Independent Assessment Summary Report: Slough Stoke Road Corridor Improvements

Ref 2.31

A Final Report by Hatch Regeneris Consulting

July 2019

Thames Valley Berkshire Local Enterprise Partnership

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Executive Summary

i. This technical note provides an independent assessment of the Slough Stoke Road Corridor Improvements Business Case submission to the Thames Valley Berkshire Local Enterprise Partnership (TVB LEP).

Scheme Summary

ii. The full business case submission sets out the case for investment in a range of highway, station interchange, walking & cycling, and urban realm improvements in and around the Stoke Road corridor. In summary this includes:

- Highway junction Improvements:
  - Enhanced signalisation at Stoke Road / Shaggy Calf Lane / Elliman Avenue junction, with additional walking and cycle crossing facilities
  - Capacity enhancements at Stoke Road / Mill Street junction, including removal of unsignalised arm that enters the junction from the west
  - Introduction of signals at Wexham Road / Wellington Street junction to enable new right turn movement from A4 into Wexham Road. Incorporates the closure of the underpass and provision of new at-grade pedestrian crossing facilities
- Improved access to/from the Thames Valley University (TVU) Development site
  - Removal of right turn from A4 and straight ahead movement from High Street into south side of TVU site
  - Additional right turn exit from south side of TVU site onto A4
  - Widening of A4 eastbound on approach to junction with Stoke Road with additional left turn lane
  - Widening of northbound carriageway on Stoke Road from A4 to provide second land for general traffic
  - Ban right turn movement from eastern side of TVU site onto Stoke Road
  - Reconfiguration of Stoke Road / Brunel Way junction
- Interchange improvement to Slough Station Northern Forecourt, including provision for:
  - 'Kiss and ride'
  - Taxis and bus access
  - Cycle parking and bike hire docking stations
  - Electric vehicle charging
- A new Quietway from Stoke Wharf (canal basin) to the Slough Station Northern Forecourt, including a new pedestrian/cycle bridge over the canal
- A new cycleway from Slough Station Northern Forecourt along Railway Terrace and down Stoke Road across Wellington Street into William Street.

Review Findings

Conclusions

iii. The overall scheme aligns well with strategic priorities and supports the broader regeneration of Slough Town Centre and, specifically, the area around the railway station.

iv. It has been demonstrated that, in general, the scheme will meet the stated objective to reduce delays on the Stoke Road and on the A4 between Stoke Road and Wexham Road, although some increases in travel times will result from the introduction of traffic signals at Wexham Road / A4 junction during certain times of the day.

v. The scheme will further meet the objectives to facilitate development; improve walking and cycling; and enhance the landscape and public realm along the Stoke Road Corridor.

vi. Whilst the evidence around the air quality impact is less well stated, the traffic model assessment indicates that the scheme should have a small positive impact on improving air quality for properties located within Slough AQMA No.4.

vii. The overall economic case for the package of measure is forecast to deliver very high value for money, although these benefits are primarily drawn from the transport user benefits associated with the highway elements of the package. The extent to which the station interchange, walking & cycling, and urban realm improvements will deliver a similarly high value for money is not as fully examined but there remains a case for investment in these elements.

viii. The financial case appears robust, with a reasonable contingency in place, albeit the preparatory and site supervision costs appear low.

ix. The commercial and management cases are generally considered to be robust, although limited in detail in some areas. The land necessary for the Station Northern Forecourt element of the package has yet to be secured but Network Rail and GWR are both supportive of the scheme.

x. It is our conclusion that there appears to be a strong overarching case for the scheme, with good strategic alignment and offering high overall value for money from investment. Whilst it is not possible to verify the scale of positive contributions from each individual scheme element, there is considered to be a good overall balance to the scheme, encouraging public transport and walking & cycling usage, alongside highway network enhancements.

Recommendations

xi. On the basis of the overall evidence presented, we recommend the scheme for approval.

1. Introduction

1.1 This report provides an independent assessment of the Full Business Case (FBC) submitted by Slough Borough Council (SBC) for a range of enhancements to highway, station interchange, walking and cycling, and urban realm provision in and around the Stoke Road Corridor in Slough.

1.2 The report considers the evidence presented and whether it represents a robust case for the investment of Thames Valley Berkshire Local Enterprise Partnership (TVB LEP) growth deal funds.

1.3 The independent assessment has applied criteria from TVB LEP assurance framework and the requirements for transport scheme business cases set out within the Department for Transports (DfT) transport Appraisal Guidance (TAG).

Submitted Information

1.4 The independent assessment process for the Slough Stoke Road Corridor Improvements (Stoke Road) submission has been conducted on the following set of documentation submitted by SBC and their consultant team (Atkins):

- Option Assessment Report (22nd February 2019)
- Appraisal Specification Report (18th March 2019)
- Full Business Case Report and Appendices (1st July 2019)

1.5 In addition to these formal documents, Hatch Regeneris have engaged with Atkins between September 2018 and July 2019 to discuss the requirements of the final business case submission and comment upon the acceptability of the proposed appraisal approach and input assumptions and parameters.

Report Structure

1.6 This Independent Assessors Report responds to the formal submission of documentation, as well as the informal engagement process with SBC and their consultants, to provide a review of information provided, assess it suitability and robustness against TVB LEPs assurance requirements, and provide recommendations in relation to the approval of LEP funding for the proposed scheme.

