

MEETING OF THE BERKSHIRE LOCAL TRANSPORT BODY (BLTB) – THURSDAY 11 NOVEMBER 2021

CONTACT OFFICER: TIM WHEADON, CHIEF EXECUTIVE, BRACKNELL FOREST COUNCIL

Item 5: 2.10 Slough: A332 Windsor Road Improvements – One Year Evaluation 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. Per reports received at the March and July 2021 BLTB meetings, it was agreed that due to the Covid pandemic, the pending one-year impact reports would be temporarily suspended until a sufficient resumption of normal, or near normal, traffic movements resumed. It has been agreed by the Berkshire Transport Officers that we are probably now at this point, enabling reports to be drawn up and submitted.
3. This report introduces the one-year impact report for scheme 2.10 Slough: A332 Windsor Road improvements scheme.

Recommendation

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

Other Implications

Financial

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

Risk Management

6. 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

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

Supporting Information

8. Slough Borough Council received £2.7m in LGF towards the cost of this £5.0m scheme.
9. The one-year on impact report is attached at Appendix 1; and the independent assessor's report is attached at Appendix 2.

Conclusion

10. The Independent Assessor concludes that the SBC one-year impact report is a well-constructed and balanced document, making good use of the available evidence at this stage. Whilst the agreed delay in producing this report was agreed with TVB LEP and Berkshire Local Transport Body some initial data has been provided to show the impacts of the scheme before COVID.
11. The report also provides very helpful photographs of after scheme completion which brings to life the changes which have been implemented because of TVB LEP and SBC investment. While the report helpfully outlines how the scheme has addressed congestion, safety concerns and reliability in Slough along the network. The scheme did also face a number of challenges including the completion date being approximately 2 years later than expected with a small cost overrun of £150k met by the council.
12. It would be useful helpful to see an overarching conclusion section which draws upon all elements of the scheme and makes final remarks about the success of the scheme.
13. Undertaking of a one-year impact report is too soon to provide a realistic assessment of the actual outcomes of the scheme. The Council expects to be able to provide a much more detailed review of the scheme at the five-year evaluation report milestone.
14. The key points for consideration, both to enhance the future outcomes of the project and to facilitate wider learning, include:
 - While the report provides a positive indication of the scheme reducing congestion and safety and provides some initial data, providing more detailed analysis for the five-year report will be important to evaluate the impact and outcomes of the scheme. Data from surveys about the operation of the scheme, local air quality levels, accident data, ATC survey counts to measure traffic flows.
 - The report includes a section about growth forecast relating to commercial and housing units coming forward relating to this scheme and wider schemes coming forward. SBC should closely monitor what was predicted for jobs, floorspace, housing etc against which of these benefits arise.
 - For future monitoring reports, providing clarity on the different stages and milestones of the scheme and what happened during construction. The report should state for each milestone what was the estimated date of completion and the actual date of completion.
 - For future monitoring reports, provide a breakdown of costs to show that the estimated costs in the business case against those actually incurred.
 - For future monitoring reports, the report should include key maps and locations of the scheme interventions and, where possible, visual evidence to help contextualise the pre-scheme investment position and the post-investment position.
15. There is no further action required.

Background Papers: None.

Slough: A332 Windsor Road Improvements

Berkshire Local Transport Body (BLTB)

One Year On Evaluation report

Bill Hicks

October 2021



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1. Introduction

1.1. Overview

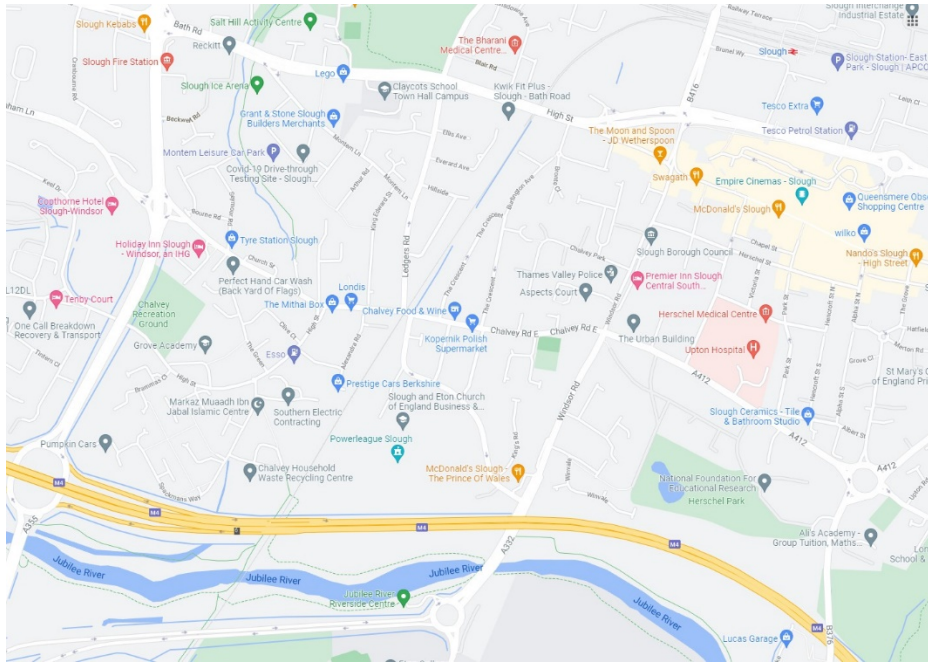
Slough Borough Council received £2,700,000 from the Local Growth Fund towards the improvements and redesign of the A332 / Windsor Road. Additional funding was provided by Slough Borough Council via S106 agreements and capital funds, making an overall total of £5,000,000 for the delivery of the scheme.

