BERKSHIRE LOCAL TRANSPORT BODY (BLTB)

REPORT TO: BLTB **DATE:** 14 March 2019

CONTACT OFFICER: Joe Carter, Director of Regeneration, Slough Borough Council, lead officer to BLTB

PART I

Item 6: 2.19 Bracknell: Town Centre Regeneration – One Year Impact Report

Purpose of Report

1. At your meeting in March 2017, you approved guidance for the preparation of one- and five-year-on impact reports for BLTB funded local transport schemes.

2. This report introduces the impact report for scheme 2.19 Bracknell: Town Centre Regeneration.

Recommendation

3. You are recommended to note the reports from the scheme promoter and the independent assessor.

Other Implications

Financial

4. There are no direct financial implications of this report.

Risk Management

5. The government requires all LEPs to have Assurance Frameworks which set out governance arrangements and financial procedures. One of the specific requirements for transport schemes is to require scheme promoters to submit impact reports one and five years post implementation.

Human Rights Act and Other Legal Implications

6. Slough Borough Council will provide legal support for the BLTB should any questions arise on the application of the Assurance Framework.

Supporting Information

7. Bracknell Forest Council received £2m towards the £6.382m cost of this scheme. Therefore, it has been treated as a “small” scheme being under the £5m threshold.

8. The one-year on impact report is attached at Appendix 1; and the independent assessor’s report is attached at Appendix 2.

Conclusion

9. There is no further action required

Background Papers

None.

Appendix 1

Bracknell Town Centre Regeneration

12 Month Evaluation Report

Bracknell Forest Council

1.0 Introduction

1.1 Background

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 is also conveniently situated for both Heathrow and, to a lesser extent, Gatwick airports. Our location is perfect for movement in and around the Thames Valley area which is a major economical hub with the UK and has led to some global brands including Fujitsu, Hewlett Packard, Waitrose, TRL, Syngenta and 3M locating their regional and UK headquarters here.

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 Council's 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 that were proposed all assisted in underpinning this economically important regeneration of the retail centre.

1.1.5 The Bracknell Town Centre scheme comprised 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 enhancement schemes.

1.1.6 Bracknell Forest Council received £2,000,000 from the Local Growth Fund towards the various highway network and public realm improvements. Additional funding was provided by Bracknell Forest Council via S106 agreements and capital funds, making an overall total of £6,382,000 for the delivery of the schemes. This report evaluates the success of the project, and the impact of the regenerated Town Centre following its opening in Sept 2017.

1.2 Baseline demand in the Town Centre

1.2.1 Following the original redevelopment scheme, and the 2012 update to the regeneration proposals, improvements would be required on the local highway network and to the Town Centre's public realm to support the additional trips and footfall that the improvements were projected to attract.

1.2.2 The local highway network and public realm improvements consisted of:

- Millennium Way signal controlled junction - provision of a new all movement signal controlled junction serving the multi-storey car park associated with the northern development zone, incorporating a new pedestrian / cycle crossing facility and forming part of a new route between Bull Lane and the Met Office roundabout;

- Weather Way - re-alignment of The Ring (north) providing access to the northern retail quarter;

- Met Office Roundabout and Station Roundabout – capacity / operational improvements;

- Bond Way - provision of a new drop off / collection point and also covered cycle parking facilities;

- Conventional Advanced Directional Signing (ADS) - revisions for surrounding network routing, including car parks and service yards improving movement on the network and reducing delay;

- Variable message signing (VMS) - 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) - providing further RTI displays at key stops linked to the Town Centre;

- Urban Traffic Management Control (UTMC) system - 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 and pedestrian facilities improvements - planting, lighting, resurface cycleway and adjacent carriageway - providing a new route into the heart of the Town Centre for pedestrians and cycles. Continuation of the new pedestrian / cycle route by crossing The Ring and linking with recent improvements at the bus and train stations, and

- Charles Square service yard / multi-storey car park / hotel entrance improvements - new junction providing access to key services including new toucan crossing across The Ring connecting to existing pedestrian / cycle network serving the Town Centre and wider area.

1.2.3 This report has been prepared to evaluate the 12 month performance of the local highway network and public realm improvements since the opening of the Lexicon.

1.2.4 It has been prepared in line with the Department for Transport Guidance 'Monitoring and Evaluating Framework for Local Authority Major Schemes' September 2012, and in agreement with Thames Valley Berkshire Local Enterprise Partnership.

1.3 Report Structure

1.3.1 The report has been split into eight sections as detailed in section 3 of the aforementioned guidance;

- Scheme Build;
- Delivered Scheme;
- Costs;
- Scheme Objectives and Monitoring;
- Travel Demand;
- Urban Traffic Control and Variable Message Signage, and
- Impacts on the Economy.

1.3.2 The report then summarises the overall impacts in the final section.

2.0 Scheme Build

2.1 Highway Works

2.1.1 The off-site highway works followed a programme spanning from March 2015 to February 2017.

2.1.2 The project programme ran as follows;

- Millennium Way – March 2015 to November 2015;
- Weather Way – March 2015 to April 2016;
- Bond Way - June 2015 to April 2016;
- Met Office Roundabout – July 2015 to February 2016;
- Station Roundabout – September 2015 to February 2017, and
- High Street West – December 2015 to July 2016

2.1.3 Each of these programmed elements included detailed design of the various schemes and the post completion Stage 3 Road Safety Audit.

2.1.4 The overall build programme for the Town Centre was delayed by six months due to the many factors involved in such a complex build. However the supporting transport infrastructure funded through the Local Growth Fund was completed ahead of schedule. This allowed us time to optimise traffic controlled junctions, car park management, sustainable links and the running of extended bus services all ahead of opening day in September 2017.

2.2 VMS, ADS and UTMC

2.2.1 The advanced directional signage was updated as a result of the construction of the Town Centre at all of the main approaches to the Town Centre between June 2017 and July 2017.

2.2.2 The Variable Message Signs were installed during the two month period between April 2017 and June 2017.

2.2.3 UTMC improvements were undertaken over the whole construction period between March 2015 and February 2017.

2.2.4 These improvements are discussed further in Section 7 of this report.

2.3 Charles Square Access

2.3.1 The revised access to Charles Square car park was installed during the three month period of March 2016 to June 2016.

