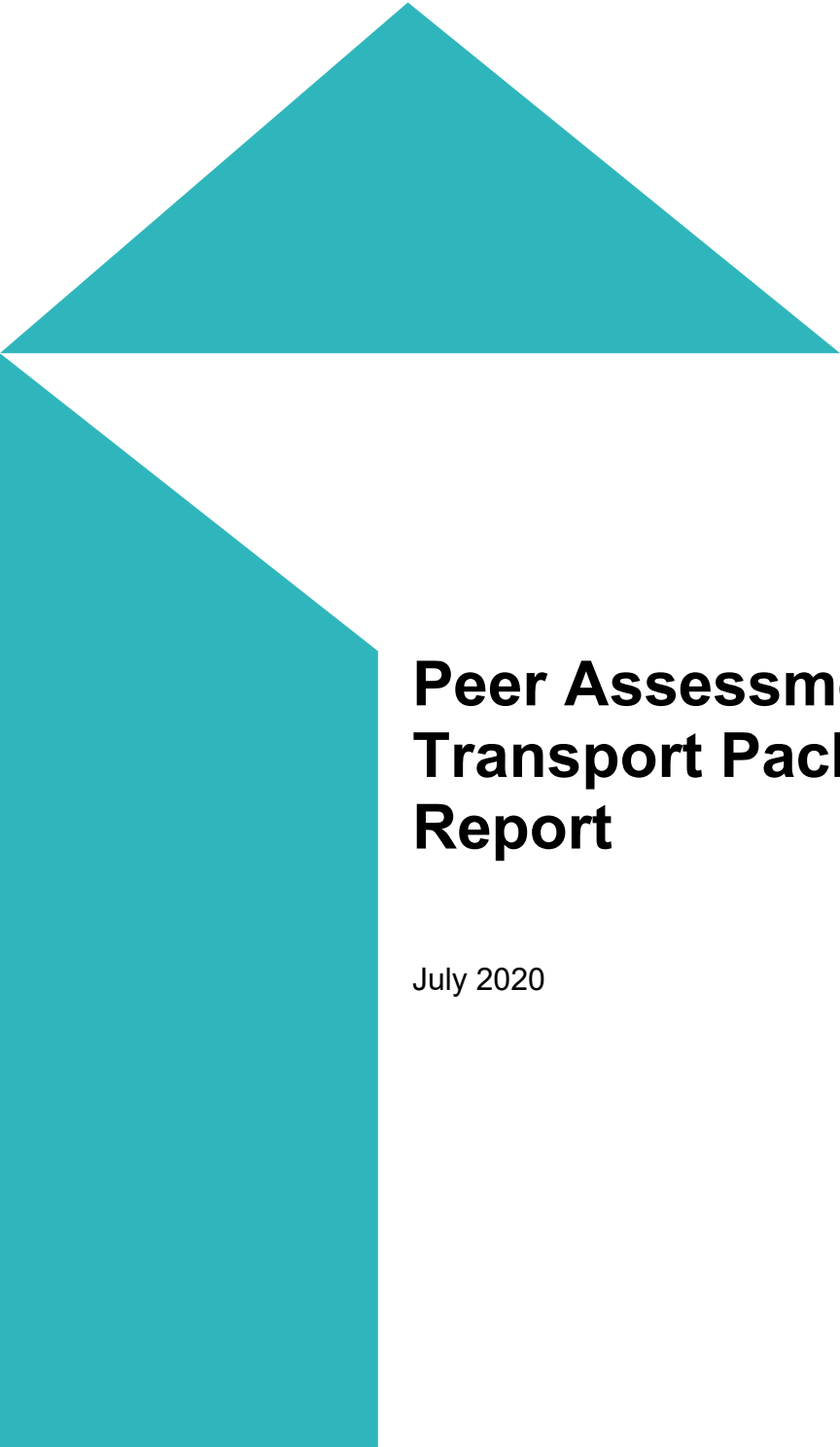




Peer Assessment of Hereford Transport Package Findings Report

July 2020

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Executive summary

Mott MacDonald (MM) was appointed by Herefordshire Council (HC) to undertake a peer review of the Hereford Transport Package (HTP) and South Wye Transport Package (SWTP). This report concludes the findings of the review of the Hereford Transport Package.