The Windsor Road Improvements scheme included a programme of junction improvements, road widening and related works on the A332 / Windsor Road, with the aim of improving conditions for general traffic as well as buses along this strategic route, making journeys quicker and more reliable. Hence, the scheme represented a major urban renewal project at this prominent entrance point to the town centre, with a substantial redesign of the road layout, signals configurations, and crossing points along the route.

This report evaluates the success of the project, taking into account improvements to the road network, road safety, and the opportunities for economic growth.

1.2. Location

The A332 is one of the main strategic routes in the borough, being a continuation of the A332 flyover from Royal Windsor Way and the subsequent spur road to the roundabout at the Jubilee River, just below the boundary between Slough and the Royal Borough of Windsor and Maidenhead. At this point the road becomes Windsor Road. The main structural changes included in this scheme are contained within the section from the junction with Ragstone Road up to the junction with Slough High Street. This includes prominent junctions with Chalvey Road East / A412 Albert Street and with Herschel Street. For traffic review purposes, the full extent considered runs from Jubilee River to the Heart of Slough.



Map of central Slough including the approach east/northbound via the Eton spur road to Windsor Road.

1.3. Historic Problems

1.3.1. Congestion

This route is subject to heavy traffic flow, as it carries a large amount of commuters as well as local traffic accessing businesses, schools, shops and other destinations. Tens of thousands of commuters enter and exit Slough on a daily basis, Monday to Friday. As a result, congestion arises and journey times can be unpredictable.

1.3.2. Road Safety

Previously, crossing facilities for pedestrians were inadequate at the junction with the A412/Albert Street, with no dedicated pedestrian phase. Although not an 'accident hotspot', one of the objectives of the scheme was to reduce the average annual number of incidents in Windsor Road.

1.3.3. Maintenance

Due to the high volume of usage, highways maintenance, including street lighting repairs, has previously been expensive and difficult to arrange and carry out safely.

1.4. Scheme Objectives

The A332 Route Enhancement scheme was designed to improve traffic flow on the strategic north-south A332 route that connects runs from this southern entrance to the borough to the Town Centre. From a traffic perspective, the key requirements were to reduce road congestion and to improve road safety as well as to increase network reliability. This goes hand in hand with economic growth, and extensive residential and commercial development opportunities were expected to be forthcoming following the completion of the scheme.

As stated in the final business case, section 3.26, the main objectives of the scheme were as follows:

1. To relieve localised congestion and enhance accessibility to the southern gateway to Slough Town Centre
2. Provide a direct high quality, safe, convenient and reliable travel to Slough Town Centre and improve public perception of transport in Slough
3. Support economic development in Slough town centre and contribute to tackling deprivation
4. Mitigate future impact of noise and air pollution and greenhouse gases on the A332 route

In terms of evaluation, the business case set out in section 3.29 the intention to focus specifically on:

- Traffic congestion and journey times; and
- Road safety

1.5. Timetable for this review

This is the formal, one-year-on evaluation review. The scheme was completed in September 2019, however, due to the impacts of COVID-19, notably on traffic levels across the network, it was agreed with the Thames Valley Local Enterprise Partnership and the Berkshire Local Transport Body that this review would be delayed until all the COVID restrictions had been lifted.

2. Funding

2.1. Funding details

The majority of the funding for this scheme came from the LEP Local Growth Deal. Additional funding was provided by the Council from S106 contributions and capital funds. The full figures are shown in the tables below:

Source of funding	Total
LEP Local Growth Deal	£2,700,000
<i>Local contributions:</i>	
- Section 106 agreements	£250,000
- Council Capital funds	£2,050,000
Total Scheme Cost	£5,000,000

3. Scheme details

The scheme included a series of junction improvements including enhanced crossing points. Widening of the carriageway was undertaken in the section on the eastern side of the road, to the south of the junction of the A332 with the A412 / Albert Street.

3.1. Specific design elements

- Re-designed road layout and lane configuration, with particular focus on the junction with Chalvey Road East/A412.
- Re-designed key junctions along the route, most prominently the junctions with Chalvey Road East/A412, Herschel Street, Vale Grove and Ragstone Road.
- New traffic islands along the route, enhancing crossing points.
- New pedestrian phase in the signalised crossing at the junction with Chalvey Road East/A412/Albert Street.
- Widening of the carriageway between the junction with the A412/Albert Street and the junction with Ragstone Road.
- Extended and enhanced traffic island approaching the junction with Ragstone Road.
- Full resurfacing with new lane markings
- Drainage improvement

3.2. Supporting measures

3.2.1. Traffic Management

Given the high volume, strategic nature of the route, extensive traffic management plans were devised. This included a temporary roundabout in place in the first phase of construction at the normally signalised junction with Chalvey Road East and the A412/Albert Street.

3.2.2. Communications

The project was supported by an extensive communications programme to keep residents and motorists advised of upcoming works and disruptions. This was particularly important at times when closures were in place for road surfacing, when diversions were in operation.