2.3.2 The works entailed construction of a new junction providing access to key services including a new toucan crossing across The Ring that connects to existing pedestrian / cycle networks serving the Town Centre and the wider area.

3.0 Delivered Schemes

The Avenue Car Park

The Canyon

Toucan Crossing on The Canyon

Eagle Lane

The Avenue

Bull Square

Braccan Walk

The Avenue

Town Centre Cycle Parking

Charles Square Access

VMS signage at Station Roundabout

4.0 Costs

4.1 The local contribution was made up from LTP grant, developer Section 106 funds, and a substantial amount drawn from the Borough Council's capital programme.

4.2 Securing funds through the Growth Deal not only helped accelerate the Town Centre regeneration by removing some financial burden on the Borough and developers, but it also allowed the authority to allocate funds to schemes aimed at bringing forward further developments, attracting businesses to the area and bringing economic growth to Bracknell and the Thames Valley.

4.3 The business case for funding was broken down as detailed in Table 4.1.

Table 4.1 – Project Funding Breakdown

Source of Funding	**Total**
Amount from LEP Local Growth Deal	£2,000,000
BFC Capital Programme	£3,619,000
Developer Funding	£763,000
Total Scheme Cost	**£6,382,000**

4.4 A quantified risk assessment and Monte Carlo simulation were undertaken for key risks identified in the business case. The risk register contained all risks associated with the scheme including where any potential overspend had been identified. It provided a forecast probability of each risk occurring and defines a range of probable costs which may be incurred in that instance.

4.5 A cumulative distribution for the forecast risk was prepared. From this distribution, a mean value was extracted for both pre and post mitigation (£543,315 pre and £84,565 post) and added to the costs of appraisal. The P(80) value for both pre and post mitigation (£709,841 pre and £188,027 post) was also assessed for the outturn cost calculation for the financial assessment.

4.6 Although the business case stated that overrun costs would be covered by the Local Authority, the relatively small overspend was in fact covered by the developer following negotiations during the early stages of construction.

4.7 The final spend for the project came out at £6,393,696. This presented a very modest overspend of approximately £12,000, which was covered by developer funding.

5.0 Scheme Objectives and Monitoring

5.1 Objectives

5.1.1 The original objectives of the schemes were to achieve the following;

- 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

5.1.2 The schemes have improved access to the Town Centre by providing management of movement and introducing better way-finding measures to reduce delays at junctions, particularly Market Street which had been predicted to operate with significant levels of queuing and delay.

5.1.3 The schemes did not require third party land and were within the extent of adopted highway and therefore did not require planning approval.

5.1.4 The schemes were relatively small in scale with a limited scope of works and no complexity in terms of construction tasks, site access etc.

5.1.5 Some of the work was able to be undertaken off-line, simplifying the traffic management issues.

5.1.6 Overall, the identified risks associated with delivering the projects were considered to be straightforward and manageable. The scheme was delivered through well-understood management practices with the main works of the project secured through the Council's highways term contract, simplifying the procurement process and demonstrating value for money.

5.1.7 By improving movement at busy junctions and reducing delays, we have also contributed towards a reduction in carbon emissions and removed a significant barrier to development in the area. It has assisted in the overall control and co-

ordination of the strategic corridor network within the Borough, whilst benefits will also be felt by neighbouring LEP areas.

5.1.8 The key measure of success of the improvements will be further realised as development continues in the Borough as part of the forthcoming Local Plan.

5.2 Monitoring

5.2.1 The business case outlined a number of monitoring and evaluation targets. These included;

- Traffic congestion and journey times on the Town Centre access routes (see sections 6.1, 6.2, 6.6, 6.7 and 6.8);
- Road safety for Town Centre routes (see section 6.5);
- Pedestrian and cycle counts on key routes into and around the Town Centre (see section 6.3);
- Car park usage (see section 6.1.2);
- Public transport use (See section 6.4), and
- Air Quality (See Section 6.9).

5.2.2 Due to the significant amount of roadworks being undertaken on the local highway network during the last 12 months, some surveys were not undertaken but will be reported in future evaluation reports. This is explained further in section 6.

6.0 Travel Demand

6.1 Observed Turning Counts

6.1.1 Junction turning counts were undertaken in March 2013 and again at the end of November 2018 to illustrate the pre and post-implementation effect of the improved junction layout.

Table 6.1 – Junction Turning Count Summary

Location	2013	2018	% Increase
Met Office Roundabout AM	9,464	10,677	12.8%
Met Office Roundabout PM	9,939	11,348	14.2%
Station Roundabout AM	6,102	6,383	4.6%
Station Roundabout PM	6,426	6,876	7.0%

6.1.2 Observations taken across the year since the opening of the Lexicon with regard to travel preferences to the Town Centre indicate that 54% of visitors travelled by car, and 1.75 million car parking spaces were used across the opening year.

6.2 Journey Time Monitoring

6.2.1 At the time of writing, there is a significant amount of roadworks being undertaken in the vicinity of the corridor that would be monitored for journey time purposes.

6.2.2 It is considered that these works would impact on journey times and temporarily displace some journeys to alternative routes, thus skewing any results that would be recorded and therefore monitoring surveys have been postponed.

6.2.3 BFC are due to undertake manual classified turning counts and journey time surveys at key junctions and routes as part of the update of the Bracknell Forest Multi Modal Traffic Model in March 2019. The monitoring for this corridor is to be included within these surveys and will be reported on in future evaluation reports.

6.3 Pedestrian and Cycle Movements

6.3.1 The improvements undertaken as part of the Town Centre infrastructure enhancements have resulted in a significant increase in the levels of pedestrian and cycle movements in and around the Town Centre.

6.3.2 Observations across the year taken since the Lexicon opening between September 2017 and August 2018 indicate that the footfall within the Town Centre has been in the region of 17 million people movements, with 23% of those visitors arriving on foot.

6.3.3 Tables 6.2 and 6.3 illustrate snapshot surveys undertaken at selected locations on the outskirts of the Town Centre and demonstrate the level of increase in pedestrian and cycle movements before and after the redevelopment of the Town Centre.