Summary of the brief

The approach to the peer review is based on the major transport scheme process as established by the Department for Transport (DfT) and set out in its Transport Analysis Guidance (TAG)), particularly Stages 1 and 2 of the Transport Appraisal Process (TAP). The aim of the peer assessment is to:

1. Establish whether each package has been developed in accordance with the major transport scheme process as laid out in TAG
2. Establish whether the packages including its major road scheme components, the western bypass in the HTP, is based on a sound evidence base
3. Clarify whether the decisions to progress these packages were sound and justified in line with the recommendations of the technical work.

In addition, the review was also asked to consider how more recent / emerging national policy, such as the climate emergency, might change the preferred package options if applied retrospectively.

It also considers whether the public and stakeholders have contributed appropriately to the processes involved in developing the two packages.

Peer review

The format of the review provides a concise commentary on the documents provided, notes any issues identified by the review team and concludes with a summary of each document. The summary classifies whether the points made are:

- Looking backwards - issues identified which should be clarified or resolved. Categorised **red** where the point made is deemed to be a significant issue, **green** if the premise is sound however things could have been covered differently (i.e. a technical recommendation which could be reconsidered).
- Looking to the future -generally technical issues which could be revisited if the packages are progressed further, as well as environmental, climate change and net zero issues which could lead to a different vision for the package. This are all categorised as **amber**, on the premise that these points would be considered in the future before the package was progressed further.

The review has the following conclusions:

Document	Conclusion as to whether the document meets the peer review aims
HTP Option Assessment Report (OAR)	The OAR produced for HTP follows the structure and format of the transport appraisal process as set out in TAG, where each of the steps 1-7 are set out in turn and reported within an OAR (Step 8). However, two points remain of concern following this review of the OAR: - Some options were discounted, due to being appraised in different studies, should have been taken through a full process to determine if they had the opportunity to fulfil the objectives of the scheme. If the HTP Strategic Outline Business Case is progressed, we would recommend those discounted options are reconsidered. - The concern with the approach taken to combine the strongest performing interventions, namely the road and active travel measures, at the end of Stage 1 is that it could appear that a preferred package has been settled at this point. It is fully acknowledged that this remaining option needs to be (and is) subject to further appraisal in Stage 2. However, the option assessment process has shown there is an alternative option which could achieve all HTP objectives. Typically, the options which are shown to meet all objectives would be carried forward to further appraisal in Stage 2 “to produce evidence sufficiently robust to support the business case”. If the scheme is progressed further, in updating the SOBC, it should be demonstrated that this has been addressed by the scheme promoters.
Hereford Transport Package Strategic Outline Business Case Large Local Majors	The content of these documents are essentially the same as the Strategic Outline Business Case reviewed below and therefore the issues are considered below.
HTP Strategic Outline Business Case (SOBC)	The SOBC structure for the HTP follows the DfT Transport Business Cases guidance closely. The primary concern with the SOBC is that it only considers one option, the preferred package, that has been taken from the OAR. This limited assessment is not in keeping with the principles of TAP which would suggest that more than one option (including a low-cost option) is considered at SOBC stage and have been assessed in comparative detail.
HTP Traffic Forecasting Report (TFR)	A series of comments have been made in respect of the TFR. These are points of clarification which should be considered further by the scheme promoters and technical team in the future if the package is progressed further. This in no way implies the work done is incorrect, it merely is intended to provide a ‘critical friend’ approach to what may need to be inspected again in the future.
Hereford Transport Model Local Model Validation Report (LMVR)	Although the LMVR is a comprehensive document, with the information providing a clear understanding of the model and its validation results, a number of queries were raised in the rapid peer review of the document. It is important to note that the LMVR was in the process of being reviewed with the DfT. The direction from HC was that a detailed technical validation of modelling was not being sought from the peer review. The assessment of the modelling was in the context of it being in general appropriate for the stage of the project and supporting the conclusions reached. The work is considered to be appropriate for the work to date and the technical queries raised are points which may need to be considered again if the packages are progressed in the future.
HTP Hereford Bypass Stage 2 Environmental Assessment	Since they pre-date these policy and guidance updates, and the latest UKCP18 climate scenarios, unfortunately all this Stage 2 Environmental assessment falls short of current ambition in these areas. Whilst a wide range of topics are assessed, there is insufficient assessment of carbon and climate impacts compared to current requirements (although the assessment was valid at the time). The documents also pre-date the exceptional floods and record-breaking water levels in the River Wye in Feb 2020. Taken this into account and given the policy changes it is likely that the Climate Emergency, Net Zero and Net Gain would now be strategic objectives against which options would need to be assessed and progressed as part of any future work on the package.