1.7 The report is structure as follows:

- Section 2: Option Assessment Report – provides commentary upon the OAR and the process by which a preferred scheme option has been identified.
- Section 3: Appraisal Specification Report – presents a high-level review of the ASR and the acceptability of the proposed appraisal approach to be adopted
- Section 4: Full Business Case Submission – presents an initial summary of scheme elements included business case submission, alongside the details presented within each of the five ‘cases’ (Strategic, Economic, Financial, Commercial, Management). It also sets out the recommendations to the LEP Local Transport Body relating to the suitability of the scheme for funding.

2. Option Assessment Report

Overview

2.1 An OAR for the scheme, dated 22nd February 2019, has been reviewed. This sets out the background for the scheme and its strategic context, the evidence of the problems identified, the drivers for change, and the subsequent identified objectives of the scheme.

2.2 It then develops and appraises five options for transport provision across the identified Stoke Road corridor:

- **Do Nothing:** As existing, with background growth, committed schemes, and schemes under construction
- **Do Something 1:** full Stoke Road Corridor improvements scheme incorporating 1) junction improvements, 2) enhanced access to TVU site, 3) improved interchange at Slough Station Northern Forecourt, 4) new public space, 5) new decked car park, 6) pedestrian / cycle bridge over Windsor Rail Line, 7) quiteway from Stoke Wharf to station, 8) strategic pedestrian and cycle route connections
- **Do Something 2:** As DS1, but without 3) improved interchange at Slough Station Northern Forecourt, 4) new public space, 5) new decked car park, 6) pedestrian / cycle bridge over Windsor Rail Line, 7) quiteway from Stoke Wharf to station, 8) strategic pedestrian and cycle route connections
- **Do Something 3:** As DS1, but without 7) quiteway from Stoke Wharf to station, 8) strategic pedestrian and cycle route connections
- **Do Something 4:** As DS1, but without 3) improved interchange at Slough Station Northern Forecourt, 4) new public space, 5) new decked car park

2.3 Each scheme option is appraised in terms of:

- How it complements the six infrastructure investment packages within the Strategic Economic Plan;
- How they will deliver against the five established scheme intervention objectives; and
- How deliverable they are, with reference to:
  - Infrastructure Feasibility
  - Operational Feasibility
  - Land Take Requirements
  - Complexity of Delivery
  - Environmental Impact
  - Socio-Distributional Impacts
  - Wellbeing
  - Stakeholder Acceptance/Support
  - Costs
  - Affordability
  - Timescales for Delivery

2.4 The OAR concludes that the Do Minimum option will result in continuing increased congestion, contributing to deterioration in local air quality. There will also be no incentives to encourage mode shift and no improvement to urban realm meaning quality of life will, at best, remain static. As such it fails to meet strategic objectives.

2.5 Do Something 2 delivers highway improvements that will assist in unlocking some housing, but does not encourage mode shift or enhance the overall urban environment and so does not contribute strongly to regional objectives and provides lower economic, social and environmental benefits.

2.6 Do something 3, whilst delivering highway and station interchange improvements, unlocking some housing, again is limited in encouraging mode shift for local trips and so does not contribute strongly to regional objectives and provides lower economic, social and environmental benefits.

2.7 Do Something 4, delivers highway and walking & cycling improvements, providing better contribution to regional objectives, but it is still considered to offer less in terms of economic, social and environmental benefits.

2.8 The OAR concludes that Do Something 1 is the only option that scores sufficiently highly across all metrics to deliver the necessary benefits that align with the TVB LEP's and SBC's objectives for the scheme.

Review

2.9 The OAR represents a well set out document, providing a detailed understanding of the underlying issues along the Stoke Road corridor and generating a specific set of objectives.

2.10 There is a relatively diverse list of potential scheme elements presented; however, the actual variation within the four Do-something options is relatively limited, with a common highway element across all of them. It is unclear how the list of individual schemes was developed and if there was a longer-list of initial scheme options that may have been considered. For example, were alternative highway schemes considered? None-the-less, the OAR provides evidence that some scheme optioneering has taken place.

2.11 The option appraisal framework appears comprehensive, considering both the likely performance of each option in supporting strategic and scheme specific objectives, as well as a wide-range of deliverability issues.

2.12 The scoring of the options in part reflects the relative number of elements that are included within each package. The do minimum scheme scores poorly as no additional measures are included, whereas DS1 scores well as it incorporates all eight elements, with the other DS option in between. As such, this somewhat undermines the value of the process and highlights that it would have been more productive to consider at least one other alternative package, of a similarly magnitude, to the DS1 package.

2.13 Based upon the process undertaken, the Applicants conclusion that the DS1 package is the preferred option is not without reasonable logic, notwithstanding the points raised in paragraph 2.12.

2.14 The final business case submission will need to clearly demonstrate that each element of package represents value for money for investment in themselves, as opposed to being included within a package to create a critical mass of impacts.

3. Appraisal Specification Report

Overview

3.1 The Appraisal Specification Report (ASR) was submitted for assessment and reviewed by Hatch Regeneris in March 2019. It provided:

- A summary of the scheme and a context map;
- An overview of the challenges and issues;
- The objectives and desired outcomes of the scheme;
- The implications of doing nothing, the options being considered; and issues around deliverability and risk;
- An overview of the transport modelling that will be required, including the existing models available and their calibration/validation, and the proposed modelling approach;
- The proposed appraisal methodology, including the approach to the economic, environmental, social and public accounts assessments, and the data sources to be utilised; and
- An Appraisal Specification Summary Table.

3.2 Various meetings and telecoms were held with SBC and their consultants, (Atkins), to discuss the broad approach. A large focus of these discussions relating to the most appropriate and proportionate modelling tools to utilise. This concluded that the original SATURN model for the area should be used, despite some limitations, as opposed to the development of the available VISSIM model for the area.