The communications took the form of public consultations, letter drops, press releases, the SBC website, and information sharing with neighbouring authorities the Royal Borough of Windsor and Maidenhead and Highways England. Overall, there was widespread patience and acceptance of the disruption in expectation of the network and wider benefits that would arise from the new road layout.

3.3. Key dates

Construction started on site in January 2016. The work was completed in September 2019. See section 4 for more information including reasons for the length of the scheme delivery.

4. Progress and Monitoring

4.1. SBC / Balfour Beatty partnership

Monthly meetings were held with the project manager, main contractor (initially Balfour Beatty) and their traffic management subcontractors. Regular contract monitoring and scheme progress reports were provided by Balfour Beatty and discussed with the Head of Transport at the Council. SBC engineers regularly attended the works site along with fellow project team members in order to monitor progress and to check adherence to technical plans and specifications.

4.2. Construction and programming problems

The programme was completed successfully with a high quality scheme delivered. However, during the construction period, several major problems were experienced on site, calling for persistence and thoroughness, as well as technical expertise and sound judgement in devising appropriate solutions. Nevertheless, the programme overran significantly.

This main reason was the presence of utility services, specifically gas pipes, in unexpected locations, despite trial holes having previously been carried out in preparation of the main construction work. The subsequent delays in responses and lead times from the utility company in question, due in part to the high profile location on the network, but also due to the complexity of the re-designs, were extensive.

Added to the utility service diversion requirements, Balfour Beatty were replaced as the main contractors in 2017, with the scheme unfinished. This did not reflect on the quality of their work, or their ability to continue from a technical perspective, but rather from a value for money perspective, and the need to ensure the costs did not escalate unacceptably as a result of the delays. The Council took the decision to transfer responsibility for the remainder of the construction programme to the recently created in-house Direct Service Organisation (DSO). Hence, there were additional delays during the transition period between the contractors.

One final aspect here which was to some extent a knock on effect of the programme delays was the completion of the signalling works at some of the junctions. Various aspects of the signalling work were rescheduled on more than one occasion to tie in with the utility diversions.

Ultimately, following a series of programme revisions, the project was completed on site in September 2019, having originally been expected to finish in 2017.

4.3. Health and Safety

As set out in the monthly reports received by SBC, an excellent health and safety record was maintained for the duration of the project. Balfour Beatty strive to maintain zero harm, and this was backed up by minimal incidents and quick responses, with thorough investigation into any problems that arose, and a culture of transparency. Slough's DSO also has the same high standards and an excellent safety record. There were no serious incidents on site during the project.

4.4. Road Safety Audits

Road Safety audits were carried out at each stage of the project. The reports indicated:

- No departures from standard reported by the Design Organisation.
- All issues raised at stage 2 (design) were resolved.
- Following RSA stage 3, the site was considered to be fully compliant with road safety guidelines.

5. Review of the outcomes against objectives:

5.1. Overall outcome

With reference to the specific objectives in the original business case:

The overall image of this route, forming the southern gateway into the Town Centre, has been drastically improved. The highway widening and junction improvements have led to a more attractive road layout out. The aesthetic appeal of the route has also been radically enhanced by the complementary development work, which has included the demolition of buildings which were old, distressed and quite an eyesore, and the construction of attractive, high quality buildings in their place. The combined highway and land development measures have positively transformed Windsor Road, bringing impressive visual and functional improvements.

The highway improvements, incorporating carriageway, footway, junction and signalling enhancements, have led to a safer, more convenient and more reliable thoroughfare for all road users. Significant traffic improvements have been achieved. See section 5.3.

Road safety has also improved. See section 5.5 for details.

The public perception of transport in Slough as a result of this scheme has not been thoroughly captured, but a positive response is anticipated. Further engagement with the public will be necessary to provide a more informed view on this aspect.

The redevelopment of Windsor Road represents a substantial contribution to the overall economic development in the town centre and surrounding environ, in both highway and development realms. The reduction in deprivation levels specifically has not yet been fully reviewed.

Regarding the expected improvements in noise reduction and greenhouse gases on the A332 route, this still requires extensive investigation. No results or conclusions have been reached yet. This is due, in part, to assessing the changing traffic patterns in response to the COVID 19 situation, and to what can be considered to be the ongoing 'normal' in this respect.

5.2. Photographs of the new road layout and re-designed junctions



Image 1: A332/Windsor Road looking north towards the town centre.

Taken shortly after completion in 2019



Image 2: Crossing to the north of the junction of Windsor Road and the A412. New crossing facility and signals enhancement. Taken September 2021



Image 3: Windsor Road looking south at the junction with Herschel Street.
Taken September 2021



Image 4: Redesigned footway adjacent to Windsor Road at the junction with Vale Grove, looking south towards the borough boundary. Taken mid-scheme 2017

5.3. Traffic network outcomes - overview

The key objective was to reduce congestion by improving traffic flow and thereby to reduce journey times and to improve journey time reliability, on Windsor Road (the specific location of the scheme in question), with a wider contribution to such benefits expected on the connected strategic routes across the borough. The Council has therefore assessed the traffic data available from the Bluetooth detectors linked to the Drakewell database.

The new road infrastructure and layout have improved network resilience and performance, overall. However, the extent of these improvements is yet to be fully established over a consistent period, due mainly to the abnormal traffic conditions from March 2020 (the onset of restricting in response to the COVID-19 situation) until late summer in 2021 (the end of

formal restrictions imposed previously by the Government). Even now, at the time of writing this report in October 2021, it is widely understood that commuter patterns have still not yet returned to normal (i.e. post COVID lockdown levels), due to many people continuing to work at home.