Table 6.2 – Observed Pedestrian Movements

Location	2016	2018	% Increase
Met Office Roundabout	772	1049	35%
Skimped Hill / Western Roundabout	841	1340	59%

Table 6.3 – Observed Cycle Movements

Location	2016	2018	% Increase
Met Office Roundabout	76	106	39%
Skimped Hill / Western Roundabout	105	124	18%

6.3.4 These observed increases in pedestrian and cycle movements and the modal share outlined above are far in excess of the measures of success for walking and cycling that were detailed within the business case (2.2% and 10% respectively)

6.3.5 The regeneration of the Town Centre included a number of associated cycle infrastructure improvements. These included a key route linking the rail station to the town centre, better access – including a new Toucan crossing – from the north, and 360 new cycle parking spaces in and around The Lexicon.

6.3.6 Although the usage of the cycle parking is not monitored, anecdotal evidence suggests it is well used, particularly in good weather, and that this continues to improve as the Town Centre grows.

6.4 Public Transport

6.4.1 The public transport contribution from the planning agreement for the Town Centre enabled Bracknell Forest Council to commission additional bus services specifically to serve the regenerated town centre. Three local routes were extended later into the evening from Monday to Saturday, and new Sunday services were also introduced.

6.4.2 The services provide a public transport option for visitors enjoying the new evening economy in the town, and for those working in the retail and leisure outlets. In addition, these services provide benefits to the wider community; providing access to retail, health services, friends and family and church-going in the parishes surrounding the Town Centre.

6.4.3 Local bus operators also extended some of their commercial services to better serve the Town Centre, including one service extended from Arborfield to call at Bracknell on an hourly frequency Monday to Sunday.

6.4.4 Due to the significant amount of roadworks being undertaken on the local highway network during the last 12 months, passenger surveys have not been undertaken but will be reported in future evaluation reports.

6.5 Road Safety

6.5.1 In the year before opening from September 2016 to September 2017, there were 12 slight accidents recorded on the highway network around the Town Centre.

6.5.2 Following the opening of the Town Centre, the number of accidents recorded in the year from September 2017 to September 2018 was four, three of which were classified as slight and one being classified as fatal.

6.5.3 It can be seen that the introduction of the highway improvements have resulted in a significant reduction in the level of slight injury accidents on the local highway network

6.5.4 The fatal accident occurred late at night and the driver of one of the involved vehicles failed to stop at traffic lights. It is noted that contributory factors to the accident were driver error, driving an unsafe vehicle and driving at excessive speeds. Local Police have stated that the accident was not caused by any highway related factor.

6.6 Traffic Monitoring

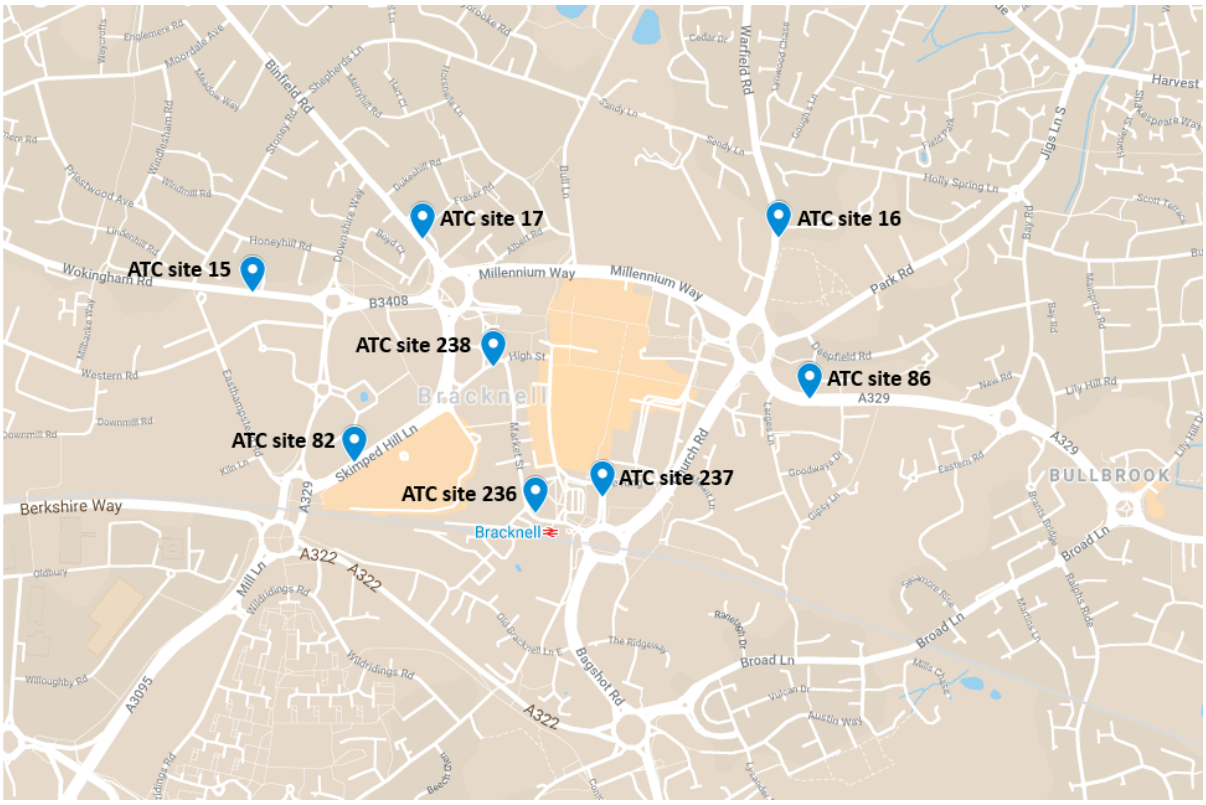
6.6.1 Traffic in the Borough is monitored by both the Council and the Department for Transport (DfT). The Council has 51 Automatic Traffic Counter (ATC) sites on a variety of roads across the Borough including key strategic routes. The DfT periodically carries out day counts at set points on key routes, devising a figure accordingly.

6.6.2 Data obtained from the Borough's 51 ATC sites have shown a cross-borough increase over the 2014 – 2018 period of 6% (verified by DfT traffic count data which have shown a similar increase). This follows a period of decline in traffic from a high point in 2006, observed in Bracknell Forest and nationally.