Review

3.3 The ASR sets out a clear overview of the context and the issues surrounding the development of the scheme and identifies the type of impacts that will need to be assessed.

3.4 The modelling work will be reliant upon the Slough Multi-Modal Transport Model (SMMTM). There are some recognised limitations with the model as it does not fully calibrate/validate to TAG guidance; however, it has been agreed that it still represents the most appropriate tool to utilise, so long as the results are treated with care and the limitations accounted for within the final outputs.

3.5 The transport model will be able to assess the impacts of the highway elements of the scheme but will not encompass the station interchange, public realm, walking and cycling elements. It will, therefore, be important for the impact of these elements to be adequately considered elsewhere within the FBC. Even within the highway model outputs, it will be important to consider the impacts of the individual scheme elements at different junctions, to ensure they are all contributing positively to the overall outcomes.

3.6 The wider approach to assessing the economic, environmental, social and public accounts impacts is consistent with TAG requirements. A range of assessments will be qualitative in nature. Whilst in principle this is acceptable, given the scale of the scheme and some of the potential environmental impacts, there will need to be clear evidence in the final business case that more detailed quantitative assessments of impacts are not required.

4. Full Business Case

Overview

4.1 The full business case submission sets out the case for investment in a range of highway, station interchange, walking & cycling, and urban realm improvements in and around the Stoke Road corridor. In summary this includes:

- Highway junction Improvements:
  - Enhanced signalisation at Stoke Road / Shaggy Calf Lane / Elliman Avenue junction, with additional walking an cycle crossing facilities
  - Capacity enhancements at Stoke Road / Mill Street junction, including removal of unsignalised arm that enters the junction from the west
  - Introduction of signals at Wexham Road / Wellington Street junction to enable new right turn movement from A4 into Wexham Road. Incorporates the closure of the underpass and provision of new at-grade pedestrian crossing facilities
- Improved access to/from the Thames Valley University (TVU) Development site
  - Removal of right turn from A4 and stratight ahead movement from High Street into south side of TVU site
  - Additional right turn exit from south side of TVU site onto A4
  - Widening of A4 eastbound on approach to junction with Stoke Road with additional left turn lane
  - Widening of northbound carriageway on Stoke Road from A4 to provide second land for general traffic
  - Ban right turn movement from eastern side of TVU site onto Stoke Road
  - Reconfiguration of Stoke Road / Brunel Way junction
- Interchange improvement to Slough Station Northern Forecourt, including provision for:
  - 'Kiss and ride'
  - Taxis and bus access
  - Cycle parking and bike hire docking stations
  - Electric vehicle charging
- A new quietway from Stoke Wharf (canal basin) to the Slough Station Northern Forecourt, including a new pedestrian/cycle bridge over the canal
- A new cycleway from Slough Station Northern Forecourt along Railway Terrace and down Stoke Road across Wellington Street into William Street.

4.2 A number of development sites sit within, and surrounding, the Stoke Road corridor, including the TVU site (1,600 dwelling), the Horlick factory (750 dwellings), the Canal Basin (640 dwelling), Octagon (10 dwellings), Queensmere (330 dwellings) and Akzo Nobel (1,370 dwellings).

Key Input Assumptions and Parameters

4.3 The overarching business case is considered particularly reliant upon the following key assumptions:

- All scheme elements will be completed by Q2 2021,
- The SMMTM transport model has been utilised, despite not being fully calibrated/validated for the corridor area
- A fixed demand matrix has been applied within the transport modelling.
- Annualisation factors:
  - 253 days per year
  - 'Neutral day' factoring: AM Peak = 7% reduction, Inter-peak = 0%, PM Peak = 6% reduction
  - Model period factoring: AM Peak = 3hr, Inter-peak = 6hr, PM Peak = 3hr
  - Overall: AM Peak = 703hrs, Inter-peak = 1,518hrs, PM Peak = 714hrs
- 60-year benefits appraisal period for the quantified highway impacts
- No COBALT accident assessment
- Costs and benefits discounted to 2010 prices

Independent Assessor Comment

4.4 Whilst it is acknowledged that there are limitations with the use of the SMMTM model for this appraisal process, the implications are understood and have been clearly set out. These can, therefore, be taken into account when considering the final model outputs and the overall assessment of the package of measures.

4.5 The annualisation factors applied, and appraisal period, are considered appropriate for the highway elements of the package. Whilst some of the other package elements may have shorter lifespan (i.e. urban realm improvements) these are not explicitly evaluated in monetary terms, and so the factors do not apply.

4.6 The requirement to undertake a COBALT accident assessment was discussed as part of the appraisal specification report. It is recognised that, at worst, the scheme should have neutral impacts upon accident levels and so it was agreed that a COBALT assessment was not necessary.

Strategic Case

4.7 The Strategic Case provides an overview of the key policy context for the scheme, referencing national, regional and local transport policy. Four key **problems are identified** that the scheme will need to address, with discussed in detail. In short, they must address:

- Congestion issues, reducing stop/start traffic at junctions and U-turns at the Queensmere / Wellington Street roundabout to smooth traffic flows across the areas
- Pedestrian access issues to Slough Town Centre through improved streetscape, enhanced gateways, reduced dominance of vehicular traffic, with a focus around enhancing access to the northern side of Slough Railway Station.
- Issues of poor social and environmental conditions across Slough affecting the image of the town centre
- Constraints on housing and economic development potential

4.8 The **impact of no change** is presented in terms of the constraints local transport provision will place upon access to rail and for economic growth, specifically affecting proposed development opportunities within the corridor.