Future requirements

Environmental issues, climate emergency and net zero policy has been considered separately to the individual documents that formed a part of the appraisal review.

Assessment approaches and guidance are still catching up with policy. It remains possible for schemes to fully meet current assessment criteria and yet fall short of the high standards set by policy. TAG Unit A3 (Environmental Impacts) predominantly dates back to 2015 (Air Quality sections were updated in 2019) and is not explicitly aligned with the 100% reduction in GHG emissions by 2050, although there is a “strong preference” for Net Gain in regard to biodiversity. The latest DMRB guidance on climate change (LA 114) is from October 2019 and references the Net Zero target and take account of current climate change scenarios (UKCP18).

Since they pre-date these policy and guidance updates, and the latest UKCP18 climate scenarios, unfortunately all the HTP documents would now fall short of current ambition in these areas. Whilst issues around air quality and noise are rightly identified, there is insufficient assessment of carbon and climate impacts compared to current requirements (although the assessment was valid at the time). These points are not intending to indicate that there was any deficiency in the work undertaken at the time, merely that more recent policy and guidance would mean that these issues should be considered again if the existing work is taken forward.

Conclusions

Aim 1 of the review is considered to be met. Whilst there remain points of technical detail which may need to be addressed in the future if the package is taken forward, it is clear that the technical work undertaken since 2018 has been prepared in accordance with the DfT Transport Appraisal Process (TAP).

Aim 2 of the review, which is to establish whether the packages including their major road scheme components (the western bypass in the HTP) have been developed with a sound evidence base, is deemed to be met. The history of the package revolves around the infrastructure needs to meet the plans of the Core Strategy. Infrastructure is required to support the development policies contained within this document and the initial HTP have been tested and challenged in an appropriate way through technical studies, modelling and Examination in Public, to enable them to be adopted within the Local Plan. In progressing to a preferred package there are areas which might have been done differently, particularly around alternative options. Given that work undertaken so far in Stage 2 of TAP remains at a draft stage, there is still the opportunity to address the comments raised in order to better make the case for the scheme, should the package be taken forward in the future. Notwithstanding, it is concluded that in general the technical work provides a suitable evidence base for the package.

Whilst a detailed inspection of the fine print of the governance decisions would need to be undertaken by a land use or legal expert rather than the transport professionals who have undertaken the peer review, from the information considered in these documents it does appear that all decisions have been made in accordance with the recommendations of the technical evidence provided to support the Council papers at the time, i.e. the action taken was appropriate in the context of the advice and recommendations provided and the technical information available. There is a logical flow of decisions which recommend the continuation of the package, including where decisions have been called in for further scrutiny and additional information has been provided to justify the associated course of action.

In addition to the council's governance the proposals have been tested and challenged in an appropriate way through technical studies and Examination in Public, to enable them to be adopted within the Local Plan. Since the adoption of the Core Strategy, more recent technical

work has been subject to regular public consultation and council scrutiny and there is nothing to indicate that decisions have not been undertaken in accordance with the technical evidence and recommendations which were available at decision points. **As such Aim 3 of the review is considered to be met.**

1 Introduction

Mott MacDonald (MM) has been appointed by Herefordshire Council (HC) to undertake a peer review of the Hereford Transport Package (HTP) and South Wye Transport Package (SWTP). This report concludes the findings of the review of the Hereford Transport Package.

