further options assessment undertaken as part of the Transport Business Case.
- 5.15.2 Proposed junction layouts and their under pinning traffic information has been drawn from the Development TA or provided by The Council as part of their discussions with the developers. As requested, traffic flow information is now provided in Appendix H along with LinSig output information.

6 ECONOMIC CASE

6.1 INTRODUCTION

- An assessment of the Economic Case is undertaken to ensure that all features of the scheme are assessed and that they fulfil the Treasury's requirements for appraisal and demonstrating value for money.
- The assessment for Value for Money will be undertaken through this Transport Business case, through the production of a Benefit Cost ratio (BCR) where monetised costs and benefits can be made (against highway and transport interventions) and through an associated Appraisal Summary Table to capture non-monetised benefits and qualitative assessments (from the Developments Approved Environmental Assessment).
- 6.1.3 In additional, a Gross Value Added calculation for how the highway and transport interventions assist in unlocking and supporting economic growth for employment and housing growth, and in this case, retail growth.

6.2 OPTIONS APPRAISED

- 6.2.1 Option assessment was undertaken prior to the scheme receiving planning permission. As the scheme is consented and is therefore fixed, there has been no further options assessment undertaken as part of the Transport Business Case.
- 6.2.2 It was agreed with the LEP independent assessor at ASR stage that the above was acceptable.

6.3 HIGHWAY ASSIGNMENT MODELLING

- 6.3.1 It was not proposed to use the BFC VISUM Transport Model to undertake the MSBC calculations. Our reasoning for this is:
 - → Existing VISUM model is calibrated / validated to 2007 observed data and therefore does not meet current DfT Transport Analysis Guidance (TAG) for use in the economic assessment of schemes. A minimal update to the 2007 model involving the following tasks has been undertaken
 - Update VISUM modelling software to latest version (VISUM 13.00-09) which uses updated traffic assignment procedures as recommended by PTV
 - Disaggregate a number of zones of particular interest e.g. Amen Corner and Bracknell
 Town Centre in order to allow more detailed assessment of forecast development impacts
 in such areas
 - Recalibrate assignment model link flows and journey times to 2013 observed traffic data
 - Recalibrate demand model to latest mode split and distributional data

No new origin and destination survey data was undertaken therefore the travel patterns are still based on the original survey data collected for the 2007 model (i.e. 2006 Road-Side Interviews) although the flow levels, turning movements and journey times have been recalibrated to observed 2013 traffic data

A 2026 forecast year model in line with the end of the current plan period was being produced at the same time as the Bracknell Town Centre Business Case. This was not available to undertaken any wider detailed strategic modelling or to undertake any TUBA economic assessment of the junctions.

The LINSIG modelling that has been used to undertake the economic assessment is making use of the best available information at the time in a proportionate way. The inputs to the LINSIG model are based on 2016 forecast information and has been taken from the agreed Transport Assessment

- → The Council and developers agreed not to use the BFC traffic model to undertake the assessment for the TA. Future traffic flows and a manual distribution on the highway network was the agreed approach
- → The intervention schemes at the three junctions were designed and agreed between the developer and the Council as meeting "nil-detriment" to meet the development impacts
- → The location of the junctions and development area in the Town Centre (replacing an existing centre) were not seen as necessarily creating a strategic re-assignment of traffic which would have required testing in a transport model
- → The assessment of individual junctions (LinSig) would better reflect delays (and reduced delays) due to the anticipated development traffic
- → As traffic modelling has not been used, no Inter-peak period has been assessed. However, we note that the use of MOVA would assist in reducing queue times, especially at inter-peak periods. See Appendix H for TRL comment on uses of MOVA.

6.4 ASSUMPTIONS

- 6.4.1 WebTAG guidance has informed the Economic Case where relevant. However, there are some further assumptions that have been made in relation to some specific areas of the assessment, which are outlined below:
 - → The highway schemes have been assessed using the stand-alone junction analysis tool LINSIG
 - → The delay per passenger car unit/hour has been extracted for the existing layout and proposed layout, for the AM peak and PM peak, and used along with the scheme cost to calculate an initial Benefit to Cost Ratio (BCR) over 60 years
 - → Benefits have been converted into a cost by using the values of time taken from the WebTAG Databook November 2014 release v1.3.b

6.5 SENSITIVITY AND RISK PROFILE

- 6.5.1 WebTAG Unit M4.3 stipulates that a "Core Scenario" should be defined which is based on the most "unbiased and realistic set of assumptions" that will form the central case for appraising a scheme. Alternative scenarios are also required which have different supply and/or demand assumptions from the Core Scenario. The differences in the alternative scenarios will reflect the uncertainties in assumptions made within the Core Scenario.
- A single development scenario, Core Scenario, has been assessed based on the 2007 and June 2012 planning applications assumed development quantum mix. This is set out below:

Land Use	Sqm
A1 Food Store	5000
A1 Replacement Retail	12991
A1 New Retail	56426
A2-A5 take-away, Café, Restaurant	14015
D2 Leisure	7000
A1 Indoor Market	600
B1 and D1 Civic Facility	8000

D1 Health Centre	7000
D1 Langley Hall	300
C1 Hotel	16200
C3 Residential	83700
5G British Legion	1200
5G Police Station	3750
50 Magistrates Court	0000
5G Magistrates Court	2300
Energy Centre	2000

- As a transport modelling approach has not been used, the 2016 traffic flows in the Developers approved Transport Assessment have been used. No high or low growth scenarios have been tested.
- These were estimated through a process using person trip demand based upon retail catchment analysis into the Town Centre. From this a person trip generation and modal split to the retail element was used and applied to corridors. As this was an approved approach WSP | Parsons Brinckerhoff have not sought to change or re-predict forecast flows at he assessed junctions.
- 6.5.5 The BFC / Developer agreed assessment year was 2016 and this is what has been used for the assessment.

6.6 APPRAISAL SUMMARY TABLE

- An updated Appraisal Summary Table (AST) is a single page summary of the key aspects of the economic case (found in **Appendix A**). It focuses on four key appraisal areas, in accordance with guidance presented in WebTAG:
 - Economy
 - Environmental
 - Social / Distributional
 - Public Accounts
- Bracknell town centre highway and public realm improvements can be considered a medium sized project due to the estimated cost of the scheme being over £5 million. Supporting the AST is a range of specific worksheets relating to the appraisal areas. These can be found in **Appendix**

6.7 VALUE FOR MONEY STATEMENT

SCHEME APPRAISAL

ASSESSMENT OF ENVIRONMENTAL IMPACTS

- 6.7.1 There are eight environmental aspects of the scheme which should be considered in the environmental appraisal, following guidance provided in DfT WebTAG Unit A3. These are:
 - Air Quality
 - Noise
 - Greenhouse Gases
 - Landscape

- Townscape
- Historical Environment
- Biodiversity
- Water Environment.
- An appraisal has been completed for each of these aspects to understand whether the scheme's impact on a scale from significantly beneficial to significantly adverse. These have been based, where information is available, on the impacts within the Approved 2007 Planning Application Environmental Statement.
- 6.7.3 Air Quality and Noise have also been assessed as a distributional impact.
- 6.7.4 **Appendix B** contains all of the worksheets for the environmental appraisals undertaken.

Air Quality

- This appraisal considers the impact of the Bracknell town centre infrastructure improvements on air quality and vehicle emissions.
- 6.7.6 During the construction phase there is the potential that there will be increased levels of dust emissions resulting from construction works. As a number of existing buildings will continue to be occupied during the construction period, dust emissions would be controlled using stringent management practices, including the use of water sprays, screens, regular cleaning of roadways and the maximising of separation distances.
- 6.7.7 While the town centre redevelopment is likely to result in increased car journeys to the town centre, the proposed infrastructure improvements will reduce congestion and provide improved access by walking and cycling, reducing the increased emissions caused by the redevelopment. The transport strategy would also aim to encourage the use of public transport, which will further serve to mitigate the impacts of vehicle emissions.
- 6.7.8 It is assumed that the households affected by changes in air quality will be within a 200m radius of the site. This suggests that 1,943 Bracknell Forest households will directly benefit from improved air quality as a result of reduced traffic and congestion on the local highway network. Figure 6.1 shows the distribution of those affected in relation to the area which will experience improvements.
- 6.7.9 The overall assessment of the impact of the improvements on air quality, as based on the Approved 2007 Planning Application Environmental Statement is assessed as **minor adverse** and the **AST** has been revised to accord with this.