6.6.3 For the purposes of this report, we will consider weekly / monthly data from Bracknell Forest Council ATC sites (shown in Figure 1 with a blue marker).

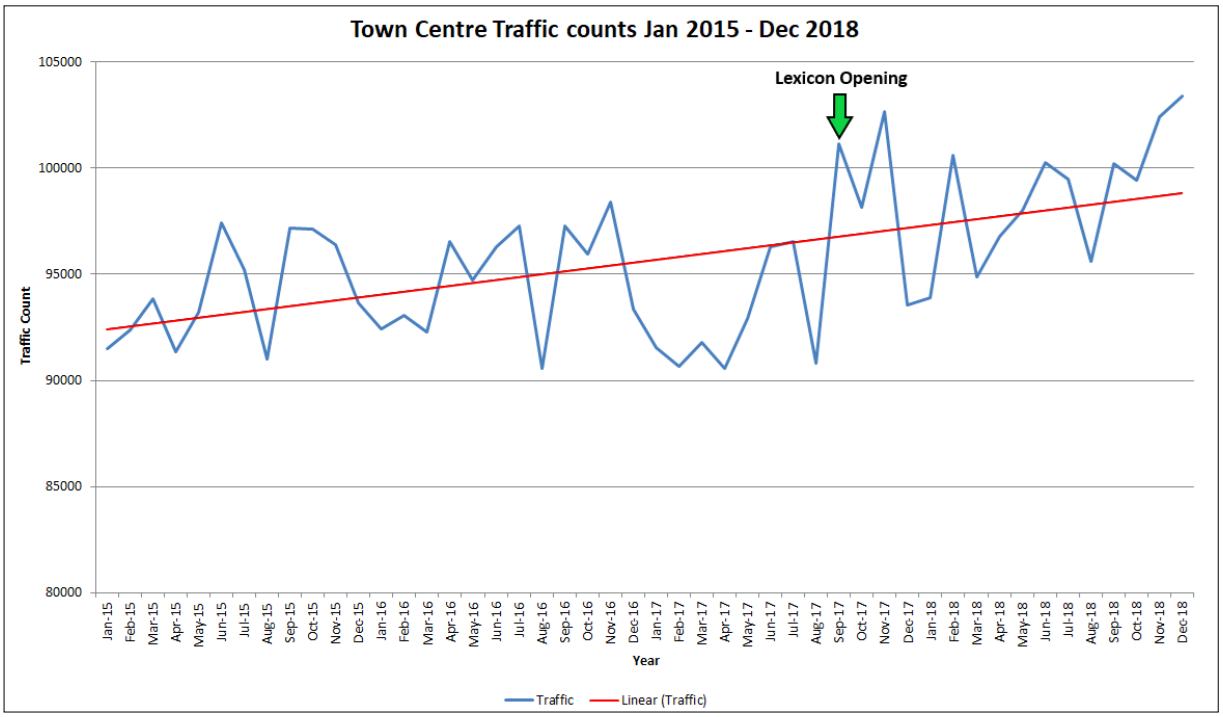
6.6.4 Site 237 Station Way was not included in the weekly analysis in section 6.6.7 as there was an insufficient level of comparison data for October 2017.

Figure 1 – BFC ATC Locations



Impact of town centre regeneration on traffic

6.6.5 Bracknell Forest Council's own automatic traffic counters can be used to take a more in-depth look at traffic trends over shorter periods – days, weeks and months, as opposed to a broader view of a whole year. It is more difficult to draw comparison conclusions using average annual traffic counts as data timeframes and reliability can vary. However, in an effort to analyse the impact of Bracknell's regenerated town centre, we have compared total monthly data from nine traffic count sites, on a range of roads around the Town Centre between January 2015 and December 2018.



6.6.6 The graph clearly shows a peak around the opening of the Lexicon in September 2017, and a continued steady increase in traffic to the end of 2018. The troughs observed around January and during the summer holidays are normal in annual traffic surveys. Also, the large fall between autumn 2016 and the opening of the Lexicon in September 2017 reflects the significantly reduced availability of retail and leisure facilities following the demolition of the old Town Centre.

Weekend traffic – before and after comparisons

6.6.7 Given that the Lexicon provides many new retail and leisure opportunities, it was assumed that it would generate significantly more weekend traffic. Considering the same sites, we have compared October 2016 with October 2017 and October 2018 (before, immediately after and one year after opening).

Table 6.4 Weekend traffic – October 2016 / October 2017 / October 2018 comparison

	Oct-16		Oct-17		Oct-18					
	Saturday	Sunday	Saturday	Sunday	Saturday	Sunday	% change 16-17 Saturday	% change 16-17 Sunday	% change 16-18 Saturday	% change 16-18 Sunday
Site 15 - Wokingham Road	13704	10664	14168	11109	14703	11227	3.27%	4.01%	6.79%	5.01%
Site 16 - Warfield Road	8432	6781	9082	7256	9435	7478	7.16%	6.55%	10.63%	9.32%
Site 17 - Binfield Road	7166	5429	7413	5701	7587	5761	3.33%	4.77%	5.55%	5.76%
Site 82 - Skimped Hill Lane	17217	12617	18809	14118	18818	13691	8.46%	10.63%	8.51%	7.84%
Site 86 - London Road (Met Office)	17136	13612	17692	13661	18372	14141	3.14%	0.36%	6.73%	3.74%
Site 236 - Market Street	8787	6181	9142	6731	8639	6303	3.88%	8.17%	-1.71%	1.94%
Site 238 - High Street	11380	7430	11221	8055	11420*	8108*	-1.42%	7.76%	0.35%	8.36%
						Average	4.88%	5.75%	6.08%	5.60%

6.6.8 The figures show that average daily traffic on Saturdays and Sundays has increased on all monitored roads around the Town Centre between 2016 (pre-opening), 2017 (post-opening) and 2018, with the exception of a very modest traffic reduction on High Street in '17 and Market Street in '18 on Saturdays. The small Saturday reduction on these streets can be attributed to the huge increase in availability of car parking at the Avenue serving the Lexicon.