1.1 Summary of the brief

The approach to the peer review is based on the major transport scheme process as established by the Department for Transport (DfT) and set out in its Transport Analysis Guidance (TAG). Hence, the peer assessment of each package reports against the following elements:

- Option development and analysis
- Analysis of impacts
- Evidence informing the business case
- Decision making

The aim of the peer assessment of the Hereford Transport Package is to:

- Establish whether each package has been developed in accordance with the major transport scheme process as laid out in TAG
- Establish whether the package including its major road scheme component, the western bypass, is based on a sound evidence base
- Clarify whether the decisions to progress these packages were sound and justified in line with the recommendations of the technical work.

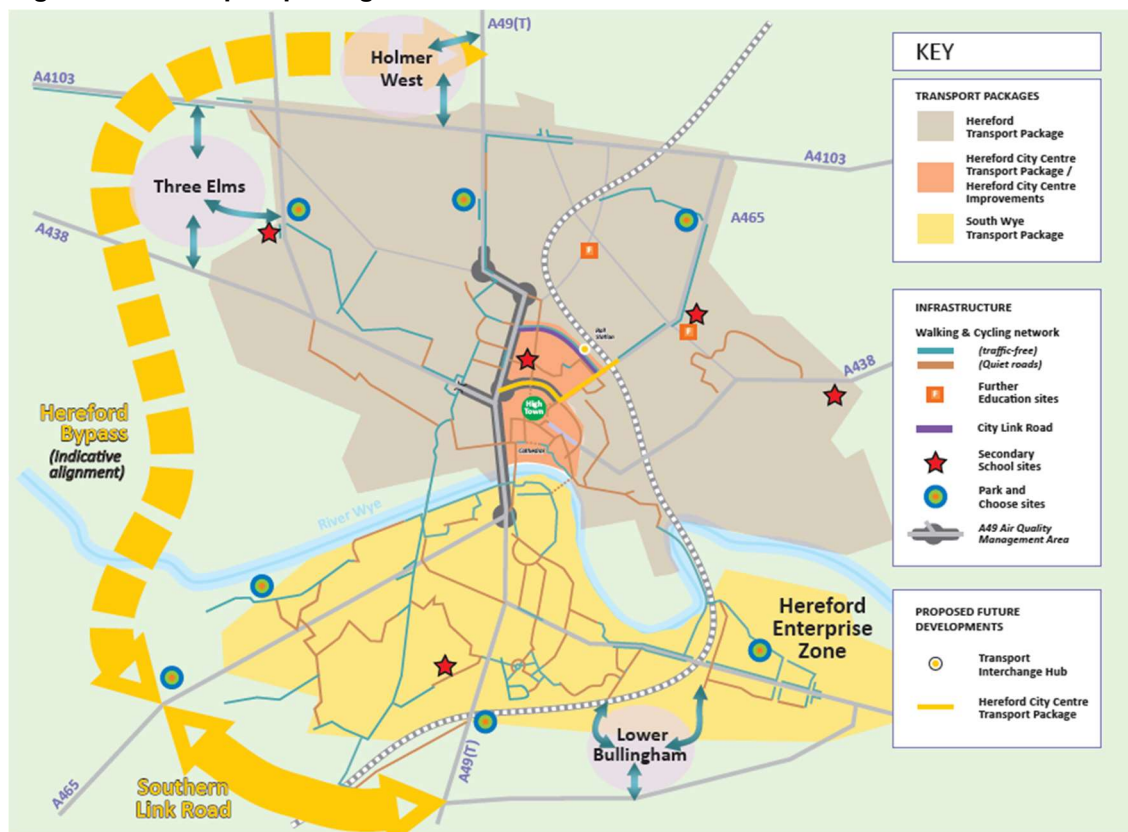
In addition to the assessment approach as outlined above, the commission also requires a consideration of how more recent/ emerging national policy, such as the climate emergency, might change the preferred package options if applied retrospectively.

1.2 Drivers for the review

On 22 October 2019 Herefordshire Council's Cabinet Member for Infrastructure and Transport recommended a review of the bypass project (the road scheme component of the Hereford Transport Package) to determine the next steps. Work on the active travel measures and other bypass work including ground investigations and traffic modelling is to be continued during the review process.

The Hereford Transport Package is being reviewed in parallel with the South Wye Transport Package. Whilst not a specific driver for the review, the council's declaration of a climate emergency and commitment to reducing the carbon output of the county means that it is vital that the council continue to develop improvements to encourage a shift of travel mode and reduce congestion.