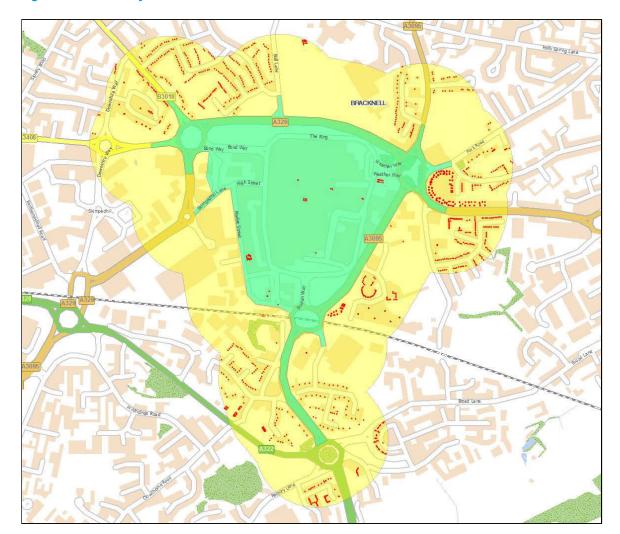


Figure 6.1: Air Quality and Noise 200m Buffer

Noise

- 6.7.10 Potential noise effects are likely to arise as a result of the construction and operation of the improvements. This appraisal considers the noise and vibrations impact of the proposed infrastructure improvements on the surrounding area.
- 6.7.11 While there is likely to be increased noise and vibrations while the improvements are undergoing construction, the resultant reduced vehicular traffic and congestion would provide a reduction in the level of noise and vibrations experienced.
- 6.7.12 It is assumed that the population affected by changes in noise levels will be within a 200m radius of the site. This suggests that 4,703 Bracknell Forest residents will directly benefit from improved noise levels as a result of reduced traffic and congestion on the local highway network. Figure 6.1 shows the distribution of those affected.
- 6.7.13 The overall assessment of the impact of the improvements on noise and vibration levels taken from the Approved 2007 Planning Application Environmental Statement, section 8 Table 8.22 summary of Impacts recorded **negligible** changes in noise impact for traffic. The AST has been revised to accord with this.

Greenhouse Gases

- 6.7.14 Greenhouse gases have not been assessed, as a transport model was not used and thus TUBA was not undertaken. WSP | Parsons Brinckerhoff acknowledge that the ASR did mention a TUBA assessment for Greenhouse gases would be undertaken.
- 6.7.15 The existing VISUM model is calibrated / validated to 2007 observed data and therefore does not meet current DfT Transport Analysis Guidance (TAG) for use in the economic assessment of schemes. A minimal update to the 2007 model has been undertaken. No new origin and destination survey data was undertaken therefore the travel patterns are still based on the original survey data collected for the 2007 model (i.e. 2006 Road-Side Interviews) although the flow levels, turning movements and journey times have been recalibrated to observed 2013 traffic data
- 6.7.16 An updated 2026 forecast year model in line with the end of the current plan period was being produced at the same time as the Bracknell Town Centre Business Case. This was not available to undertaken any wider detailed strategic modelling or to undertake any TUBA economic assessment of the junctions.
- 6.7.17 The overall assessment of the impact of the improvements on greenhouse gases was **Not Assessed**.

Landscape

- This appraisal discusses the scale of the proposed infrastructure improvements in relation to the natural landscape and its importance. The landscape of the area is urban and the site has a generally sloping topography.
- 6.7.19 The redevelopment of Bracknell town centre would result in an increase in the height and footprint of some buildings, however the scheme would have a slightly beneficial impact on the landscape as the public realm improvements and landscaping would soften and complement the buildings.
- 6.7.20 Furthermore, the tranquillity of the site will benefit due to the proposed realignment of The Ring to provide access into the northern sector and increased accessibility by pedestrians and cyclists, removing vehicle trips from the town centre's road network.
- 6.7.21 Some views of the proposed landscaping and public realm improvements are set out in Appendix G and show the typical improvements to paving and planting anticipated throughout the redevelopment.
- The overall assessment of the impact of the improvements on the landscape based on the BFC Approved 2007 Planning Application Environmental Statement section 5 Table 5.12 generally sets out **negligible to minor beneficial** of impacts on town centre and outer areas of the Town. The AST has been updated to accord with the ES findings.

Townscape

- Townscape can be defined as the physical and social characteristics of the built and non-built environment and the way that these characteristics are perceived.
- Bracknell town centre currently has a dense, mid to high-rise townscape that is outdated and relatively unattractive. The highway infrastructure is prominent and results in visual and physical severance. While the redevelopment of the town will increase the density and scale of the townscape, the modern building design and organisation of space will increase the attractiveness of the area.
- 6.7.25 The highway and walking / cycling improvements will contribute to increased accessibility by all modes to the town centre and the realignment of The Ring will reduce the severance experienced, resulting in improved human interaction. The public realm improvements will soften the increase in scale and density through improved public spaces and attractively designed and landscaped areas.
- The overall assessment of the impact of the improvements on the landscape is **Moderately Beneficial**.

Historic Environment

- The historic environment encompasses features of historic significance including listed buildings, registered parks and gardens, ancient monuments, battlefields and archaeological sites. There are five listed buildings in the vicinity of the development.
- 6.7.28 The Grade II listed buildings in the development area are located along the old alignment of the High Street and were retained during the 1960s/70s redevelopment of Bracknell town centre. The Red Lion public house is located on a currently busy road which experiences low pedestrian usage. The breaking of The Ring and formation of the area into a square will enhance the public realm and the buildings setting as a result of lower traffic flows and higher pedestrian usage.
- 6.7.29 The Bull Inn and Prospects Estate Agents are located on the High Street and are currently surrounded by unattractive buildings from the 1960s / 70s which are due to be replaced as part of the modern redevelopment works. This will enhance the public realm and restrictions have been put in place to limit the size of new buildings that surround the listed buildings. Both Whynscar House and the Old Manor will have their visual setting preserved and the redevelopment works will have a negligible impact on their setting.
- The overall assessment of the impact of the improvements on the historic environment is **Slightly** / **Moderately Beneficial**.

Biodiversity

- 6.7.31 The Biodiversity appraisal assesses the species of flora and fauna which will benefit or be adversely affected by the proposed improvements.
- The proposed Bracknell town centre redevelopment, including the highway and public realm improvements, lies in relatively close proximity to areas designated for their European, and national conservation value. Any potential effects upon the areas resulting from the scheme will be mitigated to ensure that the effects are neutralised. The scheme also has the potential to affect Wildlife Heritage Sites (WHS) within 1km, and habitats of a range of protected species and species of conservation concern. With the implementation of suitable mitigation measures, it is considered that the scheme will have a slight adverse effect on biodiversity at a local scale.
- 6.7.33 The overall assessment of the impact of the improvements on biodiversity is **Slightly Adverse**.

Water Environment

- The Water Environment appraisal details they key environmental resources related to the water environment in the vicinity of the site, and the features and quality of these.
- 6.7.35 There are a number of key environmental water resources in the vicinity of the Bracknell town centre improvements which could be impacted by its construction and operation. These include the Cut, the Bull Brook, the River Thames and the area's groundwater. For each of these a range of factors were assessed, including the quality of the water supply, conveyance of flow and materials, biodiversity, the transport and dilution of waste products, and the value to the economy.
- 6.7.36 Potential impacts that were identified include:
 - → An increase in the amount of surface run-off and potential restrictions in the flow of groundwater due to an increased footprint of the development
 - An increase in the amount of foul drainage and increased rate of abstraction from the Thames.
- 6.7.37 However, mitigation measures have been proposed to limit the significance of these impacts, including:
 - → Measures to filter surface run-off during the construction phase to remove suspended solids before it is discharged into the sewers
 - The provision of storm water retention capacity and other sustainable urban drainage systems (SUDS) to attenuate the flow and reduce the increase in total peak storm water discharge from the redeveloped area
 - → With regards to groundwater, it is anticipated that the loss of infiltration of rainfall would be balanced by the application of SUDS
 - Measures to constrain demand for abstraction and improve the water efficiency and sustainability of the development
 - → To accommodate the increase in foul drainage, the development would require some renewal, replacement and augmentation of sewers in the town centre.
- 6.7.38 Taking into account the impacts and proposed mitigation, the overall assessment of the water environment showed that the scheme could result in an impact that is **Negligible**.