When modelling the scheme, the expected outcome was an improvement in traffic flow, with particular improvements expected in the northbound direction on the A332 during morning peak hours and southbound in the evening peak hours. The objective was to reduce congestion largely caused by commuter traffic and bottlenecks on this heavily used north/south link. The northbound route commences at the borough boundary, at the Jubilee River, and continues up to the Heart of Slough junction.

The most useful measure by which to judge the impacts appears to be average journey time for peak hours on weekdays, Monday to Friday. This measures the time taken to travel, in both directions, between the Bluetooth detector on the A332/Windsor Road and the detector at the Heart of Slough.

In order to assess traffic congestion levels across the wider network, some analysis of the data for the A4/Bath Road and the A355/Tuns Lane has also been undertaken, within the extended route. Nb the A332/ Windsor Road runs tangential to the A4. The full route considered runs between the borough boundaries, from the Jubilee River to the M4 junction 6 roundabout, on the basis that all of the connected roads, all delivered via the Local Growth Fund, are interlinked and produce a combined effect across the network.

5.4. Traffic data review

Traffic data for the A332 / Windsor Road scheme has been collected and reviewed for all time periods available and considered appropriate for comparison or comment. The most appropriate figures for this purpose are considered to be average journey time and average speed.

The following overall points should be noted:

- Data has been obtained from the Drakewell traffic data system.
- Collected via Bluetooth detection.
- Detectors were installed in September 2015. This was shortly before the construction phase of the project started. Hence limited data is available pre scheme. ATC detectors

were also installed in most locations. Data from both detection methods has previously been compared and found to be consistent.

- Data has been collected for the entire period since October 2015 (the ‘before’ period) to September 2021 (with the ‘after’ period commencing in September 2019). However, only data for comparable ranges of months has been presented in tabular form.
- The most relevant comparison is considered to be between the period from October to December 2015 (pre-construction) and October to December 2019 (post-completion, pre-COVID19)
- The figures reflect a wide range of network circumstances. Most notably, over the last two years, traffic levels have been distorted significantly during the various lockdown periods due to the impacts of COVID-19, and by only a partial ‘return’ to normal since all restrictions were lifted.
- The data for 2016 to 2018 has been shown in italics, since this represents the main part of the construction period. The state of the carriageway varied during the construction programme. Notable factors included the installation of a temporary roundabout at the junction with Chalvey Road East and the A412, and also the reduction in active lanes for an extended period.
- Hence, all data is subject to caveats, and longer term analysis of traffic patterns and statistics will be essential to demonstrate the full impacts of the A332/Windsor scheme, as well as the related / linked highway improvements in Slough.

Table 1 **Northbound entering Slough**
Windsor Road from the Jubilee River roundabout to the Heart of Slough

AM Peak: 07:00 to 10:00 hrs PM Peak: 15:00 to 19:00 hrs Length: **0.9 miles**

	AM peak	AM peak	PM peak	PM peak	
Period	Jny time (mins)	Ave speed (mph)	Jny time (mins)	Ave speed (mph)	Scheme / Network status
Oct – Dec 2015	4:31	11.8	5.16	10.13	Pre-construction
<i>2016</i>	<i>5:02</i>	<i>10.1</i>	<i>5:05</i>	<i>10.5</i>	<i>Mid-scheme</i>
<i>2017</i>	<i>4:28</i>	<i>11.9</i>	<i>5:04</i>	<i>10.5</i>	<i>Mid-scheme</i>
<i>2018</i>	<i>4:45</i>	<i>11.3</i>	<i>5:10</i>	<i>10.3</i>	<i>Mid-scheme</i>
Oct – Dec 2019	4:23	12.2	4:38	11.5	Post-construction
Oct – Dec 2020	3:47	14.0	4:19	12.3	COVID - Full lockdown
Aug – Sept 2021	4:10	12.9	5:00	10.7	No COVID restrictions

Comment

From the figures shown in red, relating to the periods immediately before and after the construction period, for the AM peak period, there has been a reduction in average journey time of eight seconds, with a corresponding increase in average speed of 1.1mph. The improvement in the PM period is greater, with a reduction of 38 seconds, and a corresponding increase in average speed of 1.4mph.

The period with the greatest variation in figures is, not surprisingly, the autumn of 2020, when extensive travel restrictions were in place on both a local and national basis, with many people who would normally commute working from home. There has been a relatively short period since all restrictions were lifted, and figures are provided, but a clear picture of the overall network activity and working habits is yet to be established.

Table 2 **Southbound exiting Slough**
Heart of Slough to the Jubilee River roundabout via Windsor Road

AM Peak: 07:00 to 10:00 hrs PM Peak: 15:00 to 19:00 hrs Length: **0.7 miles**

	AM peak	AM peak	PM peak	PM peak	
Period	Jny time (mins)	Ave speed (mph)	Jny time (mins)	Ave speed (mph)	Scheme / Network status
Oct – Dec 2015	3:05	14.40	3:32	12.57	Pre-construction
2016	3:30	12.77	3:56	11.40	Mid-scheme
2017	2:57	15.17	3:43	12.27	Mid-scheme
2018	3:10	14.07	3:28	12.83	Mid-scheme
Oct – Dec 2019	3:01	14.17	3:05	14.43	Post-construction
Oct – Dec 2020	2:49	15.83	2:54	15.27	COVID - Full lockdown
Aug – Sept 2021	3:07	14.30	3:28	12.80	No COVID restrictions

Comment

As for the northbound traffic data, pre and post scheme construction periods (the figures shown in red), a relatively small reduction has been demonstrated in average journey times, with increases in average speeds, during the AM peak hours. Again, for the PM hours, a greater reduction in average journey time and related increase in average speed have been recorded. The comments related to the impacts of COVID-19 (and indeed the notes on the various changing scenarios on the network) apply here for the southbound figures too.