4.9 The **key drivers for change** in the area are explored, highlighting the significant areas of Slough Town Centre that have been earmarked for development and regeneration, alongside supporting infrastructure provision in Mass Raid Transit, public transport, walking & Cycling. The role of Heathrow Airport as a key focus for growth, as well as the upcoming delivery of Crossrail, are also highlighted.

4.10 A clear set of five **scheme objectives** are presented for the Stoke Road Corridor, focused around: reducing delays on the Stoke Road and on the A4 between Stoke Road and Wexham Road; facilitating development on the corridor and the town centre; improving pedestrian and cycling connectivity on the corridor, specifically between Stoke Wharf and the Railway Station; improving air quality; and enhancing the landscape and public realm within the corridor.

4.11 The **measures for success** associated with the established objectives are also clearly set out, relating to traffic congestion and journey times, walking & cycling usage; road safety, and air quality. **Logic mapping** sets out how the inputs delivered by the investment will translate through into outputs and outcomes in the short, medium and long-term that address the objectives.

4.12 A range of potential **constraints** are discussed, relating to planning constraints, environmental constraints, and land requirements. No planning permissions are required, but permission from the Canal & River Trust is required for the bridge over the canal. Whilst there are some potential environmental impacts, these can be mitigated against.

4.13 Land on the northern forecourt of the station is owned by Network Rail and leased to GWR. It is highlighted within the **dependencies** that Network Rail are supportive of the scheme and Heads of Terms have been agreed but formal agreement is not anticipated for a further 6 months. Network Rail also has aspirations to deck the West Station Car Park, requiring collaboration with the development of the TVU site and so this also forms part of the discussions.

4.14 A wide range of **stakeholders** have been engaged as part of the scheme development process, as well as the wider Public. No concerns have been raised.

4.15 The **options assessment** process has considered a range of different scheme packages, as outlined within the OAR. It concludes that the whole package of measures needs to be taken forward for all of the objectives to be met and the full range of benefits realised.

4.16 The Strategic Case concludes with a clear **summary** of the issues addressed by the scheme and how this has fed into the identification of the scheme objectives. It concludes that the full Stoke Road Corridor package of measures is the only solution to comprehensively meet the objectives.

Independent Assessor Comment

4.17 The Strategic Case is considered to presents a reasonably comprehensive overview of the issues, objectives and preferred solutions for the Stoke Road Corridor and surrounding areas.

4.18 The policy context is well established, with a clear understanding of the priorities of national, regional and local bodies.

4.19 There is a clear and logical presentation of the overarching problems that have been identified within the corridor, relating to delays on the highway network, issues of pedestrian and cycling connectivity to the station and into the town centre, more general concerns of

the quality of the local urban environment and the impact upon the attractiveness of the area, as well as the general need to support local development.

4.20 The direct assessment of current highway provision presents an overview of the situation and draws upon outputs from the transport model, in the form of delay plots. This provides added context of the issues and informs the subsequent economic analysis.

4.21 There is no specific analysis of current pedestrian and cycle movements across the area. This includes movements to and from the Railway Station, specifically via the current northern forecourt, although it is anecdotally stated that it is mostly used by vehicular traffic. There is also no specific analysis of trip generation from proposed residential developments and the level of rail demand this may generate to the north of the station. It would strengthen the strategic case if some quantified analysis of the demand for rail, walking and cycling provision was included.

4.22 The discussion of the urban environment focuses upon both the physical nature and the air quality issues in the corridor. Some photographic evidence is included to demonstrate the issues with poor urban realm to the north of the station. Whilst it is helpful that the analysis identifies the scheme is within an AQMA, there is limited discussion on how severe the issues are and how the scheme measures will directly improve the situation.

4.23 The quantum of potential development in and around the Stoke Road Corridor is identified and the need for transport improvements to support delivery is stated. There is no presumption that any of these developments are directly dependent upon the transport improvements but similarly there is limited discussion around the need for the specific public intervention to support delivery, as opposed to being private sector led. As indicated above, the impact of future year development trips is included within the traffic modelling, but there is no local consideration of future demand for non-vehicular modes of travel.

4.24 Whilst the impact of no change is clearly set out, the analysis would again benefit from additional quantitative analysis about the scale of congestion, poor accessibility and air quality issues.

4.25 The section on drivers for change clearly demonstrates the role of local development and infrastructure investment upon the changing dynamic of Slough, as well as the influence of Heathrow expansion and Crossrail on the wider area.

4.26 The scheme objectives are focused, with associated desired outcomes identified, and the measures for success are considered appropriate, although could also incorporate rail usage. The logic mapping provides a useful understanding of the causal links between the investments and outputs and outcomes, although it appears to include some scheme elements that are not specific to this funding bid, e.g. the new pedestrian bridge from the TVU regeneration site over the Windsor branch line.

4.27 The section on constraints and dependencies demonstrates that due consideration has been given to external factors that could affect the delivery of the schemes. The partnership with Network Rail is clearly important in progressing the works to the station northern forecourt and it is noted that formal agreements over land are still required, albeit that it is recognised that the scheme will have a positive impact for the station and is supported by both Network Rail and GWR.

4.28 The list of stakeholders appears comprehensive and it is understood that there is general support for the scheme.

4.29 The options assessment process demonstrates that consideration has been given to different scales of investment but that, as noted within the review of the OAR (Section 2), there is limited evidence that alternative schemes were considered as solutions to specific issues.

4.30 The summary section provides a useful overview of the key elements of the strategic case. It is considered that there is a strong underlying case for the package of interventions, albeit quantitative evidence is more comprehensive for the highway elements of the package than the non-highway elements, where the case is made without specific reference to underlying and future demand for improvements.