ASSESSMENT OF SOCIAL AND DISTRIBUTIONAL IMPACTS

- There are five social and four distributional aspects of the scheme which should be considered in the social and distributional appraisals, following guidance provided in DfT WebTAG Unit A4.

 These are:
 - Social
 - Accidents
 - Journey Quality
 - Physical Activity
 - Security
 - Severance.
 - Distributional
 - Accidents

- Security
- Severance
- Strategic Accessibility.
- It was not seen as beneficial to consider affordability or strategic accessibility, as the works are predominantly highway and traffic based, with only a minor focus on public transport. Further information regarding the appraisal of these impacts can be found in the worksheets in **Appendix B**.

Accidents

- Analysis of accidents that have occurred on the local highway network in the vicinity of the town centre has been undertaken for the latest available five year period (16/07/2010 to 16/07/2015). The DfT's COBALT software was used to calculate the expected annual accidents based upon the type of link and observed traffic flows.
- Table 6.1 shows a summary of the accidents and a comparison of the observed annual accidents with the expected annual accidents from COBALT. The results show that most links experienced a lower number of accidents on average each year than would be expected. However, three links experienced higher levels of accidents than expected. Further analysis of the data does not show any pattern to explain this. Despite these links experiencing more accidents than expected, the total number of accidents observed on average annually is 11% less than the expected based upon the COBALT analysis.

Table 6.1: Summary of Accidents on Local Highway Network

LINK / JUNCTION	OBSERVED NUMBER OF ACCIDENTS (OVER A 5 YEAR PERIOD)	OBSERVED ANNUAL ACCIDENTS (AVERAGE)	COBALT EXPECTED ANNUAL ACCIDENTS (AVERAGE)
A329 between Twin Bridges Roundabout and Honeywell Roundabout, incl. Honeywell Roundabout	8	1.6	1.8
A329 between Western Roundabout and Met Office Roundabout, incl. both roundabouts	16	3.2	4.4
A329 east of Met Office Roundabout	4	0.8	0.9
A3095 north of Met Office Roundabout	1	0.2	0.4
A3095 Bagshot Road, incl. Station roundabout	9	1.8	1.8
Access Road to Peel Centre	1	0.2	0.0
High Street (west of The Ring)	2	0.4	0.1

.

The Ring	8	1.6	2.6
Market Street	7	1.4	0.7
Total	56	11.2	12.6

Table 6.2 provides a summary of the accidents involving vulnerable road users that occurred on the highway network in and surrounding the town centre. Analysis of the accident data showed that the incidents did not show a discernible pattern and therefore are likely to be a result of driver / user error.

Table 6.2: Summary of Accidents Involving Vulnerable Road Users Across Latest Five Year Period

LINK / JUNCTION	SLIGHT	SERIOUS	FATAL
A329 between Twin Bridges Roundabout and Honeywell Roundabout, incl. Honeywell Roundabout	4	0	0
A329 between Western Roundabout and Met Office Roundabout, incl. both roundabouts	3	0	0
A329 east of Met Office Roundabout	3	0	0
A3095 north of Met Office Roundabout	1	0	0
A3095 Bagshot Road, incl. Station roundabout	4	0	0
Access Road to Peel Centre	1	0	0
High Street (west of The Ring)	2	0	0
The Ring	3	1	0
Market Street	3	0	0
Total	24	1	0

WSP|PB note that introduction of the Millenium Way signal junction (on the A329 between Western Roundabout and Met Office Roundabout) could increase accidents where there is currently no junction. However there had been 16 accidents on this stretch and at existing junctions compared to a COBALT estimate of 22 for the same period. The introduction of the new junction with its proposed crossing facilities may increase the risk of rear shunt highway accidents, and likely bring this in line with COBALT average, but reduce vulnerable user accidents through improved crossing facilities (where there have been 3 in the last 5 years).

- 6.7.45 The scheme's overall impact on accidents is seen as **Slightly Beneficial**, although there has been the introduction of a new junction on Millenium Way, this brings with it improved crossing facilities for vulnerable users (where there is a record of existing accidents) and creates safer infrastructure for pedestrians and cyclists, where currently there are no crossing facilities.
- The other infrastructure improvements at Met Office and Station Roundabout, improved "live traffic information" guidance to parking spaces (helping reduce search times and driver frustration) and improved public realm access to the town centre from the bus and rail stations will all assist in marginally reducing accident risk.
- 6.7.47 Given the minor layout and signal changes at the junctions and on the links a monetised value of the benefits has not been undertaken as had originally been outlined in the ASR, which was produced prior to accident data investigations. Had WSP | Parsons Brinckerhoff seen a larger benefit of the interventions and a potentially larger accident saving then this would have been monetised.

Journey Quality

- Journey quality is a measure of the real and perceived physical and social environment that is experienced while travelling. This appraisal takes into account traveller care, travellers' views and traveller stress.
- 6.7.49 Currently Met Office roundabout and Station roundabout suffer from queues and delays as shown in Table 6.3 and

6.7.50

6.7.51

6.7.52 Table 6.4 below. These delays, and the resulting congestion, are significant and have an adverse impact on travellers' views and stress.

Table 6.3: Met Office Roundabout Delay Comparison (total delay – pcuHr: 2016)

ARM	BASELINE		FUTURE		DIFFERENCE	
ARW	AM	PM	AM	РМ	AM	РМ
A329 Millennium Way	8.4	12.9	9.8	10.9	1.4	-2
A3095 Warfield Road	11.1	6.0	6.4	5.0	-4.7	-1
Park Road	7.6	3.5	6.1	6.2	-1.5	2.7
A329 London Road	14.2	11.0	9.0	11.0	-5.2	0
A3095 Church Road	5.1	8.4	5.8	8.0	0.7	-0.4

Weather Way	0	0.2	0	0.2	0	0
Total (pcuHr)	46.4	42.0	37.1	41.3	-9.3	-0.7

Table 6.4: Station Roundabout Delay Comparison (total delay - pcuHr: 2016)

ARM	BASELINE		FUT	FUTURE		DIFFERENCE	
ARIVI	AM	PM	AM	PM	АМ	PM	
A3095 Church Road	57.8	11.1	1.2	1.8	-56.6	-9.3	
Hazell Hill	0.0	0.0	0.1	0.1	0.1	0.1	
A3095 Bagshot Road	59.5	13.9	5.4	7.4	-54.1	-6.5	
Market Street	0.5	2.2	4.5	6.7	4	4.5	
Station Way	0.0	0.5	0.0	0.9	0	0.4	
Total (pcuHr)	117.8	27.7	11.2	16.9	-106.6	-10.8	

- The proposed improvements at these junctions will help to reduce the delays by providing additional capacity, allowing more vehicles through the junction per hour, as shown in the tables above. The reduction in delay and congestion will therefore reduce traveller stress and frustration, and will provide an improved view.
- In addition to a reduction in delay, the improvements will provide new signage for town centre destinations and the altered highway network, to advise travellers how to get to their destination. This will help to reduce driver frustration.
- The overall impact of the improvements on journey quality can be considered **Moderately Beneficial** as they will provide additional capacity at the junctions, improve the legibility of the road network and benefit up to 27,500 users per day.

Physical Activity

6.7.56 An assessment of the improvements on physical activity has been completed by using GIS mapping and accessibility changes with before and after (development) scenarios. Included with this is an assessment of the health benefits of the improved pedestrian and cycle linkages in to the regeneration area (and Town Centre) and also the reduction in absenteeism that improved walking and cycling could allow based on an expanded town centre work force.