6.6.9 Weekend traffic on Skimped Hill Lane, a road which is predominantly used for access to the Town Centre's shops and offices, increased by 10% between 2016 and 2017. On Warfield Road to the north, there was a similar increase over the two year period between 2016 and 2019. This is an indicator of the increased attraction of the Town Centre, as Skimped Hill Lane provides the most direct route from the major southern (A3095 Mill Lane) and western (A329 Berkshire Way) corridors, whilst Warfield Road provides the main northern route.

6.6.10 It is expected that traffic levels associated with the Town Centre will continue to increase in the short to mid-term future with further phases of regeneration planned following opening in 2018.

6.7 Station Roundabout Junction Modelling Summary

6.7.1 The industry standard modelling program ARCADY was used to calculate the capacity and estimate vehicle queuing on Station Roundabout before the introduction of the traffic signal scheme.

6.7.2 The pre-improvement roundabout was tested using 2013 observed traffic volumes, whilst the observed 2018 traffic flows and 2026 modelled traffic flows illustrate how the junction would have operated if the signalised junction had not been installed. These results are illustrated in Tables 6.5, 6.6 and 6.7.

6.7.3 LINSIG was used on the subsequent signalised roundabout to illustrate the effect of introducing signals here using the 2018 observed turning counts, and then retested using the 2026 modelled flows to illustrate the future performance of the junction. These results are shown in Table 6.8 and 6.9.

Table 6.5 – Standard Roundabout ARCADY results – 2013 Observed

	AM Peak			PM Peak		
Arm	**Ratio of Flow to Capacity**	**Queue**	**Delay (s/veh)**	**Ratio of Flow to Capacity**	**Queue**	**Delay (s/veh)**
Station Way	0.1	>1	2.47	0.26	>1	3.05
Church Road	0.35	>1	2.47	0.35	>1	2.82
Hazell Hill	0.26	>1	5.70	0.03	>1	6.59
Bagshot Road	0.67	2	4.73	0.39	>1	2.39
Market Street	0.69	3	23.86	0.70	3	15.69

Table 6.6 – Standard Roundabout ARCADY results – 2018 Observed

	AM Peak			PM Peak		
Arm	**Ratio of Flow to Capacity**	**Queue**	**Delay (s/veh)**	**Ratio of Flow to Capacity**	**Queue**	**Delay (s/veh)**
Station Way	0.03	>1	2.52	0.16	>1	3.07
Church Road	0.32	>1	2.27	0.41	>1	2.99
Hazell Hill	0.22	>1	5.16	0.06	>1	7.02
Bagshot Road	0.69	3	5.02	0.41	>1	2.50
Market Street	0.80	4	33.98	0.96	14	65.26

Table 6.7 – Standard Roundabout ARCADY results – 2026 Modelled

	AM Peak			PM Peak		
Arm	**Ratio of Flow to Capacity**	**Queue**	**Delay (s/veh)**	**Ratio of Flow to Capacity**	**Queue**	**Delay (s/veh)**
Station Way	0.06	>1	2.66	0.05	>1	2.69
Church Road	0.38	>1	2.72	0.44	>1	3.26
Hazell Hill	0.28	>1	6.48	0.12	>1	9.15
Bagshot Road	0.79	4	6.97	0.43	>1	2.63
Market Street	0.96	12	79.99	0.88	7	35.26

6.7.4 Tables 6.5 - 6.7 illustrate that although the roundabout operated within capacity in 2013, it was predicted to get progressively worse in the when using the 2018 observed flows and modelled 2026 future flows.

Table 6.8 – Station Roundabout LINSIG results – 2018 Observed

	AM Peak		PM Peak	
	Deg. Of Sat (%)	**Mean Max Queue**	**Deg. Of Sat (%)**	**Mean Max Queue**
Station Way	3.5	0.0	19.4	>1
Church Road	36.4	>1	46.9	1.6
Hazell Hill	24.0	>1	5.4	0.0
Bagshot Road	70.5	7.7	37.2	3.5
Market Street	53.0	3.0	51.1	4.6
Cycle Time	44s		52s	
Delay	12.48 pcuHr		9.07 pcuHr	
PRC (%)	27.7		75.1	

Table 6.9 – Station Roundabout LINSIG results – 2026 Modelled

	AM Peak		PM Peak	
	Deg. Of Sat (%)	**Mean Max Queue**	**Deg. Of Sat (%)**	**Mean Max Queue**
Station Way	9.7	>1	6.5	>1
Church Road	63.2	2.8	69.0	3.5
Hazell Hill	36.3	>1	10.0	>1
Bagshot Road	64.1	7.7	35.9	3.3
Market Street	62.2	5.9	68.7	5.4
Cycle Time	55s		53s	
Delay	13.54 pcuHr		11.10 pcuHr	
PRC (%)	32.1		30.4	

6.7.5 The introduction of a signalised junction is shown to demonstrate a reduction in queuing and delay when compared with the original roundabout based on the 2018 observed traffic flows, particularly on the Market Street arm of the junction which had been predicted to operate over capacity with increasing queue levels.

6.7.6 The roundabout is also predicted to continue to operate within capacity when using the 2026 future modelled flows.

6.8 Met Office Roundabout Summary

6.8.1 Primarily, the improvements to the Met Office Roundabout comprised the upgrading of the signal infrastructure at the junction and installation of MOVA at the junction which would improve the coordination of the signals around the roundabout and make it operate more efficiently.

6.8.2 As part of the installation, modifications were made to the kerb lines on London Road and Weather Way and to the white lining around the roundabout.

6.8.3 LINSIG was used to test the before and after scenarios to illustrate the impact of the improvements made to the junctions. Note LINSIG can only model based on fixed signal timings and as such, the roundabout would benefit from significantly larger improvements as a result of the operation of MOVA.