Figure 1.1 provides a diagrammatic layout of the two transport packages.

Figure 1.1: Transport packages in Hereford

Source: Hereford Transport Package Draft SOBC (WSP, May 2019)

1.3 Project deliverables

The Peer Assessment commission covers the following stages and deliverables:

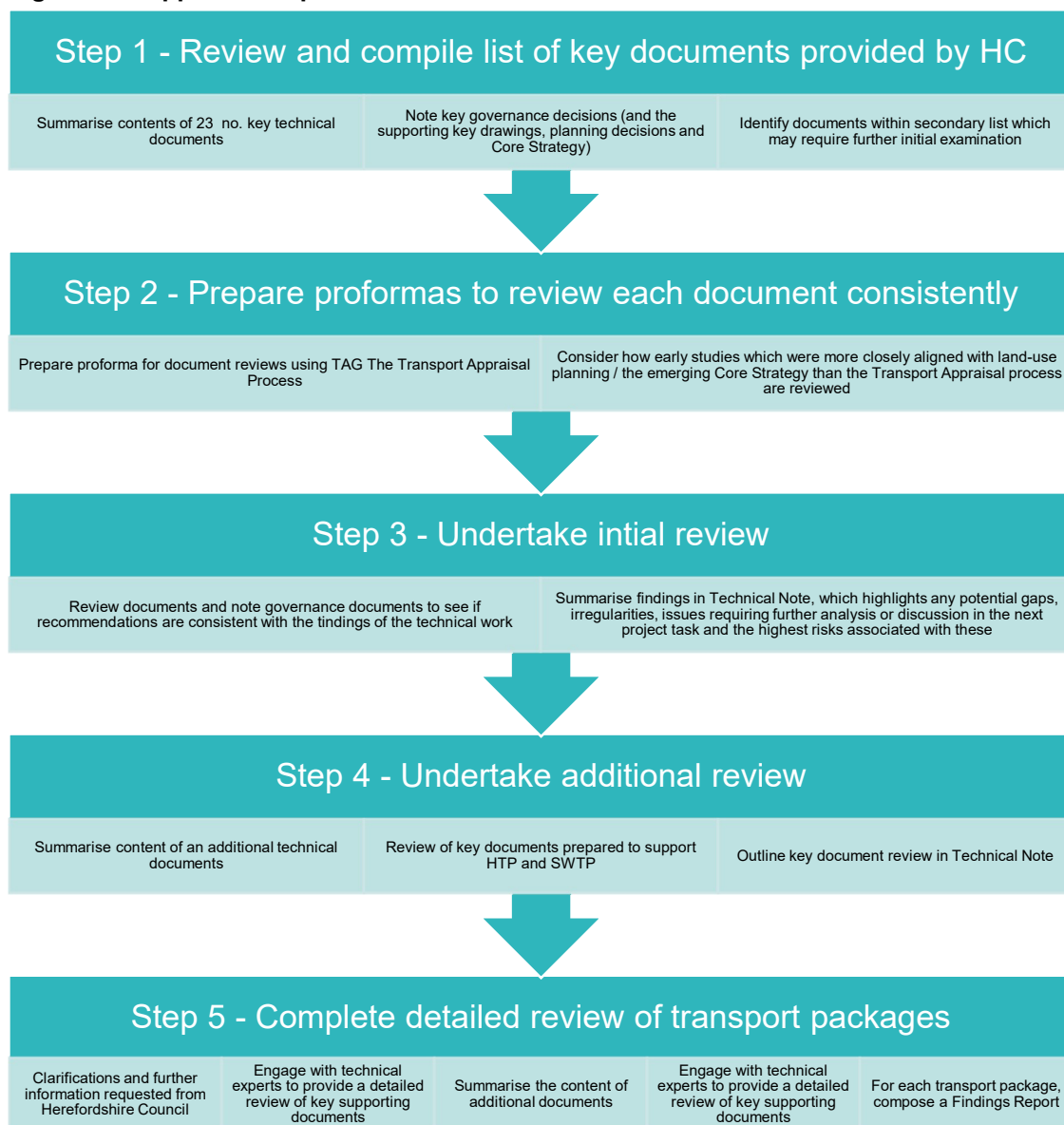
- **Task A – Project management:** The outputs from Task A are a monthly progress note and updated risk register.
- **Task B – Evidence Gathering, Initial Sift and Initial Report:** An initial evidence gathering, sifting and reporting back to the client team. To review the previous work, the constraints which have influenced optioneering were considered, rather than trying to point out small technical discrepancies. The key question is whether the preferred scheme options are correct:
 - The output from Task B has been two Technical Notes summarising the findings and explain how this initial sift will be taken forward in the main review (Task C).
 - An additional Technical Note was produced to facilitate discussions during a call between HC and their technical team for the packages, WSP, to address where further information was required following the initial reviews.
- **Task C – Full assessment and first draft reports:** A more detailed review of the key issues identified within the documentation. This has included Herefordshire Council and WSP providing further information and clarification to support the peer review. This assessment also considers implications for alternative testing/ scenarios to meet potential requirements for a climate emergency review for both schemes.