- In addition to the above assessment a WHO HEAT assessment for walking has been completed. This was based on GIS, census JTW and NTS information to estimate current journeys by walk and cycle and base durations of time. Forecasts of increases in use (with the improvements) where estimated from other Local Authority infrastructure interventions on walking and cycling (WBC LSTF Scheme and Brighton Valley Crescent walk and cycle schemes). Details of HEAT input data are contained in Appendix B with the HEAT Walk assessment.
- 6.7.58 The pedestrian improvements will benefit 7,375 users, of which 159 are new and generated by the scheme. The improvements will provide new links from the north into Bracknell town centre via the signalised crossing on Millennium Way, and will improve the links to the south of Millennium Way in the town centre. These improvements will lead to an average journey time reduction of 40 seconds. The improvements will also generate an increase in the number of cycle users from 259 to 285, and lead to a slight reduction in cycle journey time.
- 6.7.59 The overall impact of the improvements on physical activity can be considered **Slightly Beneficial**. The assessments indicate a potential monetary benefit of:
 - → Reduced Mortality benefit of cycling of £62,000 calculated from Webtage 3.14.1
 - → WHO HEAT Walking Economic Benefits of approximately £646,000 average per year
 - → Reduced Absenteeism annual benefit of approximately £58,800 per year

Security

- 6.7.60 Changes to transport provision may affect the security of transport users. This impact assessment evaluates the factors which may contribute to a change in the perceived, or real, risk to a user's security.
- The improvements to the highway network, the pedestrian / cycle facilities and the public realm in the town centre will help to make it a more secure environment for all users, particularly vulnerable users such as pedestrians, cyclists, women and older people.
- 6.7.62 Users will benefit from changes to landscaping through the public realm improvements, improved lighting and visibility due to the realignment of parts of the town centre's existing internal road network, and improvement access on foot to destinations from public transport stops due as a result of the improved pedestrian infrastructure. The realignment of the internal road network, and the 'breaking' of the ring to create more open public space will allow for greater informal surveillance.
- A number of different vulnerable groups were analysed as part of the appraisal; women, older people and young people. All were shown to slightly benefit from the improved security. Analysis of different transport user groups showed that the improvements to security will moderately benefit both pedestrians and cyclists (up to 14,750 and 570 users per day, respectively), and slightly benefit all motor vehicle users (up to 27,500 users per day).
- Overall, the impact on security is **Slightly / Moderately Beneficial**. This is due to the infrastructure improvements having positive impacts on the security of the landscape, particularly for pedestrians and cyclists who are vulnerable road users, and affecting over 42,800 users per day.

Severance

6.7.65 Severance relates to the physical separation of residents from facilities and services within their community, caused by transport infrastructure or traffic volumes. This impact assessment evaluates the effect that the change in transport infrastructure provision in Bracknell town centre will have on levels of severance. Three areas, shown on Figure 6.2 below, have been appraised using GIS maps with 400m buffers, and 2011 Census data.



Figure 6.2: Location Plan of Points Assessed for Severance Appraisal

- The provision of improved crossing points on the outskirts of Bracknell town centre will improve the accessibility of the redeveloped centre for pedestrians and cyclists. The provision of an additional pedestrian crossing on the High Street close to its junction with Market Street will have a negligible impact on severance as there is already a pedestrian crossing nearby. The new pedestrian crossing on The Ring, close to its junction with Station Road, will have a slight positive benefit, as there is currently not a road level pedestrian crossing nearby. However, the road does not currently experience a high level of severance. The provision of an additional crossing on the A329 Millennium Way will have a moderate positive benefit. This link experiences high vehicle flows, especially in the peak periods, and therefore is a significant barrier to pedestrian and cyclist movement.
- 6.7.67 The overall impact of the improvements on severance can be considered **Slightly Beneficial**, as new additional crossing points will be provided on both the High Street and A329 Millennium Way.

Strategic Accessibility

6.7.68 Strategic accessibility was not considered relevant for further analysis due to the scheme's focus on highway and pedestrian / cycle infrastructure, rather than public transport.

Affordability

6.7.69 Affordability was not considered relevant for further analysis due to the scheme's focus on highway and pedestrian / cycle based schemes, rather than specifically looking at public transport affordability.

6.8 SCHEME ECONOMIC ASSESSMENT

- 6.8.1 The highway scheme assessment has been undertaken for the following junction improvements
 - → Met Office signalised roundabout
 - Station Way signalised roundabout
 - Millennium Way signalised junction

MET OFFICE SIGNALISED ROUNDABOUT

Table 6.5 details the benefits when the proposed improvements to the Met Office signalised roundabout are included.

Table 6.5: Scheme benefits – Met Office signalised roundabout (present values discounted to 2010, in 2010 prices unless stated)

SCENARIO	ELEMENT	AM PEAK	PM PEAK
Existing lovout	Delay (pcuHr) (LINSIG)	58.08	54.24
Existing layout	Delay (pcumins)	3,485	3.254
Proposed layout	Delay (pcuHr) (LINSIG)	53.79	52.68
Proposed layout	Delay (pcumins)	3,227	3,161
Difference	Delay (pcumins)	-257	-93.60
Annual Benefit	2016 (2016 prices, undiscounted)		£5,000
Present Value of Benefits	£436,000		
Present Value of Costs (P	£430,000		
Net Present Value (NPV)	£6,000		
Benefit to Cost Ratio (BCI	₹)	1.0)14

The scheme generates a total PVB of £436,000 with a total discounted scheme PVC of £430,000 resulting in a Benefit to Cost Ratio (BCR) of 1.014.

STATION ROUNDABOUT

Table 6.6 details the benefits when the proposed improvements to the Station Way signalised roundabout are included.

Table 6.6: Scheme benefits – Station Way signalised roundabout (present values discounted to 2010, in 2010 prices unless stated)

SCENARIO	ELEMENT	AM PEAK	PM PEAK	
Existing layout	Delay (pcuHr) (LINSIG)	118.15	27.93	
Existing layout	Delay (pcumins)	7,089	1,676	
Proposed layout -	Delay (pcuHr) (LINSIG)	17.03	24.64	
	Delay (pcumins)	1,022	1,478	
Difference	Delay (pcumins)		-197	
Annual Benefit	ual Benefit 2016 (2016 prices, undiscounted)		£9,000	
Present Value of Benefits	(PVB)	£8,130,000		
Present Value of Costs (P	£537,000			
Net Present Value (NPV)	£7,593,000			
Benefit to Cost Ratio (BCI	R)	15,	140	

The scheme generates a total PVB of £8,130,000 with a total discounted scheme PVC of £537,000 resulting in a Benefit to Cost Ratio (BCR) of 15.140. The BCR value is due to the large decrease in the delay in the AM peak period which reduces from 118.15 pcuhr without the junction improvements to 17.03 pcuHr when the junction improvements are included.

MILLENNIUM WAY

Table 6.7 details the benefits when the proposed improvements to the Millennium Way signalised junction are included.

Table 6.7: Scheme benefits – Millennium Way signalised junction (present values discounted to 2010, in 2010 prices unless stated)

SCENARIO	ELEMENT	AM PEAK	PM PEAK	
Eviating loveut	Delay (pcuHr) (LINSIG)	0	0	
Existing layout	Delay (pcumins)	0	0	
Droposed layout	Delay (pcuHr) (LINSIG)	12.23	22.66	
Proposed layout	Delay (pcumins)	734	1,360	
Difference	Delay (pcumins)	734	1,360	
Annual Benefit	2016 (2016 prices, undiscounted)	-£43,000	-£75,000	
Present Value of Benefits	-£2,531,000			
Present Value of Costs (P	-£2,066,000			
Net Present Value (NPV)	0			
Benefit to Cost Ratio (BCF	₹)	0		

- The scheme generates a total PVB of -£2,531,000 with a total discounted scheme PVC of £2,066,000. The PVB are negative for this junction because there is no existing junction at the proposed site and therefore increased journey times and delays are being created at this location by the addition of a signalised junction.
- 6.8.8 It must be remembered that the introduction of the Millennium Way signalised junction will help to facilitate the successful introduction of the town centre re-development.

6.9 MONETISED COSTS AND BENEFITS

The value for money assessment has been prepared in accordance with the DfT's 'Value for money assessment: advice note for local transport decision makers'. A summary of the benefits are included within Table 6.8.