Table 6.10 – Met Office Roundabout "Before" LINSIG results – 2013 Observed

	AM Peak		PM Peak	
	Deg. Of Sat (%)	**Mean Max Queue**	**Deg. Of Sat (%)**	**Mean Max Queue**
Warfield Road	54.7	4.8	63.8	5.1
Park Road	51.3	3.9	51.9	3.1
London Road	87.1	11.1	63.9	5.0
Church Road	61.8	5.4	60.2	4.9
Weather Way	20.6	>1	46.1	2.8
Millennium Way	52.4	4.3	62.8	5.9
Cycle Time	53s		55s	
Delay	33.26		27.36	
PRC (%)	3.3		40.4	

Table 6.11 – Met Office Roundabout "Before" LINSIG results – 2018 Observed

	AM Peak		PM Peak	
	Deg. Of Sat (%)	**Mean Max Queue**	**Deg. Of Sat (%)**	**Mean Max Queue**
Warfield Road	52.6	5.2	70.6	6.7
Park Road	66.3	7.0	65.6	5.9
London Road	89.4	15.5	68.7	5.6
Church Road	75.2	8.3	57.7	5.4
Weather Way	6.7	>1	28.6	>1
Millennium Way	46.1	6.0	73.4	7.9
Cycle Time	64s		56s	
Delay	44.17		34.46	
PRC (%)	0.7		22.6	

Table 6.12 – Met Office Roundabout "Before" LINSIG results – 2026 Modelled

	AM Peak		PM Peak	
	Deg. Of Sat (%)	**Mean Max Queue**	**Deg. Of Sat (%)**	**Mean Max Queue**
Warfield Road	106.2	29.4	74.9	9.3
Park Road	76.7	11.4	71.6	8.0
London Road	108.6	82.4	73.7	10.2
Church Road	84.7	12.8	57.2	7.3
Weather Way	21.3	0.9	61.4	4.0
Millennium Way	80.6	16.2	85.9	17.1
Cycle Time	90s		90	
Delay	165.19		44.74	
PRC (%)	-20.6		4.8	

6.8.4 Tables 6.10 – 6.12 illustrate that the original layout of the Met Office Roundabout was approaching capacity in 2018 and was predicted to operate over capacity in 2026.

Table 6.13 – Met Office Roundabout "After" LINSIG results – 2018 Observed

	AM Peak		PM Peak	
	Deg. Of Sat (%)	**Mean Max Queue**	**Deg. Of Sat (%)**	**Mean Max Queue**
Warfield Road	46.1	4.6	62.6	6.1
Park Road	65.3	6.7	62.6	5.1
London Road	73.6	10.2	56.4	5.8
Church Road	68.6	7.4	52.8	4.8
Weather Way	6.7	>1	7.8	>1
Millennium Way	69.2	7.4	71.2	8.0
Cycle Time	64		56	
Delay	38.52		31.65	
PRC (%)	8.2		26.4	

Table 6.14 – Met Office Roundabout "After" LINSIG results – 2026 Modelled

	AM Peak		PM Peak	
	Deg. Of Sat (%)	**Mean Max Queue**	**Deg. Of Sat (%)**	**Mean Max Queue**
Warfield Road	61.4	8.5	69.8	8.7
Park Road	67.2	9.2	74.2	8.2
London Road	90.3	18.5	61.4	8.9
Church Road	89.6	14.6	58.8	7.4
Weather Way	21.3	>1	56.3	3.8
Millennium Way	83.5	17.3	82.9	13.2
Cycle Time	90		90	
Delay	65.13		43.67	
PRC (%)	-0.4		7.4	

6.8.5 The revised layout is shown to operate significantly better when modelled with 2018 observed and 2026 modelled flows. This compounded with the effect of the installation of MOVA on the junction (which cannot be simulated in LINSIG) that is estimated to reduce delays by over 13% compared to junctions under VA control.

6.9 Carbon Impacts

6.9.1 Bracknell Forest's annual Air Quality Action Plan (AQAP) considers air quality across the Borough, focussing on emissions that are harmful to human health, such as nitrogen dioxide, particulates and sulphur dioxide. Pollutants are monitored at two Air Quality Management sites in Crowthorne, and adjacent to the A322 Downshire Way in Bracknell.

6.9.2 The levels of NOx and particulates have been steadily decreasing over the past ten years, but there is still a need for improvement. The report notes that "it is well recognised that queuing traffic can have a massive impact upon air quality and as

such this is an area which needs to be considered in both AQMAs. The stopping and starting of traffic can also impact upon air quality and therefore any measures to ease congestion within the AQMAs will assist in improving air quality".

6.9.3 The Council's junction improvement projects in the town centre and along the A322 / A329 corridor aim to provide more reliable journey times and a smoother flow of traffic by better managing traffic at key junctions. The further works to dual Downshire Way (adjacent to an AQMA monitoring site) should also help to keep traffic flowing, where it is often currently stationary, creating a network bottleneck. Once this improvement is in place, there will be a resulting improvement in overall air quality.

6.9.4 Air quality is monitored at various sites around Bracknell Town centre. There is an Air Quality Management Area along the A322 Downshire Way and part of Bagshot Road, with a permanent monitoring station between the Twin Bridges roundabout and Fire Station, and monitoring tubes at separate locations along the AQMA route.

6.9.5 Air quality data is also being collected from 11 new sites around the town centre, in order to monitor the impacts of the town centre regeneration and related road improvements. These sites have not been in long enough to provide a trend pattern, however data from monitoring sites along the AQMA suggests a steady reduction in pollutants recorded over the past 5 years, including 2016 – 2017.

6.10 Summary

6.10.1 Broadly speaking, the increases to travel demand were marginally higher than those forecast in the business case.

6.10.2 However, it is noted that the highway improvements are more than capable of handling the additional traffic and are still predicted to perform well in future traffic simulations.

7.0 Urban Traffic Control and Variable Message Signage

7.1 As part of the Town Centre (Lexicon) redevelopment, Bracknell Forest Council was allocated funding to undertake major infrastructure development in order to ensure the surrounding highways network was suitable to cope with additional demands placed upon it by the regeneration.

7.2 A key area of investment was a reliable, fast and adaptable telecommunications network. This system provides a solid platform for the Town Centre signals and other intelligent transport systems. It is also scalable for the future and cost-effective, both in terms of capital and revenue outlay.

7.3 The Council opted for a high speed internet protocol based mesh system which has afforded the ability for live real-time communication monitoring, quick connections of new systems, and a nearly revenue-neutral ongoing cost.

7.4 The systems have been implemented across the entire Town Centre, being utilised in an advanced car park guidance system, as well as traffic signal control and monitoring, plus CCTV.

7.5 The Council are now looking to expand its use into a journey time monitoring and traffic counting system.

7.6 The Town Centre funding also allocated money to a comprehensive variable messaging system, which is being used for car park guidance.