- **Task D – Reporting and presentation:** Briefing on findings to the Cabinet Member for Infrastructure and Transport.
- **Task E – Final report** update draft reports and publish final review reports for each package.
 - This report represents the Task E output for the Hereford Transport Package.

1.4 Approach to the peer review

Following the project inception meeting with Herefordshire Council on 2 April 2020, the steps have summarised in Figure 1.2 have been undertaken.

Figure 1.2: Approach to peer review



Source: Mott MacDonald

1.4.1 How has the peer review considered the information?

The peer review aims to answer three questions (as noted in Section 1.1) from an inspection of the large volume of information provided to support the package. The review provides a combination of commentary on what has been done and what might have been done differently. It is not intended to be a comprehensive technical check of every piece of information. There also needs to be an acknowledgement of things which were appropriate at the time but may no longer be appropriate in the future as a result of changing policy or guidance.

As such within the report, the review of the main documents inspected concludes with a short summary to explain if the comments made relate to:

- Looking backwards – issues identified which should be clarified or amended.
- Looking to the future – generally points of technical detail which could be revisited if the packages are progressed further or issues related to policy and context which has progressed since the time the document was produced, for example the climate emergency.

1.5 History of the Hereford Transport Package

The Hereford Transport Package is part of a number of transport packages for Hereford which will support the delivery of the Herefordshire Local Plan Core Strategy, adopted in 2015. The primary aim of the HTP is to support housing and employment growth for the city and also ensure that the requirements of Highways England and the A49 strategic route are accommodated.

In its current proposed form, the package consists of a western relief road/bypass extending the A49 north of the A4103 Roman Road and active travel measures in the form of walking, cycling bus and public space improvements across 11 movement corridors.

The history and context of the package is summarised in the Herefordshire Council Cabinet report of 22 October 2019¹, summarised below.

Significant transport issues have been identified by transport and economic studies which are considered to constrain growth and to negatively impact the local and regional economies including; congestion, barriers to active travel, poor network resilience, high collision rates and a high number of short distance car journeys. The HTP has been developed to resolve these issues and to enable growth and to provide active transport improvements.

According to the Options Appraisal Report², the HTP objectives are:

- To enable the delivery of future housing, employment and educational development by maintaining acceptable peak hour journey times across the city
- To enable the delivery of future housing, employment and educational development by providing attractive alternatives to the private car for journeys within the city
- To enable the improvement of regional connectivity through achieving acceptable peak hour journey times on the A49(T)
- To ensure the transport network within Hereford is resilient enough to provide consistent journey times throughout the day
- To encourage healthy lifestyles by encouraging more people to walk and cycle from new and existing developments to key trip attractors

¹ [Hereford Transport Package and South Wye Transport Package. Head of Infrastructure and Delivery](#)

² P166-167, Hereford Transport Package Options Assessment Report, December 2018

- To reduce the impacts of transport on air and noise within the city
- To protect the quality of the urban realm to enhance pedestrian and cyclist connectivity along and across A49(T) and A438
- To improve road safety within the city.

1.5.1 Hereford Transport Package timeline

Figure 1.3 provides a timeline of the documents and decisions associated with the two transport packages.