Nb the distance for the route in this direction (0.7miles) is less than for northbound travel (0.9 miles), due to the configuration of the Heart of Slough junction. Northbound traffic is required to make a minor detour at the junction, whereas southbound traffic is permitted to travel directly through the junction.

Wider network impacts

Further data collection and analysis is ongoing. This includes consideration of the collective impact of the various major highway improve projects that have taken place over the period under review. The overall expectation is that widespread benefits derived from all three major schemes (A332/Windsor Road, A355/Tuns Lane/Copthorne Roundabout and the A4/Mass Rapid Transit phase one will combine to produce a collective benefit across these main strategic routes in the town.

A notable improvement revealed by the data to date is an overall reduction in journey time for eastbound journeys across Slough (northbound in Windsor Road), from the starting point of the Jubilee River roundabout to the M4 junction 5 roundabout via Windsor Road/A4/A355. This reduction is over and above the reduction for the Windsor Road stretch specifically. However, there is inconsistency in the results for the journey in reverse, and other more extensive links on the wider network. Hence these figures are considered to be provisional at this stage, and the data analysis is still under review.

There is an additional need to take account of the impacts of the experimental bus lane on the A4, implemented during the summer of 2020 (as part of the emergency response to the COVID impacts, and as a preparation to ensure the recovery is not car-led. Furthermore, two subsequent major schemes are currently still in progress. These are the Stoke Road area regeneration scheme and Mass Rapid Transit phase 2. These schemes have some impact on the Heart of Slough junction and the A4/Bath Road/London Road respectively. Therefore, the data for traffic journeys across the wider network (and to some extent for the A332/Windsor Road scheme itself) are not completely representative of normal traffic conditions across Slough. There is a requirement here to continue to monitor the traffic data and to take a longer term view overall. The most appropriate review point is likely to be at the five year evaluation stage.

5.4.1. Ongoing monitoring

Traffic congestion levels will continue to be monitored on an ongoing basis, and will be assessed mainly by average journey times. In addition, the signal timings at the Chalvey Road East/A412

and Herschel Street junctions will continue to be monitored and potentially adjusted in order to seek further improvements to the network traffic flow, for both north and south bound traffic movements on Windsor Road. Traffic count data monitoring will also continue to be performed specifically on the A4 approaches to the Windsor Road junction (the Heart of Slough), to further analyse the impact of current and recently completed schemes on the network. Analysis here is more involved, however, as the A4/Bath Road lane allocation has changed in recent times, with the introduction of the emergency bus lanes in 2020. An existing programme of monitoring of the A4 is currently in progress.

Furthermore, the monitoring will continue to take account of journey times and traffic levels for the wider network, and the more extensive route comprising the A355/Tuns Lane, A4/Bath Road and the A332/Windsor Road. This covers the combined impacts of the overall package of three major highway improvement schemes funded by the LGF and constructed between 2014 and 2019. As above, analysis of the impacts of the A4 element will be more complex.

5.5. Road Safety

Although not specifically one of the core objectives stated in the original business case, improvements to road safety was highlighted as one of the aspects to be covered at the evaluation stage (with this report being the first formal evaluation).

Road safety was an important priority in the design of the Windsor road Scheme. Design elements include new pedestrian crossing facilities including signal enhancements for this purpose. In particular, there is a new, dedicated pedestrian phase at the junction with the A412. The scheme also includes improved designs for all the main junctions with Windsor Road, to increase crossing safety and visibility for all road users.

In terms of statistics, the analysis in the original business case indicated that the effects of the scheme on road safety would be minimal. The expectation was that the scheme would increase traffic flows along the A332, which, without any targeted safety measures, would generate a marginal increase in traffic accidents. The scheme was therefore designed to include safety measures including the features set out above, and hence to deliver a reduction in annual number of road related accidents in this location.

Accident data has been reviewed for the two years before the construction of the scheme commence in December 2015, and for the two years following the construction of the scheme

from September 2019. The numbers of accidents (serious and slight) are shown in the tables below:

PRE start of construction

Year	Serious	Slight	Prominent Locations
2014	2	9	Junction with Ragstone Road x 3 Junction with Albert Street x 2 Unction with Vale Grove x 2
2015 (to Dec)	1	4	Junction with Ragstone Road x 2 Junction with Albert Street x 3

POST completion of construction

Year	Serious	Slight	Prominent Locations
2019 (from Sept)	0	1	Junction with Ragstone Road
2020	2	0	Junction with Ragstone Road Junction with Arborfield Close
2021 (to Sept)	0	0	

Figures were obtain from the CrashMap ProBerkshire collision reports.

These reports refer to data entered by Thames Valley Police (TVP) onto a central database.

The figures shown in the tables above show that according to TVP records, the number of accidents in the scheme location was considerably lower in the period following construction of the scheme, with only two serious incidents and one slight over two years (post scheme), compared with three serious and thirteen slight over the two years (pre-scheme).