7.7 The system has successfully linked all the major Town Centre car parks, giving road users an overview of all available parking, including information on car park closures, and if there are any major incidents. This system has proven to be very reliable and ensures efficient use of the network and our available parking facilities.

7.8 Furthermore, a key part of the investment into the Town Centre was the installation and upgrade of new and existing pedestrian crossing facilities and traffic signal junctions.

7.9 Significant development work was undertaken, and the Town Centre now benefits from modern, efficient and advanced functioning traffic signals equipment. The junction installations have adaptive control and live monitoring, which has been used to benefit the highway network already.

8.0 Impacts on the Economy

8.1 The transport infrastructure improvements have helped facilitate the delivery of 270,000sqm of retail floor space generating over 3,500 retail and leisure jobs.

8.2 This increase in floor space has resulted in Bracknell being ranked 31st in the South East in terms of retail footprint, and boosted the town to be the 33rd best shopping destination in the UK (up from position 255 in 2017), with each visitor making a trip to the town centre on average 73 times per year.

8.3 The Town Centre development was also to facilitate the construction of 1,000 new housing units, of which 892 are have been started of which 287 are complete. Following the success of the town centre regeneration, this figure is set to rise by a further 500 housing units which have also been secured for delivery by 2026.

8.4 Since opening, the Town Centre redevelopment has received a number of awards ;

- REVO 2017 Re:new Award (December 2017)
- REVO 2017 Best of the Best Award (December 2017)
- 2018 iESE Transformation Gold Award, Community Regeneration Category (March 2018)
- 2018 iESE Transformation Best of the Best Award (March 2018)
- Thames Valley Property Awards 2018 – Development of the Year (May 2018)
- REVO Purple Apple Marketing Awards 2018 – Strategic Marketing 'Winning Back Local Hearts and Minds' (May 2018)

8.5 Reception for the redevelopment on social media has been favourable with high ratings on Facebook, Google and Trip Advisor. There has also been a large level of increase in followers on Instagram and Twitter.

8.6 There is significant development due to come forward within Bracknell Forest Borough as part of the forthcoming Local Plan, and this will require suitable infrastructure to mitigate any associated impacts on the road network.

8.7 By improving movement and control at the busy junctions around the Town Centre and reducing delays, we have assisted in reducing carbon emissions and removed a significant barrier to development in the area.

9.0 Summary

9.1 With the benefits of the scheme based on a modelled forecast year of 2026, it is too early to report on the impact of the delivered schemes, but it is clear that overall movement and capacity at the junctions have been improved, forming an important part in the overall management the local highway network.

9.2 Observations taken across the year since the opening of the Lexicon with regard to travel preferences to the Town Centre indicate that 54% of visitors travelled by car, and 1.75 million car parking spaces were used across the opening year.

9.3 It is also noted that between September 2017 and August 2018 footfall within the Town Centre was reported to be in the region of 17 million people movements, with 23% of those visitors arriving on foot. We have also seen an increase in bus patronage, with this mode of transport accounting for 18% of the visitors to the site.

9.4 The huge positive changes in Bracknell town centre since the demolition of the old shopping area had the potential to bring increased traffic congestion, unsustainable parking demand, poorer air quality, reduced safety and a lack of technological future proofing. However the integrated and cost-effective approach adopted by the Council from the planning to the implementation stage has ensured that none of these eventualities have come to pass.

9.5 Instead, Bracknell now has a flourishing 21st century retail and leisure hub that will serve the existing and projected population, as well as the increased number of visitors to the town. All this whilst ensuring that the local and strategic transport network continues to provide efficient access to and from these new facilities.

Appendix 2

Thames Valley Berkshire Local Enterprise Partnership

Independent Assessment Summary Report: Bracknell Town Centre Regeneration

One Year Impact Report

Hatch Regeneris

February 2019

www.regeneris.co.uk

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Independent Assessment

i. This technical note provides an independent assessment of the One-year Impact Report submitted by Bracknell Forest Council (BFC) in relation to the Bracknell Town Centre Regeneration (BTCR) scheme.

ii. The BTCR scheme received funding through the Thames Valley Berkshire Local Enterprise Partnership (TVB LEP) Local Growth Fund deal. As part of the on-going assurance process, TVB LEP requires all funded schemes to produce one-year and five-year post-implementation impact reports to demonstrate how each scheme has performed against expectations.

Process

iii. The one and five-year impact reports are expected to assess the following elements of the scheme:

a. did it get built?
b. was it to plan?
c. was it on time?
d. was it to budget?
e. is it working ok?
f. what impact has it had?
g. any learning points?

iv. Hatch Regeneris have applied these criteria but also sought to use the process as positive influence to identify specific ways in which project scheme design or delivery could be enhanced to enhance future value of this scheme or other future LEP funded schemes

Scheme Summary

v. The Council received £2,000,000 from the TVB LEP Local Growth Fund as part of an overall estimated scheme cost of £6,382,000.

vi. The scheme was delivered in support of the wider regeneration of Bracknell Town Centre that comprised 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.

vii. The associated transport scheme elements incorporated the delivery of changes to the local highway provision, improved public realm, new and enhanced walk / cycle connections, and the improved transport information technologies. The specific improvements included:

- Provision of a new signal-controlled junction on Millennium Way serving the multi-storey car park, incorporating a new pedestrian / cycle crossing facility and forming part of a new route between Bull Lane and the Met Office roundabout;
- Re-alignment of The Ring (north) from Weather Way;
- Improvements at the Met Office Roundabout and Station Roundabout;
- Provision of a new drop off / collection point on Bond Way and covered cycle parking facilities;
- Revisions to Conventional Advanced Directional Signing (ADS);
- Additional Variable Message Signing (VMS) - enabling greater co-ordination and management and maximising car park occupancy;
- Additional Real Time Bus Information (RTI) at key stops linked to the Town Centre;
- Enhanced Urban Traffic Management Control (UTMC) system;

- A range of cycle and pedestrian facilities improvements across the heart of the town; and
- A new junction to provide enhanced access to Charles Square service yard / multi-storey car park.

viii. The primary objectives of the scheme were to: 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; and enhance the viability of the town centre, support Economic Development and other key areas.

ix. The Full Business Case included a series of monitoring and evaluation targets relating to: traffic congestion and journey times on the Town Centre access routes; road safety for Town Centre routes; pedestrian and cycle counts on key routes into and around the Town Centre; car park usage; public transport use; and air quality.