The Hereford Transport Package development follows an extended period of appraisals and applications. The timeline, shown in Appendix 2 of the 22 October 2019 Cabinet Decision³, is as follows:

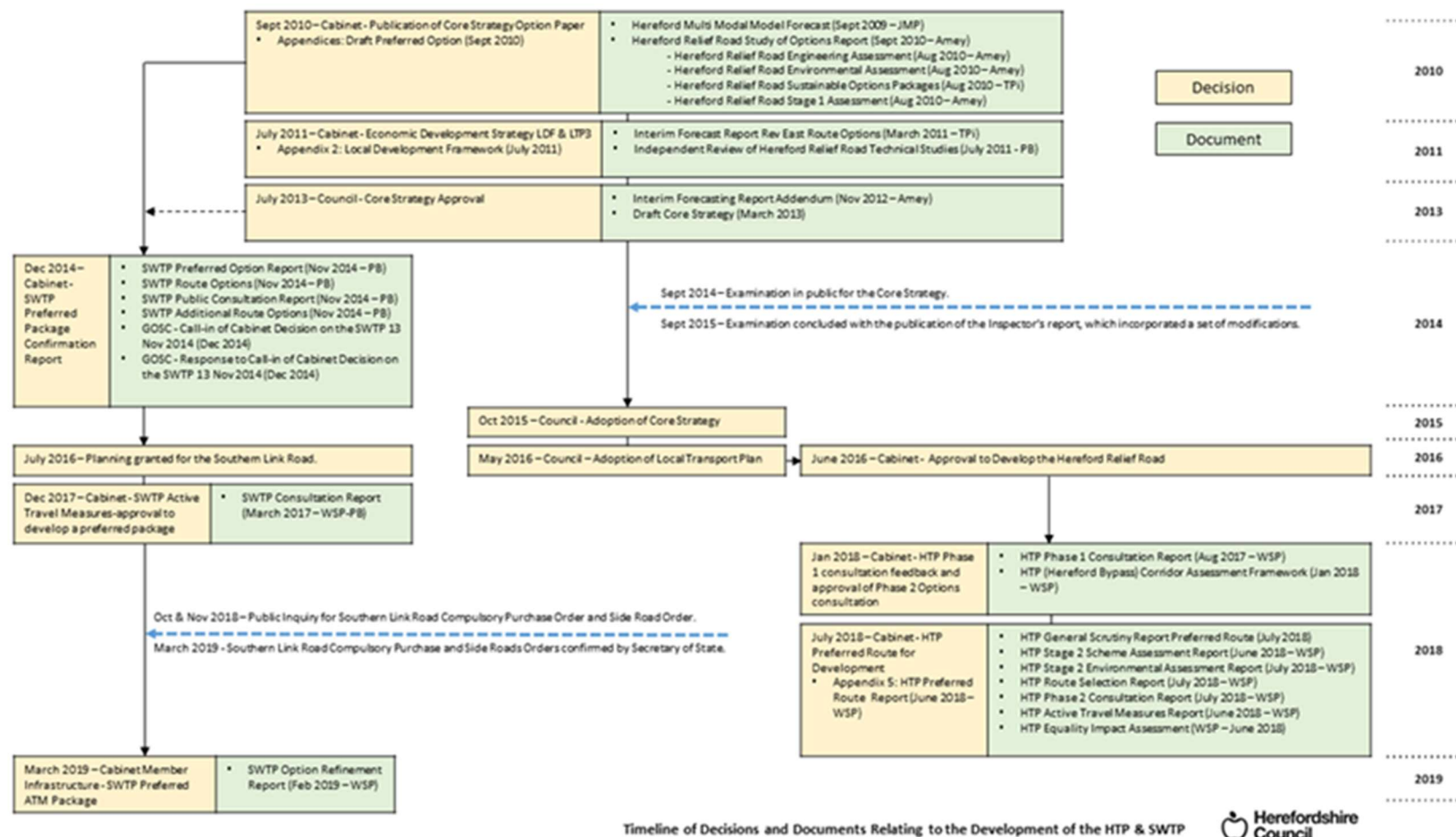
- 2003-2015 - Various transport and economic studies assessing Hereford's transport issues and options for transport strategy
- October 2015 – Adoption of Local Plan Core Strategy
- June 2016 – Cabinet authorise works to develop Hereford Transport Package
- Early 2017 – Public Consultation 1 to introduce the Hereford Transport Package and obtain public feedback
- 2017-2018 – Engineering, environmental surveys, further traffic surveys, development and assessment of bypass routes. Identification and assessment of walking, cycling, bus and public realm improvements.
- January 2018 – Cabinet approve shortlist of possible route corridors and active travel measures to present to consultation
- Early 2018 – Public Consultation 2 to present the possible bypass routes and active travel measures
- Summer 2018 – Red route selected as preferred bypass route by cabinet for further scheme development
- Early 2019 – Public Consultation 3 to present possible walking, cycling, bus and public realm improvements