Economic Case

4.31 The Economic Case provides an assessment of the transport modelling work undertaken, the benefits appraisal, the derivation of scheme costs and the scheme assessment and supporting analysis.

4.32 The **options appraised** references the broader combinations of scheme elements assessed within the OAR, but the focus of the economic case is upon the 'Do-minimum' (Reference Case) and the full package of measures (Do-something).

4.33 The main impacts of the package of measures is stated as: highway-based journey time and vehicle operating costs; journey quality; health; wider impacts; bus journey time reductions; air quality, accidents and noise.

4.34 The approach to the **transport modelling** is set out describing the use of the Slough Multi-Modal Transport model (SMMTM). Specific reference is made to the adoption of an approach considered to be proportionate to the scale of the overall investment in the scheme. There is recognition that the model is not fully compliant with all TAG requirements but that these are not anticipated to create any significant risk with the predictive properties of the model for the scheme elements being assessed.

4.35 The approach to assessing future year demand for the model is set out, along with the committed transport schemes included within the model. The model covers an average hour within a 3-hour AM peak period, an average hour within a 6-hour inter-peak period, and an average hour within a 3-hour PM peak period.

4.36 The underlying assumptions applied within the SMMTM modelling are described in relation to trip matrices, vehicles types, land use assumptions, committed transport schemes, as well as the underlying approach to coding the Do-something network is presented.

4.37 An overall summary of the approach to the **economic appraisal** is set out. This describes the use of a TUBA model to assess direct transport user impacts. Benefits are assessed for the AM, inter-peak, and PM peak periods.

4.38 The **capital and operating costs** associated with the package of scheme measures has been set out, with the underlying assumptions. Optimism bias of 9% has been applied within the economic assessment.

4.39 A section on **transport modelling outputs** sets out the levels of current and future year highway demand, by vehicle type. It then presents the difference in flows and average journey times/speeds between the Do minimum (DM) and Do Something (DS) [with scheme measures] scenarios.

4.40 The outputs show a significant change in traffic flows across the network in the AM Peak as a result of the scheme, with increases in movements predicted along the Wexham Road / St Paul's Avenue / Stoke Road (north) route and significant reductions in movements along the A4 Wellington Street between Stoke Road and Wexham Road. There are also notable impacts from the change in access to the TVU site, with a reduction in southbound traffic on Stoke Road approaching the A4 Wellington Street and a large increase in flow in the other direction. The changes in the PM peak and inter-peak are less pronounced but of a similar trend.

4.41 Journey time analysis of selected routes indicates that southbound trips along Stoke Road see the largest reduction is times. The impact for journey times along Wellington Street are broadly neutral in the AM peak, however, the introduction of the signals at Wexham Road does create additional journey times in the inter-peak and PM peak periods. The same signalisation scheme provides positive benefits for southbound trips along Wexham Road, as well as permitting the right turn movements, thus contributing to making this a significantly more attractive route.

4.42 The assessment of **monetised impacts** demonstrates the forecast ***highway users benefits*** from the package of measures, with two thirds being derived from the AM peak. The assessment also presents some outputs from a previous Feasibility Study for the Stoke Road Regeneration which considered the potential for ***journey quality and physical activity benefits*** from the Northern Station Forecourt and the Stoke Wharf to Railway Station Quietway, respectively.

4.43 The assessment of **non-monetised impacts** considers a range of ***social impacts*** (accidents, physical activity, journey quality, personal security, severance, accessibility and personal affordability); ***economic impacts*** (wider impacts, and bus journey times), as well as ***environmental impacts*** (townscape, landscaping, historic environment, biodiversity, water environment, air quality, and noise)

4.44 The ***accident analysis*** presents levels of accidents within a buffer zone and considers the proportions along key routes affected by the proposed package of measures. Consideration of how the proposed types of scheme measures could create positive safety benefits are discussed. The assessment is qualitative with no COBALT included within the scope.

4.45 In addition to the monetised assessment of ***journey quality and physical activity***, a wider qualitative assessment of the potential positive impacts is presented. This describes how the urban realm, walking and cycling scheme elements will encourage levels of active travel, with associated health benefits. The quality of the environment will also be enhanced, making these types of trips of higher quality. Journey quality impacts for highway users are also described.

4.46 The higher quality of public realm and closure of the A4 subway is also anticipated to improve ***personal safety and security***. The walking and cycling schemes are also stated to reduce ***severance***, particularly the connection over the canal basin and direct link to the station. More generally the scheme is described as enhancing ***accessibility*** to the town centre and employment locations. Enhancing the efficiency of the transport network is stated to reduce vehicle operating costs and so impact positively on ***personal affordability***.

4.47 The section on ***wider impacts*** highlights how the combined package of measures will ease access and movement across the area and make it a more attractive location for business and employment. Reference is made to research and case study examples to infer the types of positive wider economic impacts that could occur. Bus routes using the corridor are also anticipated to benefit from ***bus journey time*** reductions, with associated benefits.

4.48 A high-level assessment of environmental impacts is presented. It is recognised the scheme could impact upon ***townscape, landscaping and the natural and urban environment*** but these impacts are not anticipated to be significant. The impact upon ***historic environment*** is also considered to be unlikely and can be mitigated. No statutory conservation sites are identified in relation to ***biodiversity***.

4.49 A range of potential ***water environment*** impacts are identified, given the package includes a bridge over the canal basin, but the assessment considers that measures can be put in place to mitigate any negative impacts.