Table 6.8: Scheme benefits

ITEM	VALUE (£000S)
Infrastructure improvements:	
→ Met Office signalised roundabout	0.436
Station Way signalised roundabout	8.130
→ Millennium Way signalised junction	-2.531
Reduced mortality benefit	1.325
HEAT walking economic benefits	13.802
Reduced absenteeism	1.256
Present Value of Benefits (PVB)	22.418
Broad Transport Budget	6.140
Present Value of Costs (PVC)	6.140
OVERALL	. IMPACTS
Net Present Value (NPV)	16.278
Initial Benefit to Cost Ratio (BCR)	3.651

6.9.1 This information shows that the initial BCR (benefit cost ratio) of the scheme, based on standard monetised values, is **3.651**. This represents the benefits for the core elements of the scheme, and is considered high value for money according to DfT guidance.

6.10 ASSESSMENT OF WIDER STRATEGIC BENEFITS JOB CREATION

- 6.10.1 Previously, BFC and its consultants outlined (submission to LEP October 2014) that the Town Centre regeneration (approximately 885,000 sq ft) could potentially create 3,540 full time equivalent employment positions as well as construction workers and supply chain employment (to around 6,300 indirect jobs).
- 6.10.2 There is significant development due to come forward within Bracknell Forest Council (BFC) which requires suitable infrastructure to mitigate any impacts of the development on the road network. The Gross Value Added (GVA) is a measure in economics of the value of goods and services produced in an area, industry or sector of an economy.
- 6.10.3 The information used in the following assessment has been calculated using:
 - → HM Treasury data for construction jobs in the economy
 - → Economic Impact Assessment for Wokingham Town Centre carried out by Hunt Dobson Stringer as a proxy for the BFC area. This equates to similar estimates made in planning applications for other retail and leisure facilities within Wokingham. The equivalent information from the Bracknell area could be substituted in the calculations
 - → Home Builders Federation jobs multiplier for house building
 - ONS average Weekly Wages by Sector
- 6.10.4 An assumption has been made of the number of housing and employment sites that would be impacted by the scheme which are:
 - → number of units: 1,050
 - → square feet of employment land: 885,000 sq feet
- 6.10.5 In order to calculate a GVA value the number of units in table 1.2 has to be factored by the number of jobs created for each unit built. Figures from the Home Builders Federation show that there are 1.5 full time equivalent (FTE) jobs and 6 FTE indirect jobs created for every unit built.
- 6.10.6 In terms of employment land each job relates to 250 sq ft for retail/leisure. The retail/leisure value has been based on an Economic Impact Assessment for Wokingham Town Centre carried out by Hunt Dobson Stringer

HOUSING

6.10.7 The Town Centre Regeneration includes for residential development and office to residential conversions. In total approximately 1,050 residential units are to be delivered.

GROSS VALUE ADDED

6.10.8 As outlined in the previous BFC submission to the LEP the estimated GVA for the town centre regeneration is set out in Table 6.9 (table 1.8 from previous submission).

Table 6.9: Scheme

SECTOR	AVERAGE ANNUAL EARNINGS PER SECTOR	UPLIFT IN NUMBER OF FTE JOBS IN SECTOR	ADDITIONAL EARNINGS TO THE ECONOMY PER ANNUM
Construction (including housing)	£28,132	7,875	£221,539,500
Wholesale retail, hotels and restaurants	£15,652	3,540	£55,408,080
Total		11,415	£276,947,580

6.10.9 The GVA from the town centre re-development is £276,947,580.

6.11 DEPENDANT DEVELOPMENT

- 6.11.1 WebTAG Unit A2.3 provides guidance on assessing the economic benefits generated by transport in the context of dependant development. Dependent development refers to new development that is dependent on the provision of a transport scheme and for which, with the new development but in the absence of the transport scheme, the existing transport network would not provide a reasonable level of service to existing and/or new users. This has the implication that the development would not be delivered in the absence of the transport scheme.
- The existing VISUM model is calibrated / validated to 2007 observed data and therefore does not meet current DfT Transport Analysis Guidance (TAG) for use in the economic assessment of schemes. A minimal update to the 2007 model has been undertaken. No new origin and destination survey data was undertaken therefore the travel patterns are still based on the original survey data collected for the 2007 model (i.e. 2006 Road-Side Interviews) although the flow levels, turning movements and journey times have been recalibrated to observed 2013 traffic data
- An updated 2026 forecast year model in line with the end of the current plan period was being produced at the same time as the Bracknell Town Centre Business Case. This was not available to undertaken any wider detailed strategic modelling or to undertake any TUBA economic assessment of the junctions nor to undertake a dependant development assessment in line with TAG Unit A2-3.
- 6.11.4 It is felt that the only development that this assessment relates to is the North Development Zone which comprise:
 - → up to 45,000m² of new retail
 - a cinema
 - → up to 7,000 m² of A2-A5 land use, which includes financial / professional services, restaurants / cafes, drinking establishments and hot food takeaways
 - → Up to 15,200m² of residential units
 - > car park to serve the town centre.
- The town centre redevelopment assumes that there is 63,200m² of residential units split across the North development zone, North West development zone and the South development zone. Assuming that the North development zone has a maximum of 15,200m² residential units then this equates to 252 residential units (15,200/63,200 multiplied by 1,050).
- 6.11.6 Table 6.10 details the GVA of the dependant development.

Table 6.10: Dependant development – North Development Zone

SECTOR	AVERAGE ANNUAL EARNINGS PER SECTOR	UPLIFT IN NUMBER OF FTE JOBS IN SECTOR	ADDITIONAL EARNINGS TO THE ECONOMY PER ANNUM
Construction (including housing)	£28,132	1,890	£53,169,480
Wholesale retail, hotels and restaurants	£15,652	682	£10,681,123
Total		11,415	£63,850,603

6.11.7 The GVA from the dependant development is £63,850,603 which relies on the Millennium Way signalised junction being built. This far outweighs the transport scheme dis-benefit of -£2,531,000 with a total discounted scheme PVC of £2,066,000. The PVB are negative for this junction because there is no existing junction at the proposed site and therefore increased journey times and delays are being created at this location by the addition of a signalised junction

7 FINANCIAL CASE

7.1 INTRODUCTION

- 7.1.1 This chapter presents the Financial Case for the infrastructure improvements associated with the Bracknell town centre redevelopment scheme. The DfT's guidance document, 'The Transport Business Cases' outlines the areas that should be covered as part of the Transport Business Case documentation. This chapter will provide details about the necessary elements required to achieve compliance in the Financial Case, which are:
 - → The scheme's anticipated costs
 - Details of the budgets and funding cover

7.2 COST ESTIMATES

- 7.2.1 Derived cost estimates, including the preparation costs, the design, supervision and construction of the scheme, and associated complementary environmental mitigation costs have been prepared by the Developers cost consultant.
- 7.2.2 Preparation costs include such items as design fees and agreement fees. The construction costs provided are for all elements of the improvements, as set out in the programme in Appendix D. Statutory Division / allowances costs are those currently identified through site investigations and discussions with utility companies. There are no land costs associated with the scheme as all land is within either Bracknell Forest Council ownership or the Town Centre Developer.
- 7.2.3 The anticipated costs of the total scheme, as provided by the developers cost consultant, are provided in Table 7.1.

Table 7.1: Breakdown of Costs

COST ITEM	COST (£)	
Preparation costs	£426,489	
Construction costs	£5,755,511	
Land Costs	Included at no cost	
Statutory Division costs	£200,000	
Total	£6,382,000	

7.3 ANTICIPATED SPEND PROFILE

7.3.1 The highway access improvements

Table 7.2: Spend Profile (£m, outturn)

YEAR COST ARE INCURRED (£MILLIONS)

ORGANISATION	15 / 16	16 / 17	17 / 18	TOTAL
BFC	£3.0	£3.382		£6.382
TOTAL COST	£3.0	£3.382		£6.382

7.4 FUNDING PACKAGE

7.4.1 The funding package proposed for the scheme comprises the anticipated contribution from the Local Enterprise Partnership of £2.0 million (as previously outlined by the Council), and £4.382 million of Council funding. Table 7.3 shows the estimated funding sources by year, broken down by funding organisation.