Taken at face value, this represents a significant improvement in road safety in Windsor Road. However, the particularly low numbers obtained for the post scheme years may require further investigation. Reference is made here to previous discussions within the Safer Roads Partnership, and further discussions with Thames Valley Police, relating to the reliability of the data entered onto the system in recent years. Along with fellow Partnership members

(neighbouring local authorities), Slough Borough Council is actively seeking reassurance on this matter, and also considering possible alternative ways of maintaining incident records.

Regarding the locations identified in the TVP records for both pre and post scheme periods, the references to the junctions with Ragstone Road and Albert Street indicate the value of the improvements to these junctions in particular in the overall scheme designs. As above, further information and investigation will be required to confirm that the reductions in these locations, and over all, can be fully substantiated by the data.

6. Growth related outcomes

6.1. Growth Forecast

In terms of growth, the aim of the project was to contribute to the overall delivery 2,995 new housing units and 79,150sqm of office and ancillary space proposed, to be delivered in the town centre as part of the ongoing 'Heart of Slough' project.

The following table shows the complete list of expected outcomes relating to this scheme:

Type of infrastructure	Junction improvements, road widening, bus lanes
Type of service improvement	Relieve congestion, reduce journey times, increase journey reliability

Outcomes	Predicted	Actual
Planned Jobs connected to the intervention	2,150	TBA
Commercial floorspace constructed (square metres)	79,150	TBA
Housing unit starts	2,995	TBA
Housing unit completion	2,995	
Number of new homes with new or improved fibre optic provision	2,995	TBA
Transport Outputs		
Total length of resurfaced roads	550m	375m

Total length of newly built roads	500m of additional traffic lane	375m
Total length of new cycle ways	350m	265m
Follow on investment at site	Redevelopment for 125 housing units	TBA

6.2. Comment on outcomes

The highway and transport measures in the above table have been delivered. The variations in length were due to changes at the detailed design stage.

In terms of growth across the borough, in the immediate area surrounding the stretch of highway that has been enhanced, the Heart of Slough and more widely on the approaches, the project outcomes are subject to ongoing review. It is not possible to establish at this stage the number of houses built, property developed or occupied, or jobs created. Ongoing monitoring is in progress in order to establish these outcomes. Evidence of such outcomes will be provided to the LEP / Berkshire Transport forum at the earliest opportunity.

7. Links to wider Growth Fund projects and Network activity

The A332/Windsor Road, perpendicular to the A4, provides a key entrance to and exit from the borough. Similar to the A355 / Tuns Lane / Copthorne roundabout project, the work here has included substantial road widening, along with junction improvements, all designed to improve traffic flow, junction control and road safety.

The A355/Tuns Lane, again perpendicular to the A4/Bath Road was a forerunner to the overall construction package in terms of delivery. This location has itself been subject to a major network infrastructure project facilitated by the Growth Fund.

The third of three inter-linked major LGF funded projects, the Slough Mass Rapid Transit (SMaRT) scheme, phase 1, was completed in early 2018. The respective major road projects have complemented each other and presented combined, network wide improvements.

SMaRT phase 2, which extends the route as far as Heathrow, is currently in progress on site. The Council has received a Business Rates Retention Pilot (BRRP) funding contribution to support this project.

The combination of these three major schemes, plus the extension of MRT, will provide considerable additional network performance, with improved traffic flow, reduced congestion, and overall resilience.

8. Changing circumstances and new scenarios

The A332/Windsor Road continues to provide an important north/south route through the town. The route connects with the town centre to the north, and to the boundary with RBWM in the south. This serves all road users, but it continues to provide in particular for the needs of commuters, and is therefore considered one of the major strategic routes on the network.

However, the impacts of the COVID-19 restrictions were considerable and traffic patterns have fluctuated over the past two years. Following the removal of all formal restrictions, as part of the government's roadmap to recovery, it is not yet possible to identify a '*return to normal*' across the road network, and indeed exactly what the '*normal*' situation now represents.

In preparation to try to prevent a '*car based recovery*' in Slough, post COVID, the Council has implemented measures to promote more sustainable forms of travel. This has included the experimental bus lane scheme on the A4 (running through the Heart of Slough junction, tangential to Windsor Road), as well as increased promotion of both public transport patronage and active travel. More recently, the Council has been developing a Bus Service Improvement Plan (BSIP), a response to the Government's National Bus Strategy, also known as *Bus Back Better*. Windsor Road is already a major thoroughfare for buses travelling to and from the town centre, and beyond the boundary with RBWM. The BSIP is expected to have further, positive implications for Windsor Road and the connecting sections of the network.

The public uptake of active travel during the lockdown periods has in some cases been new, but in many ways this is a necessary response to the existing and long behavioural change campaign, including the Access programme, which seeks to promote sustainable travel. Most recently, an official, Government-backed e-Scooter trial scheme has been introduced in Slough. Windsor Road is one of the prominent locations for e-Scooter travel in the borough, with massive uptake already. The total number of eScooter journeys across the borough for August 2021 was

approximately 30,000. More detailed statistics on eScooter usage have been requested and will be provided when available.

One unexpected and temporary downside to the popularity of e-Scooters has been the decline in usage of bikes access via the cycle hire docking points. However, the promotion of cycling continues to be a key priority in transport policy, and is supported by the Council's Local Cycling and Walking Infrastructure Plan (LCWIP). Following the Windsor Road scheme, with safety improvements for cyclists and pedestrians having been prominent aspects of the design, cycling and walking are numbers are expected to increase over the medium to long term.