4.50 Parts of the package of scheme measures are considered to be within the designated Slough AQMA No. 4. ***Air quality*** is considered to potentially be affected positively or negatively by changes in vehicle activity. Where the scheme results in road widening, this could reduce the distance to key air quality receptors. An assessment of the number of properties that are likely to be within 200m of an increase of traffic levels is presented, which is lower than those that are predicted to have a decrease. The assessment concludes that further research is required to determine the detailed impacts but that the scheme is in line with SBC's draft Low Emission Strategy, which forms part of Slough Air Quality Action Plan.

4.51 An assessment of the impact of changes in ***noise*** levels has been undertaken. It concludes that 150 properties located within a Noise Impact Area (NIA) will benefit from reduced noise levels. Whilst a higher absolute number of properties will have minor adverse impacts, these are not within a NIA, and so the analysis concludes that the overall impact will be neutral to slight beneficial.

4.52 A section on **appraisal tables** sets out the required Transport Economic Efficiency, Public Accounts, and Analysis of Monetised Cost and Benefits tables. The information presented indicates the overall scheme is forecast to deliver a monetised Benefit to Cost Ratio of 4.52 to 1. This would represent very high value for money from investment.

4.53 A clear **Value for Money Statement** is also provided, setting out an overview of the scheme, costs, monetised direct benefits, other wider non-monetised benefits. A full **Appraisal Summary Table** is presented within the appendices.

4.54 The Economic Case concludes by reflecting that the scheme is forecast to deliver very high value for money, based upon the changes in travel times, vehicle operating costs, indirect tax revenues and greenhouse gas impacts for road users (from the TUBA assessment), as well as some monetised journey quality and physical activity benefits from the station northern forecourt and Stoke Wharf to Station Quietway schemes. A wide range of other positive non-monetised impacts are also predicted.

Independent Assessor Comment

4.55 The Economic Case is well formulated and presents information on the approach adopted, the tools utilised, and the forecast economic costs and benefits.

4.56 The options assessment process is limited in scope but does demonstrate that alternative approaches have been considered.

4.57 The approach to transport modelling and forecasting of demand is broadly considered sound. The issue around the SATURN model calibration/validation to TAG requirements has been discussed with the Applicant and it has been accepted that the model represents an acceptable tool for the appraisal process on the basis that the outputs are reviewed in relation to the known limitations with the model.

4.58 The input assumption and parameters applied within the modelling appear sensible, as are those applied within the approach to the economic appraisal.

4.59 The incorporation of the scheme costs within the economic appraisal has generally applied standard TAG approaches. The selection of a 9% optimism bias level would appear relatively low, given the level of detailed design of the scheme measures; however, it is acknowledged that a quantified risk register has been produced. It is recommended that the impact of applying a higher level of optimism bias is considered as a sensitivity test.

4.60 The outputs from the SATURN model appear logical, with the changes to the road layout at the Wexham Road / A4 Wellington Street junction having a significant impact upon local traffic routing, whilst the access changes to the TVU site appear to result in logical changes around the junction of Stoke Road / A4 Wellington Street.

4.61 Whilst the overall impact of the highway measures is clearly positive, it is noted that there are some negative impacts upon journey times along the A4 Wellington Street as a result of the signalisation at Wexham Road.

4.62 It is noted that the most significant economic user benefits are within the AM peak period, which account for the majority of transport user benefits. It is assumed this is the result of the AM peak hour having higher traffic flows, and the predominant direction of those flows.

4.63 The inclusion of the monetised assessment of journey quality impacts for the station northern forecourt and the physical activity benefits for the Stoke Wharf Quietway are useful, albeit the approach to deriving these benefits is not stated in detail. It is noted, however, that when the monetary benefits are compared against the scheme costs for these elements the ratio is relatively poor, in value for money terms. Demonstrating additional, non-monetised benefits, for these scheme elements is, therefore, important.

4.64 Whilst it was agreed with the Applicant that a full COBALT accident analysis was not specifically required, the accident analysis presented is relatively high-level and there is limited direct evidence to relate the proposed scheme elements to address specific areas of concern. For example, the accident data is not disaggregated by pedestrian or cyclist accidents, which is where the majority of benefits are anticipated to be derived. It is therefore difficult to conclude with any certainty whether the net impact of the scheme will be positive or negative. On balance, however, any impacts either way are unlikely to be substantial.

4.65 The assessment of wider journey quality and physical activity benefits (above those quantified and monetised) highlights the range of ways the combined package of measures could deliver positive impacts; however, the magnitude of these impacts is not stated, making it challenging to assess the overall impact.

4.66 The assessment of other social impacts (personal security, severance, accessibility and personal affordability) sets out a range of logical impacts but again the scale and influence of these impacts is not clearly stated.

4.67 The assessment of wider economic impacts provides useful reference to research and case studies but does not directly translate this into the context of the Stoke Road Corridor. It is therefore difficult to determine the reality of where these benefits will be derived.

4.68 Similarly, with the discussion of the positive impact upon bus journey times, there are no specific examples of routes where accessibility will be enhanced and how this might translate into local benefits.

4.69 The environmental assessment is, generally, very high level. There are some elements of inconsistency including the statement that townscape will not change significantly, despite the level of urban realm improvements included within the scheme. The assessment of biodiversity also does not appear to recognise the presence of the canal. More detail is provided for the assessment of water environment, recognising the potential for impacts and the need for mitigation.

4.70 A range of background information is presented about the AQMA areas and air quality monitoring. The assessment of the impact on properties within 200m of a road affecting provides evidence that a small positive impact is feasible but the specific impact within the Slough AQMA No.4 is not specifically stated.

4.71 The assessment of noise impacts is also reasonable detailed and is considered to provide sufficient evidence to demonstrate the potential for a slight overall positive impact.

4.72 The overall assessment of the economic case concludes that the scheme offers very high value for money and that there are additional, non-monetised benefits. The monetised benefits are significantly attributable to the highway elements of the package of measures.