Table 7.3: Funding Package

YEAR COST ARE INCURRED (£MILLIONS)

ORGANISATION	15 / 16	16 / 17	17 / 18	TOTAL
LEP	£2.0			£2.0
BFC Capital	£1.0	£3.382		£4.382
TOTAL COST	£3.0	£3.382		£6.382

7.5 ACCOUNTING IMPLICATIONS

7.5.1 This is **not required** according to the business case guidance. However, the injection of LEP funding will assist BFC in bringing forward earlier a number of the infrastructure interventions which may otherwise have to wait until the Council has sufficient capital funding to deliver them. These are likely to be items such as the Real Time Passenger Information, Variable Message Signing for car parking. Early deliver would assist in supporting the town centre redevelopment and allow the gains made by the highway and transport access improvements to be realised sooner.

8 COMMERCIAL CASE

8.1 INTRODUCTION

- 8.1.1 The DfT's guidance document, 'The Transport Business Cases' outlines the areas that should be covered as part of the Transport Business Case documentation. The necessary elements required in the Commercial Case to achieve compliance are:
 - Output based specification;
 - Procurement strategy;
 - Sourcing options;
 - Payment mechanisms;
 - Pricing framework and charging mechanisms;
 - Risk allocation and transfer;
 - Contract length; and
 - Contract management.
- 8.1.2 The Commercial Case has been developed following the outline set out 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 party best placed to manage them.

8.2 OUTPUT BASED SPECIFICATION

- 8.2.1 The Commercial Case is based on strategic outcomes and outputs, against which alternative procurement options are assessed.
- 8.2.2 The outcomes which the preferred procurement strategy must deliver are to:
 - → 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; and
 - → 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.

8.3 PROCUREMENT STRATEGY

- 8.3.1 The town centre regeneration is being led by the Developers and as such their procurement strategy will be dictated by their own internal processes. However BFC will emphasise that any works undertaken making use of public funding will be subject to public accountability and scrutiny.
- The developers will procure all the works, including the environmental and public realm changes through selective tendering via their supply chain, as set out below.
- 8.3.3 Highways work will be undertaken by Ringway Infrastructure Services (RIS). The Council has a term maintenance contract (TMC) with RIS which was let through an OJEU competitive tender process in 2014). In addition, the developer has secured a direct contract with RIS which mirrors the schedule of rates secured through the competitive tendering process. Public realm and "greening" project works will be undertaken by MACE and other supply chain partners procured through a competitive process and via direct contracts with the developer.
- 8.3.4 The interventions included within this business case (section 4) have in part been secured through Section 106 and form part of the scheme planning conditions. To support scheme viability the Council will be under-writing the highway, transport and public realm improvements noted in section 4.
- 8.3.5 The delivery of the social, environmental and economic benefits form part of the planning conditions and will be delivered through the scheme delivery. The Council has control, through the planning enforcement processes to ensure the improvements are delivered in accordance with the project programme (Appendix D).

8.4 SOURCING OPTIONS

- 8.4.1 As the TMC was a competitively based tender, it is considered that the parallel contract (and associated schedule of rates) agreed between RIS and the developer represents value for money. BFC do not anticipate further wholesale tender processes associated with the highway works which provides the advantage of shortening contractor procurement and also making use of RIS knowledge and understanding of the BFC highway and transport network.
- 8.4.2 The main Town Centre contract has been let to MACE, who through the use of sub-contractors, including RIS, will procure the public realm and greening works associated with the redevelopment of the Town Centre. For the highway related elements of these works it is considered that the parallel contract (and associated schedule of rates) agreed between RIS and the developer represents value for money.
- There are likely to be developer tender processes for procurement of car parking technology and VMS sign technology. BFC will form part of the specification works, review of tender documents and approval to quotations through the Project Board.

8.5 PAYMENT MECHANISMS, PRICING FRAMEWORK AND CHARGING MECHANISMS

- Task orders based on a fixed or target price arrangement will be awarded based on the NEC 3 contract model, which allows for penalty clauses, specifically relating to over running.
- Payments to the contractor will be made in arrears to the value of 60% of the project subject to an independent clerk of works agreeing with the submission made by the contractor.

- Payments made to the contractor will be subject to a further cross checking against the programme to ensure that the absolute minimum over run occurs, if any and if a penalty is due to be applied work with the contractor to rectify/remedy this.
- 8.5.4 The final 40% will be paid in stages upon receiving invoices for completed elements of the work.

8.6 RISK ALLOCATION AND TRANSFER

- The developers design team have prepared a risk assessment based on their experience and following detailed investigations on the ground. It is for the developers team to allocate risks to the organisation best suited to overcome the risk, and, for its part The Council has some risks that it will seek to manage, these include:
 - Strategic/Political/Policy;
 - Economic/ Financial/Management;
 - Statutory processes (TRO);
 - → Stakeholder Management/Consultation, and;
 - → Operation (traffic signals, VMS).

RISK MANAGEMENT PLAN

- 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.
- 8.6.3 The Risk Management Plan will set out the full risk management process and responsibilities for undertaking risk management to deliver the Bracknell town centre improvements scheme. 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.
- 8.6.4 Further risk identification will be carried out in numerous ways such as:
 - Workshops;
 - Reviews;
 - > Meetings; and
 - Day to day operation.
- 8.6.5 When a risk is identified, the data will be added to the Risk Register.

RISK MANAGEMENT ORGANISATION

- The risk management organisation for this scheme consists of four key parties: the Joint Project Board, the Developers Project Manager, the Developers Risk Manager and the Risk Owner.
- 8.6.7 The Joint 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 Board shall be primarily concerned with managing strategic level risks relating to interfaces between the scheme and the wider project environment.
- The Developers Project Manager has overall responsibility for ensuring that the risk management process is implemented and managed in accordance with strategies.

- 8.6.9 The Developers Risk 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 by the Developers Risk Manager to the Joint Project Board through the Developers 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 Joint Project Board.
- 8.6.10 The Risk 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;
 - be the custodian of the risk register and the contained data.
- The Risk Owner shall be responsible for the day to day management of the risk(s) that they own. The selection and appointment (by the Developers 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.

KEY PROJECT RISKS

Table 8.1: Key Project Risks identifies the key project risks throughout the planning and implementation of the scheme. A full risk register can be found in Appendix E.

Table 8.1: Key Project Risks

RISK MITIGATION

PLANNING / APPROVAL RISKS AND MITIGATION

CC	OST RISKS AND MITIGATION
Approval to S278 Detailed Designs	Close working between Developers and BFC Implementation team, regular meetings

COST KISKS AND WITTIGATION

Unforeseen Statutory Utilities diversions leading to cost overruns	Specific Utility planning, timely surveys and trial holes, regular cross team meetings with Utilities and contractors
Unforeseen highway constraints leading to cost overruns	Regular design team co-ordination meetings with BFC Implementation team – ongoing review and assessment of designs verses site constraints – timely and focussed investigations

DELIVERY RISKS AND MITIGATION

Project deadline overruns	Constant delivery programme and risk review (weekly meetings of Implementation team) – search for efficiencies, re-programming, acceleration opportunities
Access and highway network constraints	Timely planning of works, forward "look" for traffic management and street works permit requirements

8.7 HUMAN RESOURCES ISSUES

8.7.1 This is not a requirement of the DfT Transport Business Case. There are no HR Issues.

8.8 CONTRACT LENGTH

8.8.1 As specified in the project programme, the contract for construction of the scheme will run from 3rd
August 2015to April 2017

8.9 CONTRACT MANAGEMENT

- 8.9.1 A New Engineering Contract (NEC 3) form will be used, ensuring that the contractual / commercial arrangement will be well defined between the developers and their contracting partners.
- 8.9.2 This form of contract is well understood throughout the supply chain and relies on a pre-defined risk register to allocate and manage anticipated risk. During contract negotiations, risk will be allocated to the party best able to manage it the most cost effective way.
- 8.9.3 A detailed delivery programme is contained in Appendix D.
- 8.9.4 The Council has put in place additional project management "Implementation Team" which are dedicated to the oversight of the project, managing technical approvals and measuring progress. This team, led by the Senior Responsible Officer, will report to the Council Senior Officer team and key Councillors, as set out in the Governance arrangements (Section 9.4)

9 MANAGEMENT CASE

9.1 INTRODUCTION

- 9.1.1 The DfT's guidance document, 'The Transport Business Cases' outlines the areas that should be covered as part of the Transport Business Case documentation. The necessary elements required in the Management Case to achieve compliance are:
 - Programme and project dependencies;
 - → Governance:
 - Communications and stakeholder management;
 - Risk management strategy;
 - Contract management and
 - Monitoring and evaluation.
- 9.1.2 The management approach has been developed following the outline set out below:
 - Set the appropriate governance structure to ensure outcomes and objectives are met;
 - Identify and plan for the key approval milestones ensuring information is provided in good time so as to not delay the programme;
 - Assess how the delivery process will be managed to achieve the optimum financial and impact performance.