9. Costs and financial control

Budget management was undertaken by the project manager appointed by the Council for the three major construction projects with growth funding at the time (SMaRT1, A355/Tuns Lane and A332 Copthorne Roundabout), which were all delivered by the main contractor Balfour Beatty (and in the case of the Windsor Road Scheme, subsequently the DSO). This was regularly reviewed and overseen by the Council's Head of Service for Transport.

There was a relatively minor overspend on the construction for the overall package, of approximately £150k due to compensation events arising mainly out of additional utility service related work. This additional cost was covered by the Council from capital funds.

10. Lessons Learnt

The main lessons learnt relate to construction and project matters rather than growth or funding aspects.

The eventual completion date of the scheme was approximately two years later than originally planned. This was due to the discovery of utility services in unexpected locations, despite carefully checking the plans well in advance and carrying out trial holes before the main excavations. This is a common problem in works for road purposes, and there is a limit to how much preparatory exploration can be carried out before the main works. However, more time should be factored in to the overall programme for contingencies, for example discovering unexpected services (requiring diversions) and materials (hard concrete requiring additional excavation time).

Regarding evaluation of growth, and success in realising all the various objectives, there is again a need to fully understand, at an early stage and as part of the initial project plans and business case process, exactly how the success of a scheme will be measured, and to set a realistic timeframe for evaluation. Assessing the amount of development, jobs created, houses built and so forth is not straightforward when it comes to the impact of an enhanced road junction and improved traffic flow that forms an existing, high profile thoroughfare in the borough. It can be challenging to establish a direct causal relationship between a highways project of this nature and development across the borough.

This point has been previously raised in evaluation reports relating to the A355/Tuns Lane/ Copthorne Roundabout and Mass Rapid Transit (MRT phase 1) schemes, which were interlinked (in both network and growth terms) and formed part of an overall construction package.

11. Final comments

Slough Borough Council would like to express its appreciation to the Local Enterprise Partnership for the Growth Fund financial contribution and various other forms of LEP / Berkshire Local Transport Body support enabling the delivery of this project. The Council is also grateful for the patience and understanding of motorists and residents during the work. Despite considerable temporary disruption to commuting and other network activity, the resulting road layout of the A332 / Windsor Road has facilitated a genuine, long-term improvement to the network. The predicted growth benefits are still being reviewed, to date, and the expectations are that these benefits will be realised over the next five years. This time period is considered realistic, not least, to allow the re-establishment of what might be considered '*normal*' conditions, in terms of both traffic and development patterns.

Appendix 2

Thames Valley Berkshire Local Enterprise Partnership

Independent Assessment Summary Report: A332 Windsor Road Improvements

One Year Impact Report

October 2021

www.hatch.co.uk

Independent Assessment

- i. This technical note provides an independent assessment of the one-year Impact Report submitted by Slough Borough Council (SBC) in relation to the A332 Windsor Road project.
- ii. The scheme received £2.7 million 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 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. Slough Borough Council received £2.7m from the TVB LEP Local Growth Fund as part of an overall estimated scheme cost of £5.0m. TVB LEP's contribution to the scheme accounted for 54% of all estimated scheme costs.
- vi. The Windsor Road Improvements scheme included a programme of junction improvements, road widening and related works on the A332 / Windsor Road. The scheme represented a major urban

renewal project at this prominent entrance point to the town centre, with a substantial redesign of the road layout, signal configurations, and crossing points along the route.

- vii. This specific project focussed on improving conditions for general traffic as well as buses along this strategic route, making journeys quicker and more reliable. The A332 is one of the main strategic routes in the borough, being a continuation of the A332 flyover from Royal Windsor Way and the subsequent spur road to the roundabout at the Jubilee River, just below the boundary between Slough and the Royal Borough of Windsor and Maidenhead.
- viii. The planned work consisted of the following elements:
 - Re-designed road layout and lane configuration, with particular focus on the junction with Chalvey Road East/A412.
 - Re-designed key junctions along the route, most prominently the junctions with Chalvey Road East/A412, Herschel Street, Vale Grove and Ragstone Road.
 - New traffic islands along the route, enhancing crossing points.
 - New pedestrian phase in the signalised crossing at the junction with Chalvey Road East/A412/Albert Street.
 - Widening of the carriageway between the junction with the A412/Albert Street and the junction with Ragstone Road.
 - Extended and enhanced traffic island approaching the junction with Ragstone Road.
 - Full resurfacing with new lane markings
 - Drainage improvement
- ix. It is important to note that the planned improvements were part of a much wider strategic programme being delivered by Slough Borough Council. This programme includes:
 - The A355 / Tuns Lane / Copthorne roundabout project
 - The A355/ Tuns Lane, perpendicular to the A4/Bath Road
 - The Slough Mass Rapid Transit (SMaRT) scheme phases 1 & 2
- x. It was proposed that the combination of this project's scope, plus the additional schemes in Slough, provided additional network performance and improve traffic flow, congestion and overall resilience of the network.