This makes it more challenging to directly determine the value for money of the non-highway aspects, although qualitative statements are provided.

4.73 There are no sensitivity tests presented to demonstrate whether the scheme would deliver high value for money under different input assumptions. These could include tests of high and low growth assumptions

Financial Case

4.74 The Financial Case provides a detailed breakdown of the capital scheme costs and the estimated funding and cost profile.

4.75 The **total cost** of the scheme is £10.9m, of which the **funding ask** from TVB LEP is £7.65m.

4.76 Within the overall costs £2.396m relates to junction improvements, £2.810m on the access arrangements to TVU site, £1.830m for the Station Northern Forecourt, and £1.110m on the walking and cycling network enhancements, including the bridge over the canal basin. A full Bill of Quantities is presented for each scheme element.

4.77 A further £0.8m relates to preparatory and site supervision costs and £1.386m is included to cover risk. An additional allowance to inflate prices from 2016 Q4 to 2019 outturn prices is included.

4.78 A detailed outturn costs and spending profile is presented, with the total per annum summarised below:

- 2019/20 = £3,279,875
- 2020/21 = £7,612,490

4.79 Funding is to be sourced from the LEP (£7.65m) and from S106 contributions (£3.250m). Any cost overruns, and operation and maintenance costs, will be covered by SBC.

Independent Assessor Comment

4.80 The breakdown in cost estimates presented demonstrates how each of the main cost elements have been developed. Whilst further annotation could be provided, to outline component parts of the core elements, the level of detail presented demonstrates they have been developed from unit cost rates. Cost inflation has been adequately incorporated.

4.81 The level of preparatory costs and site supervision appears relatively low (both are 5% of overall construction costs), although it is noted that preliminaries are included with the construction costs.

4.82 A Quantified Risk Budget of £1.386m (or 17% of the construction cost) has been set aside to meet any unexpected costs. This is based upon a detailed assessment of risks presented within the Appendices and would appear to be a reasonable amount of contingency funding.

Commercial Case

4.83 The Commercial Case outlines the procurement strategy, incorporating an output-based specification for the scheme, an overview of potential procurement options, and the preferred procurement routes, along with the contract management procedures.

4.84 In total four procurement routes were considered, each judged by their offer, risk transfer, and advantages and disadvantages. These are listed in turn:

- Traditional procurement - construction, separate maintenance;

- Design and Build (D&B) construction, separate maintenance;
- Early Contractor Involvement (ECI), separate maintenance; and
- Private Finance Initiative (PFI) Funding, Design Build Operate and Maintain (DBOM).

4.85 The preferred route, identified as balancing risk with efficiency, has resulted in the scheme being divided into three elements for the procurement process:

- Infrastructure design – will be competitively tendered using the existing ESPO framework
- Infrastructure build – delivered through the Councils contractor for Direct Service Organisation
- Infrastructure maintenance and renewal – to be undertaken by SBC, as an extension of existing highway and parking maintenance

4.86 The project will be managed internally by SBC adopting PRINCE2 methods for programme management and NEC 4 principles. Risk will be allocated during the contract negotiations in the most cost-effective manner.

4.87 The procurement strategy will follow the SBC Council Procurement Strategy (2012).

Independent Assessor Comment

4.88 The Output-Based Specification for the scheme is relatively broad but appears to cover the core elements of the scheme, albeit it is difficult to distinguish the individual scheme elements within the overall package.

4.89 The procurement strategy outlines the framework that governs procurement. Though a detailed account of advantages and disadvantages for several procurement options were presented, this does not particularly flow through to the preferred route, although some rational for the chosen path is presented.

4.90 There is some information on risk allocation and transfer, contract length, contract management that provides an overarching understanding, without presenting the detail of the proposed approach.

Management Case

4.91 The Management Case presents information on how the proposal will be delivered and managed.

4.92 Five examples of Slough Borough Council's **experience** in successfully delivering transport infrastructure schemes are provided, encompassing highways, public transport, walking & cycling and urban realm enhancements.

4.93 **Programme and project dependencies** are set out in relation to funding, construction delays, procurement, engagement, and land requirement for the Station Northern Forecourt scheme.

4.94 An organogram and **governance structure** are presented which lists the individual, job title and team. For each group/team, a list of responsibilities is listed.

4.95 Reference is made to SBC's Gateway Process for assessing projects at critical stages, as part of the **assurance and approval** process. **Project reporting** processes are also set out.

4.96 A **Communication & Stakeholder Management Strategy** is set out with objectives, key stakeholders, communications, engaging with the public, handling of the media, and public consultation.

4.97 An **Implementation Plan** sets out the key workstreams and issues and milestones. This confirms scheme opening by March 2021.

4.98 Reference is made to a risk workshop that resulted in the formation of the risk register. A **Risk Management Plan** is to be developed throughout the lifetime of the project. The process of risk management and allocation is described, and an outline of how different risks will be owned is presented. The key project risks are identified.

4.99 A **Benefits Realisation Plan** is set out along with a **Monitoring and Evaluation Plan** with key performance indicators and targets.

4.100 A **Contingency Plan** is also provided, setting out contingency arrangements.

Independent Assessor Comment

4.101 The previous project examples demonstrate SBC's ability to deliver major transport schemes that incorporate all aspects of the proposed package of measures - highways, public transport interchange, walking & cycling, and urban realm.

4.102 The project dependencies section presents a broadly standard set of elements but highlights the specific requirement of land from Network Rail to deliver the proposals for the Station Northern Forecourt. There is no specific reference to planning approval requirements.