9.2 EVIDENCE OF SIMILAR PROJECTS

- 9.2.1 Bracknell Regeneration Partnership who are delivering the regeneration of Bracknell Town Centre is a Joint Venture between Schroders and Legal and General Capital. Legal and General Property (LGP) are the Development Managers for the project and are one of the largest and most experienced Fund managers of Commercial Property in the UK. LGP have a dedicated team of 11 professionals in their Development Team who deal with major redevelopments across the UK including projects in London, Birmingham, Cardiff and Eastbourne as well as other major projects within Bracknell Borough. These include retail and leisure, residential and office projects, across the spectrum of differing sectors.
- 9.2.2 LGC is providing significant infrastructure and regeneration capital in the UK in the next five years (circa £15bn) and is committed to stimulating the UK economy through capital investment. LGC was founded in 2013 to help look after the financial interests of its millions of customers. It helps deliver benefits to society by ensure financial security for its customers and funding investments in public projects. In 2013, LGC invested £2.9 billion in a range of sectors, including housing, care homes, hospitals and city regeneration. LGC has been a long term Partner with the Council on the delivery of the Town Centre Regeneration.
- 9.2.3 Mace is an international consultancy and construction company, offering highly integrated services across the full property and infrastructure lifecycle. Formed in 1990 it has grown to over 4,600 staff, working in 70 countries, with a turnover in 2014 of 1.49bn. It key services are: Programme and project management, cost consultancy, construction delivery and facilities management.

- 9.2.4 For delivery of the highway and public realm works RIS is not only the council's term contractor but is vastly experienced at delivery of public street works and highways improvement schemes. Working closely with local authorities for over thirty years, RIS deliver a range of integrated services from planned and reactive highways maintenance, through to winter planning and delivery, emergency response, gully cleansing, street lighting installation and maintenance, grass cutting and traffic management.
- 9.2.5 RIS currently operates a number of highway maintenance contracts throughout the country, including North Yorkshire, Shropshire, Bracknell Forest and Hertfordshire, as well as two PFI's in the London Borough of Hounslow and Isle of Wight.
- 9.2.6 Redevelopment of major Town Centres retail areas is very specific to each Authority. In the local area, the major redevelopment at Reading Oracle. This included new build retail provision, face lifts of existing buildings, new junctions and improved public realm with new links and improved facilities alongside the Kennet Canal.
- 9.2.7 The Oracle (extracts from Wikipedia) provides an example of how a re-developed retail centre can assist in reinvigorating a town centre and improve the local economy.

In March 1997 Hammerson acquired a 22 acre site of largely derelict and undeveloped land immediately to the south of the town centre. Most of this site was previously occupied by Simond's Brewery (latterly owned by the Courage brewing company) and by the Reading Transport bus depot (formerly the Reading Corporation tram depot). The brewery had earlier relocated to a new site adjoining the M4 motorway, whilst the bus depot was relocated to a location just west of the town centre as one of the first phases of the redevelopment.

Hammerson's strategy was to create a combination of big-name retailers at the new centre, including a number of international retail banners fairly new to Britain. The merchandise mix has strong emphasis on fashion and is slightly higherend than the average for Reading's main street shops. Peter Cole, the development director for Hammerson said "We were looking to bring in a retail mix that would enhance what was already there – we wanted to get the right caliber retailers to suit the slightly higher-end shopping demographic of the area.

The main shopping malls comprising phase I of The Oracle were opened in September 1999, followed in November by the Riverside restaurants, pubs and cinema that made up phase II. Once phase I was complete, the way was open to relocate the Debenhams department store from its previous location on Broad Street into the centre. This in turn allowed for the redevelopment of the old Debenhams site as phase III of The Oracle, linked to phase I by a bridge over Minster Street. Phase III provided The Oracle with its all-important direct link to Broad Street, and was opened in May 2000 by The Princess Royal.

Although now well-respected and appreciated by local residents, the Oracle caused local controversy when first opened. However, many of the stores within the Oracle did not previously exist in Reading and have substantially improved its status as a shopping destination.

The centre contains 90 shops, including department stores from the Debenhams (136,000 ft²) and House of Fraser (150,000 ft²) chains. A third and larger department store, John Lewis (still referred to locally by its older name, Heelas), is adjacent to the Minster Street entrance but not part of the centre itself. There are also 22 restaurants, cafés and bars along the riverside of the Kennet, and an 11-screen Vue cinema. The Oracle increases Reading's retail footage by one-third, and it has attracted some retailers who would otherwise not have located in Reading.

The Oracle Riverside area, with its restaurants and bars, spans the Brewery Gut, a particularly narrow stretch of the River Kennet. The layout allows space for outdoor tables, and there is granite stadium-style seating and a sail-like canopy. Two bridges have been installed spanning the Kennet, Cooks Bridge, a straight footbridge which links The Riverside Car Park to House of Fraser, and Delphi Bridge, an 'ellipse-shaped' bridge giving access from the Vue cinema to Debenhams.

The shopping centre has a 98.5% occupancy and attracts over 15million visitors annually $^{(2009)}$

9.3 PROGRAMME AND PROJECT DEPENDENCIES

- 9.3.1 The scheme programme is provided in Appendix D and outlines the key delivery stages for the town centre highway redevelopment works and the improvements associated with this business case.
- 9.3.2 The key infrastructure deliverables have been listed in Section 4.2 and form part of the overall scheme delivery. Pedestrian and cycle infrastructure is a fundamental part of the overall development scheme and will be delivered through the new building and surrounding pavement improvements (see drawings in Appendix C and Appendix G.
- 9.3.3 Delivery of the RTPI, VMS and UTMC will be by The Council and is programmed for delivery during 2016/2017 subject to LEP funding.
- 9.3.4 Planning permission for the town centre redevelopment works and the infrastructure improvements has been granted by the planning authority, which significantly reduces the delivery risk for this project as the schemes are dependent upon each other.

9.4 GOVERNANCE, ORGANISATIONAL STRUCTURE AND ROLES

- 9.4.1 The Developers Project Director in conjunction with their contractors and the Council's dedicated implementation team, will oversee the detailed design, construction and monitoring stages of the scheme. The day to day delivery of the scheme will be managed by the Developers Project Manager.
- 9.4.2 An organogram detailing the Developer and Consultant team organisational structure of the scheme is provided in Appendix F.
- 9.4.3 The Senior Responsible Officer for the Council will be Andrew Hunter (Chief Officer: Planning & Transport) supported by Neil Mathews (Head of Transport Development)

9.5 ASSURANCE AND APPROVAL PLAN

- 9.5.1 The Developer and its consultancy team follow a "Gateway Process" as a mechanism for assessing projects at critical stages in their 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; and
 - → A visible audit trail.
- 9.5.2 These milestones have been built into the project programme and will be monitored by the Developers Project Manager and reported to the Joint Project Board.

9.6 COMMUNICATIONS AND STAKEHOLDER MANAGEMENT

- 9.6.1 The key objectives of the schemes stakeholder management are to:
 - → Keep stakeholders aware of schemes development and progress:

- → Meet statutory requirements (such as TRO and Streetworks Permit approvals);
- Increase public and stakeholder awareness of the scheme through local publicity; and
- Provide information and support to those affected by the scheme during construction and operation.