Review Findings

General Observations

x. The scheme elements were all delivered as planned. Whilst the overall regeneration programme was delayed by 6 months, the transport infrastructure, funded through the LGF, was delivered ahead of schedule.

xi. The scheme was delivered for a final cost of £6,393,696, representing a very modest cost overrun of just £12,000, which was covered by the developer. It is worth noting that the projected scheme costs included a monetary value derived from the Quantified Risk Assessment and so it can be

concluded that this represented an accurate assessment of required cost contingency.

xii. Comparative junction turning count data for pre and post-scheme implementation are presented within the one-year impact report. This data demonstrates increases in traffic movements through the Met Office and Station Roundabouts of between 4.6% and 14.2%. These increases are reported as being marginally higher than those forecast within the FBC.

xiii. Comparative data on vehicle journey times has not been presented within the one-year impact report. This is because there is currently a significant amount of roadworks being undertaken in the vicinity of the corridor that is likely to distort the outcomes of the survey work. BFC have scheduled these surveys, alongside other manual classified turning counts, to be undertaken in March 2019.

xiv. Surveys undertaken since the opening of the main Lexicon Centre in the town centre estimate around 17 million people movements, with 13% arriving on foot. It is not clear whether these movements are in-line with expectations for the scheme.

xv. Comparative data on pedestrian and cycle movements pre and post-scheme implementation are presented within the one-year impact report. This data demonstrates increases in pedestrian movements at the Met Office Roundabout and Skimped Hill / Western Roundabout of between 35% and 59%, whilst cycle movements have increased between 18% and 39%. These observed increases are reported as far in excess of the 'measures of success' for walking and cycling detailed within the FBC of 2.2% and 10%, respectively.

It would be insightful if a broader range of count locations were available for future surveys.

xvi. Monitoring data for the use of the 360 cycle spaces delivered in and around the Lexicon is not available; however, the report states that anecdotal evidence suggests it is well used, particularly during good weather.

xvii. It is reported that the town centre improvements have enable BFC to commission additional bus services to serve the town and that these now serve the evening and Sunday time periods. Local bus operators are also reported to have extended their commercial services. Whilst specific patronage data is not available, the evidence presented infers that the schemes are encouraging greater use of public transport to access the town centre.

xviii. There is no commentary on how the schemes have specifically contributed to enhancing access to Bracknell Train Station and any associated benefits.

xix. Comparative data on accident levels indicates that there were 12 slight accidents in the year prior to the scheme opening, and in the subsequent year there were three slight accidents and one fatal. Local Police have stated that the one fatal accident was not caused by any highway-related factor, but rather driver error. It can be concluded that the overall frequency of accidents has fallen significantly.

xx. Monitoring data from BFC and the DfT traffic count locations have indicated a 6% average increase in cross-borough traffic between 2014 and 2018. Specific count locations within the town centre have been used to demonstrate a peak in demand when the Lexicon opened and steady growth thereafter, providing evidence of the overall success of the regeneration

scheme in attracting new trips into Bracknell Town Centre. Traffic data presented for the weekend, when retail and leisure activity was anticipated to be highest, indicates a post-scheme implementation increase in traffic of 6.1% and 5.6% on Saturdays and Sunday, respectively.

xxi. To assess the impact of changing traffic flows upon the operation of junctions within the town centre, the report utilises local junction modelling tools (ARCADY, LINSIG) to assess the performance of two junctions under different levels of traffic flow. The outputs indicate that the revisions to both the Station Road and Met Office Roundabouts have resulted in enhanced operational performance, despite the increases in traffic flow.

xxii. It is reported that improving the flow of vehicles across the town centre network, and reducing the stop/start nature of traffic, will help improve local air quality. No evidence is currently reported to verify this position, but it is reported that this will be collected in future years.

xxiii. The UTMC and VMS system delivered is described and it is stated that it now successfully links with all major Town Centre car park to help optimise the use of the road network and car parking capacity. No specific examples of how it works in practice are presented.

xxiv. The impacts that the overall town centre regeneration scheme has had upon the economy is described in broad terms, with a range of positive benefits, including the delivery of 3,500 retail and leisure jobs.

Conclusions

xxv. The BTCR one-year impact report represents a well-constructed and balanced document, making good use of the available evidence. It is considered to meet the majority of requirements for a one-year impact report.

xxvi. The report provides a good overview of the scheme delivered and the positive impacts that have occurred in terms of increased junction capacity, increased walking and cycling flows, and overall improved management of the local transport network. The scheme has also clearly facilitated access to the enhanced regeneration scheme and helped to secure positive local economic benefits, including the delivery of jobs. It would be more insightful if all the described impacts were presented against the prior expectations of the scheme, as set out/forecast within the FBC.

xxvii. The absence of journey time data makes it challenging to assess the overall impact of the scheme measures and it will be important to review this data when it becomes available. It also remains unclear what the specific impact the scheme has had upon local air quality.

xxviii. The scheme was delivered ahead of time and extremely close to budget, and at no extra cost to the public sector, and demonstrates that a robust budgeting process was completed and that the delivery of the project was well-managed. Subject to considerations of journey time impacts and air quality, the scheme is considered to be working well and has delivered the broad outcomes required.

xxix. The key points for consideration, both to enhance the future outcomes of the project and to facilitate wider learning, include:

- The collection of journey time data will be a key metric for assessing the ultimate impact of the scheme upon the operation of local highway network and the collection, analysis, and presentation of this data should be prioritised.
- For a scheme that appears to have increased the levels of vehicular traffic moving across parts of the local transport network, it will be critical to demonstrate that this traffic is being managed in a way that minimises the impact upon local air quality.
- It would be beneficial to have broader assessments of the impact of the scheme upon public transport, cycling and walking levels, including how the scheme has support the use of Bracknell Train Station and use of cycle parking.
- The budgeting and management processes applied within the development and delivery of the scheme, including the quantified risk assessment, should be shared with future projects of this type.