4.103 The governance structure is clear, with responsibilities outlined. The SBC Gateway Process for assurance and approvals appears robust, although limited detail is presented. The responsibilities for project reporting are also clear.

4.104 The communication and stakeholder management strategy is considered comprehensive and covers core expectations. The previous public consultation in January 2019 indicates majority support for the package of measures. Key concerns raised related to parking provision and ensuring cars do not park on pavements blocking pedestrian routes. It is unclear if any specific design elements have been included by SBC to address this issue.

4.105 The implementation plan sets out key workstreams covering the majority of key delivery issues, however, it is noted there is no reference to the land acquisition required for the Station Northern Forecourt. Similarly, this is not highlighted within the key milestones.

4.106 The underpinning governance and management of risk is well structured and considered. The Risk Register presented is comprehensive and mitigation actions sensible. There appear to be some elements that appear within the Risk Register that are not more generally referenced within the FBC, e.g. potential land requirements at Mill Street. The approach to estimating the quantified risk appears logical and the overall contingency budget would appear robust.

4.107 The Benefits Realisation Plan establishes the benefits that will be tracked, although it does not specifically contain details on proactive actions that the SBC will undertake to ensure benefits are realised.

4.108 The Monitoring and Evaluation plan includes specific 1-year and 5-year targets for each indicator. Some of these indicators are clearly defined as a quantified target, although others are less specific.

4.109 The Contingency Plan sets out a range of contingency arrangements that are considered to cover most potential outcomes, although some of the issues of land availability are not specifically referenced.

Summary and Conclusions

Summary

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

- The Strategic Case demonstrates strong policy alignment and a good case for intervention, albeit additional quantified analysis would enhance the arguments presented around the need for enhanced connectivity and the magnitude of impacts upon travel demand resulting from future development proposals in the corridor.
- Of the established objectives, there appears to be the least certainty around the impact of the package of measures upon local air quality, particularly within the Slough AQMA No.4. Whilst the package includes a variety of public transport interchange and walking & cycling measures, there is also additional highway provision that could encourage some car use. Whilst the Strategic Case suggests overall impact will be some mode shift away from car, the magnitude of this change is not stated. The evidence from the traffic modelling analysis does at least indicate that the re-routing of traffic should have a positive impact upon air quality levels affecting nearby properties.
- The Station Northern Forecourt element of the package is dependent upon a land agreement with Network Rail, and, more generally, the package requires some planning approvals, but the evidence suggests that both of these should be relatively easy to resolve and not impact upon the overall delivery programme for the scheme.
- Overall the economic case for the package of measures appears strong. There are some areas where the scheme does not perform as well as might be anticipated, including in relation to reducing journey times along the A4, and the benefits also appear predominantly associated within the AM peak period. The level of optimism bias applied is also considered to be relatively low, at 9%, given the design certainty but even if this was doubled to 18%, the overall BCR would remain above 4 to 1.
- The absence of a COBALT accident analysis means that the impact of traffic re-routing upon accidents has not been examined; however, the qualitative analysis of accidents has provided some evidence that the benefits should be marginally positive for active travel modes.
- The monetised impact of journey quality and physical activity benefits for the Station Northern Forecourt and Stoke Wharf Quietway scheme contribute positively to the overall value for money case for the package. However, when compared against the scheme costs for these elements they do not provide as compelling a case, by themselves, for investment in these component parts. The non-quantified analysis identifies a series of additional areas where these schemes can contribute positive impacts, but the magnitude of these impacts remains unclear.
- A robust financial case is presented with a clear breakdown of costs and risk contingencies that have been generated through a quantified risk register. The level of costs associate with preparatory work and site supervision appears relatively low as a proportion of construction costs; however, we assume that these have been verified within the terms of existing supplier framework provision.
- The commercial and management cases provide reasonably detailed information to demonstrate surety in the preferred procurement processes and the overall deliverability of the project. The land availability at the station appears to be the only significant non-standard risks associated with delivery.

Conclusions

4.111 The overall scheme aligns well with strategic priorities and supports the broader regeneration of Slough Town Centre and, specifically, the area around the railway station.

4.112 It has been demonstrated that, in general, the scheme will meet the stated objective to reduce delays on the Stoke Road and on the A4 between Stoke Road and Wexham Road, although some increases in travel times will result from the introduction of traffic signals at Wexham Road / A4 junction during certain times of the day.

4.113 The scheme will further meet the objectives to facilitate development; improve walking and cycling; and enhance the landscape and public realm along the Stoke Road Corridor.

4.114 Whilst the evidence around the air quality impact is less well stated, the traffic model assessment indicates that the scheme should have a small positive impact on improving air quality for properties located within Slough AQMA No.4.

4.115 The overall economic case for the package of measure is forecast to deliver very high value for money, although these benefits are primarily drawn from the transport user benefits associated with the highway elements of the package. The extent to which the station interchange, walking & cycling, and urban realm improvements will deliver a similarly high value for money is not as fully examined but there remains a case for investment in these elements.

4.116 The financial case appears robust, with a reasonable contingency in place, albeit the preparatory and site supervision costs appear low.

4.117 The commercial and management cases are generally considered to be robust, although limited in detail in some areas. The land necessary for the Station Northern Forecourt element of the package has yet to be secured but Network Rail and GWR are both supportive of the scheme.

4.118 It is our conclusion that there appears to be a strong overarching case for the scheme, with good strategic alignment and offering high overall value for money from investment. Whilst it is not possible to verify the scale of positive contributions from each individual scheme element, there is considered to be a good overall balance to the scheme, encouraging public transport and walking & cycling usage, alongside highway network enhancements. On this basis, we recommend the scheme for approval.

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