9.7 PROGRAMME / PROJECT REPORTING

- 9.7.1 Responsibility for accurate, timely and appropriate communications within the project team rests with both the Council and developer to ensure that the Joint Project Board is kept up-to-date with programme developments.
- 9.7.2 The Developers Project Director and the Council's Senior Responsible Officer are identified is responsible for ensuring the Joint Project Board is provided with sufficient information and that the Joint Project Board clearly understands that information in order to provide necessary guidance on programme decisions. The Developers Project Manager is responsible for leading on project delivery via the joint Delivery Team which comprises of both developer and Council representatives. Monitoring of project delivery and tactical direction is undertaken jointly by the Developers Project Director and Senior Responsible Officer.
- 9.7.3 The SRO is responsible for keeping the Lead Members aware of the development of the scheme towards meeting the project objectives.
- 9.7.4 It is the responsibility of the Developers Project Director and Senior Responsible Officer to ensure that the Joint 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.
- 9.7.5 The developer's project team meetings are held on a weekly basis, in addition to monthly review meetings involving senior representatives. Key issues and outcomes escalated to the Joint Project Board if necessary.

9.8 IMPLEMENTATION OF WORK STREAMS

- 9.8.1 The Transport Business Case Guidance does not require comment on this item.
- 9.8.2 However, the Developers will implement work stream for main highway, pedestrian and cycle improvements as part of the development and building works. This will be overseen by the Council's Implementation Team.
- 9.8.3 The Council will deliver the RTPI, VMS and UTMC through its existing experienced signal staff with assistance from its supply chain.

9.9 KEY ISSUES FOR IMPLEMENTATION

- 9.9.1 The live risk register contains a full set of identified risk associated with the implementation of the scheme along with planned mitigation.
- 9.9.2 Table 8.1 in the Commercial Case identifies the key project risks throughout the planning and implementation of the scheme.

9.10 CONTRACT MANAGEMENT

9.10.1 The Town Centre Developer will be appointing the contractors for the scheme works, with the expectation that this will be the TMC for BFC - RIS. Once appointed, RIS work will be overseen by the Developer and his design team.

9.11 RISK MANAGEMENT STRATEGY

- 9.11.1 A quantified risk assessment and Monte Carlo simulation have been undertaken for key risks identified at this time. The risk register is provided in Appendix E. The risk register contains all risks associated with the scheme including risks of potential overspend which have been identified. It provides a forecast probability of each risk occurring and defines a range of probable costs which may be incurred in that instance.
- 9.11.2 A cumulative distribution for forecast risk has been prepared. From this distribution a mean value has been extracted for addition to the costs of appraisal and the P(80) value has been assessed for the outturn cost calculation for the financial assessment. The forecast risk values are provided in Table 9.1 below.

Table 9.1: P(50) and P(80) Values for Bracknell Town Centre Infrastructure Improvements

	PRE-MITIGATION	POST-MITIGATION
P(50)	£543,315	£84,565
P(80)	£709,841	£188,027

- 9.11.3 The risk owner for the project will be Bracknell Forest Council and they will be working with their contractors to mitigate the risks identified on the risk register as outlined in the risk response.
- 9.11.4 As the scheme promoter, the Council will meet all cost overruns on the scheme beyond the £6.382million predicted scheme cost.

9.12 BENEFITS REALISATION PLAN

9.12.1 It is anticipated that the benefits will be realised in stages as parts of the redevelopment and improved junction are constructed. The expectation is that these benefits will be delivered in line with the overall delivery programme and also as the individual retail and leisure facilities come on line and also as the local and wider population becomes used to the land changes and the improved access arrangements and "greening" of the public realm areas.

9.13 MONITORING AND EVALUATION

- 9.13.1 Post scheme-opening traffic surveys will be undertaken on highway network around the town centre to establish the change in traffic movement patterns and whether improvements to journey times have occurred as anticipated in the modelling.
- 9.13.2 In addition, wider transport surveys of walking and cycling will be undertaken on existing routes to identify if the anticipated increase in these modes has occurred. These will help to inform the Council on future projects.
- 9.13.3 Timing for the above surveys is likely to be within a year of opening the schemes, which would be spring 2017, with a further follow up survey in Spring 2018. Evaluation reports will be undertaken by the Council and provided three months after the surveys are completed.

9.14 CONTINGENCY PLAN

- 9.14.1 Contingency planning forms part of the risk register, and are reviewed by the Developers and their design team (and reviewed by the Joint Project Board), as outlined in other document paragraphs.
- 9.14.2 The scheme is currently under way with finalised detailed design and construction taking place for key highway, pedestrian and cycle link improvements. This is being overseen by the Council's Implementation Team so delivery risk is minimal.
- 9.14.3 The Council is delivering the RTPI, VMS and UTMC, the plans for which are well defined. The main risk is a short fall in capital funding. If LEP funding were not made available to provide these interventions during the main town centre building works then a "piecemeal" approach to the delivery would be needed over a longer period of time, when capital funding could be made available.

9.15 OPTIONS

- 9.15.1 There are minimal options for change given the planning approval process has already occurred.
- 9.15.2 In summary, the main infrastructure interventions (highway junctions, pedestrian and cycle links, public realm improvements) are being delivered through the main development / building works, overseen through a dedicated Council "Implementation Team" with governance through a combined developer / BFC project board (Appendix F).
- 9.15.3 The Council delivered interventions (RTPI, VMS and UTMC) will be delivered through in house council traffic teams with the support of the .Councils direct specialist supply chain partners.

10 CONCLUSIONS

- 10.1.1 Economic, distributional, environmental and social appraisals have been conducted in conjunction with the Department for Transport's (DfT) WebTAG guidance. These appraisals consider the impacts associated with the highway schemes proposed. The strategic, commercial, financial and management cases of the scheme have also been considered in this report.
- The value for money assessment has been prepared in accordance with the DfT's 'Value for money assessment: advice note for local transport decision makers'.
- 10.1.3 The scheme will also provide benefits socially through:
 - Reduced Mortality benefit from cycling of £62,000
 - → HEAT Walking Economic Benefits of approximately £646,000 average per year
 - → Reduced Absenteeism annual benefit of approximately £58,800 per year
- There are highway infrastructure benefits of £6,035,000 (PVB) with costs of £3,032,000 (PVC) giving a BCR of **1.990**.

ITEM VALUE (£000S)

Infrastructure improvements:	
Met Office signalised roundabout	0.436
Station Way signalised roundabout	8.130
→ Millennium Way signalised junction	-2.531
Reduced mortality benefit from Cycling	1.325
HEAT walking economic benefits	13.802
Reduced absenteeism	1.256
Present Value of Benefits (PVB)	22.418
Broad Transport Budget	6.140
Present Value of Costs (PVC)	6.140

OVERALL IMPACTS

Net Present Value (NPV)	16.278
Initial Benefit to Cost Ratio (BCR)	3.651

This information shows that the initial BCR (benefit cost ratio) of the scheme, based on standard monetised values, is **3.651**. This represents the benefits for the core elements of the scheme, and is considered high value for money according to DfT guidance.

- 10.1.6 An assumption has been made of the number of housing and employment sites that would be impacted by the scheme which are:
 - → number of units: 1,050
 - → square feet of employment land: 885,000 sq feet
- 10.1.7 The GVA from the town centre re-development is £276,947,580.
- 10.1.8 The Appraisal Summary Table (AST) provides a summarised breakdown of the final impact assessments for the scheme. This can be found in **Appendix A**.
- 10.1.9 Extensive work has been undertaken to ensure that the mechanisms for delivering the scheme are in place, and that the scheme is overseen by a steering group (Project Board). The key milestones of the project following the submission of this Transport Business Case are:
 - → Conditional approval sought from Berkshire Local Transport Body (BLTB): November 2015
 - → Tendering process date: this was completed following the reserved matters planning consent
 - → Construction work begins on site: this commenced in July 2015
 - → Completion of highway works date: July 2016
 - → Monitoring of works: this is still to be negotiated with Bracknell Forest Council (BFC) and the developer
- 10.1.10 The total scheme cost, on which this Business Case is based, is £6.382million.