- xi. The evaluation report reviewed the outcomes of the scheme against the objectives stated in the business case. The objectives were as follows:
- To relieve localised congestion and enhance accessibility to the southern gateway to Slough Town Centre
 - Provide a direct high quality, safe, convenient and reliable travel to Slough Town Centre and improve public perception of transport in Slough
 - Support economic development in Slough town centre and contribute to tackling deprivation
 - Mitigate future impact of noise and air pollution and greenhouse gases on the A332 route
- xii. The scheme was completed in September 2019. However, due to the impacts of COVID-19 and notably the impact on traffic levels across the network, it was agreed with TVB LEP and the Berkshire Local Transport Body that the monitoring report be delayed until all the COVID restrictions had been lifted.

Review Findings

General Observations

- xiii. The planned works started January 2016, with SBC not stating if the project started on time. The programme overran significantly with the completion date approximately 2 years later than originally planned due to a number of delays during the construction period. This main issue was the presence of utility services in unexpected locations. SBC stated that it was the slow response from the utility company, due in part to the high-profile location on the network, which led to extensive redesigns.
- xiv. Additionally, SBC replaced Balfour Beatty as the main contractors in 2017 with the scheme unfinished. The Council stated value for money considerations and the need to ensure the costs did not escalate as a result of delays as the key reasons for replacing Balfour Beatty. SBC took the decision to transfer responsibility for the remainder of the construction programme to their recently created in-house Direct Service Organisation (DSO). Hence, there were additional delays during the transition period between the contractors.

- xv. The scheme costs slightly overran by £150,000 from the initial estimate of £5 million, representing a 3% increase. The additional cost was from compensation events arising mainly out of additional utility service-related work. The One Year evaluation report confirmed that the extra cost was covered by SBC from capital funds.
- xvi. The one-year report includes helpful visual evidence of the scheme implementation of the improvements. These clearly bring to life how the project funding has made enhancements and changes to the highway, carriageway, footway, junction and signalling enhancements, have led to a safer, more convenient and more reliable thoroughfare for all road users.
- xvii. SBC has collected data for the Northbound route entering Slough – Windsor Road from the Jubilee River roundabout to the Heart of Slough comparing both AM Peak (07:00 to 10:00) and PM Peak (15:00-19:00). Data was collected before construction, mid-scheme and post construction (before and during COVID). Comparing before construction and immediately after construction showed that, for the AM peak period, there has been a reduction in average journey time of eight seconds, with a corresponding increase in average speed of 1.1mph. The improvement in the PM period is greater, with a reduction of 38 seconds, and a corresponding increase in average speed of 1.4mph. Data for the full COVID-19 lockdown period (Oct-Dec 2020) and recently in August-Sept 2021 have also been provided.
- xviii. Additionally, SBC has collected data before construction, mid-scheme, post construction (before and during COVID) for the Southbound route existing Slough – Heart of Slough to the Jubilee River roundabout via Windsor Road. The analysis shows that by comparing pre-construction and immediately post construction (Oct-Dec 2019), there was a relatively small reduction in average journey times, with increases in average speeds during the AM peak hours. For PM Hours, a greater reduction in average journey time and related increase in average speed have been recorded. Data for the full COVID-19 lockdown period (Oct-Dec 2020) and recently in August-Sept 2021 have also been provided.
- xix. SBC didn't provide an overall conclusion of the scheme but from the information provided they have demonstrated that the scheme is

meeting the objectives set out in the business case. From the lessons learnt section they state the need for more time to be factored into the overall programme for contingencies, for example discovering unexpected services and materials (hard concrete requiring additional excavation time).

Conclusions

- xx. The SBC one-year impact report is a well-constructed and balanced document, making good use of the available evidence at this stage. Whilst the agreed delay in producing this report was agreed with TVB LEP and Berkshire Local Transport Body some initial data has been provided to show the impacts of the scheme before COVID.
- xxi. The report also provides very helpful photographs of after scheme completion which brings to life the changes which have been implemented because of TVB LEP and SBC investment. While the report helpfully outlines how the scheme has addressed congestion, safety concerns and reliability in Slough along the network. The scheme did also face a number of challenges including the completion date being approximately 2 years later than expected with a small cost overrun of £150k met by the council.
- xxii. It would be useful helpful to see an overarching conclusion section which draws upon all elements of the scheme and makes final remarks about the success of the scheme.
- xxiii. Undertaking of a one-year impact report is too soon to provide a realistic assessment of the actual outcomes of the scheme. The Council expects to be able to provide a much more detailed review of the scheme at the five-year evaluation report milestone.
- xxiv. The key points for consideration, both to enhance the future outcomes of the project and to facilitate wider learning, include:
 - While the report provides a positive indication of the scheme reducing congestion and safety and provides some initial data, providing more detailed analysis for the five-year report will be important to evaluate the impact and outcomes of the scheme. Data from surveys about the operation of the scheme, local air

quality levels, accident data, ATC survey counts to measure traffic flows.

- The report includes a section about growth forecast relating to commercial and housing units coming forward relating to this scheme and wider schemes coming forward. SBC should closely monitor what was predicted for jobs, floorspace, housing etc against which of these benefits arise.
- For future monitoring reports, providing clarity on the different stages and milestones of the scheme and what happened during construction. The report should state for each milestone what was the estimated date of completion and the actual date of completion.
- For future monitoring reports, provide a breakdown of costs to show that the estimated costs in the business case against those actually incurred.
- For future monitoring reports, the report should include key maps and locations of the scheme interventions and, where possible, visual evidence to help contextualise the pre-scheme investment position and the post-investment position.