1.6 Report structure

The structure of this report is as follows:

- Section 2 – Transport Analysis Guidance and major scheme process
- Section 3 – Context of the Hereford Transport Package
- Section 4 – Peer review
- Section 5 – Future requirements
- Section 6 – Summary and conclusions

³ [Herefordshire Transport Package scheme development timeline](#)

Figure 1.3: Timeline of decisions and documents relating to the HTP and SWTP

Source: Herefordshire Council

2 TAG and major scheme process

The peer review of the Hereford Transport Package has been undertaken using the following primary sources of guidance:

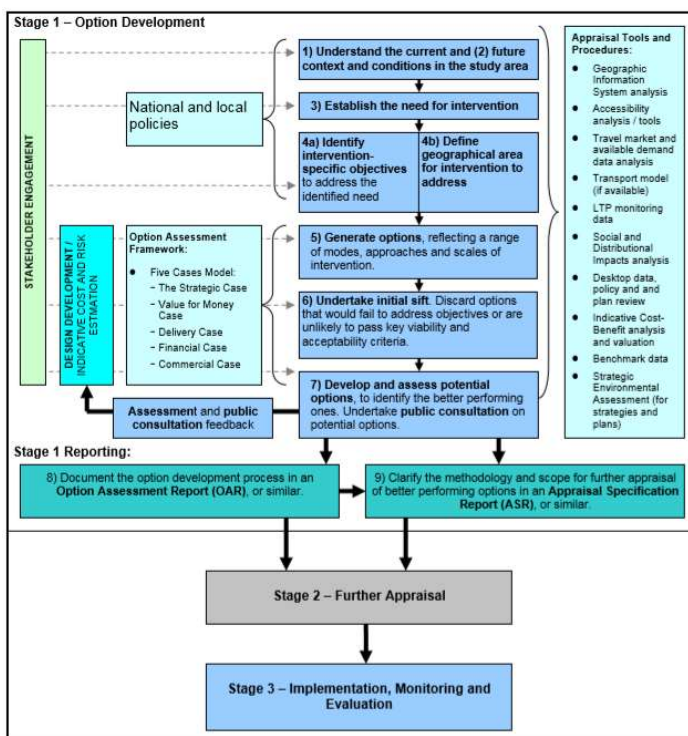
- Transport Analysis Guidance – The Transport Appraisal Process (DfT, May 2018)
- DfT Transport Business Cases (DfT, January 2013)
- Local policy (Herefordshire Council, various)

Transport Analysis Guidance (TAG) provides detail on the process of transport modelling, appraisal and the associated requirements for transport interventions. TAG involves a three-stage appraisal process as detailed within the Transport Appraisal Process (TAP).

Stage 1 Option Development of the appraisal process involves identifying the need for intervention, definition of clear set of locally developed objectives and desired outcomes and the development of options. These options are then sifted for the better performing options to be taken on to further detailed appraisal. Stage 2 Further Appraisal involves the evaluation of the better performing options and their likely impact to enable a decision as to whether to proceed with the transport intervention. Stage 3 Implementation, Monitoring and Evaluation is applicable towards the end of the development of a transport scheme.

Given the level of scheme and option development for the HTP, this peer assessment considers Stage 1 and part of Stage 2 of the appraisal processes. Figure 2.1 indicates steps 1 to 9 in Stage 1 of the Transport Appraisal Process.

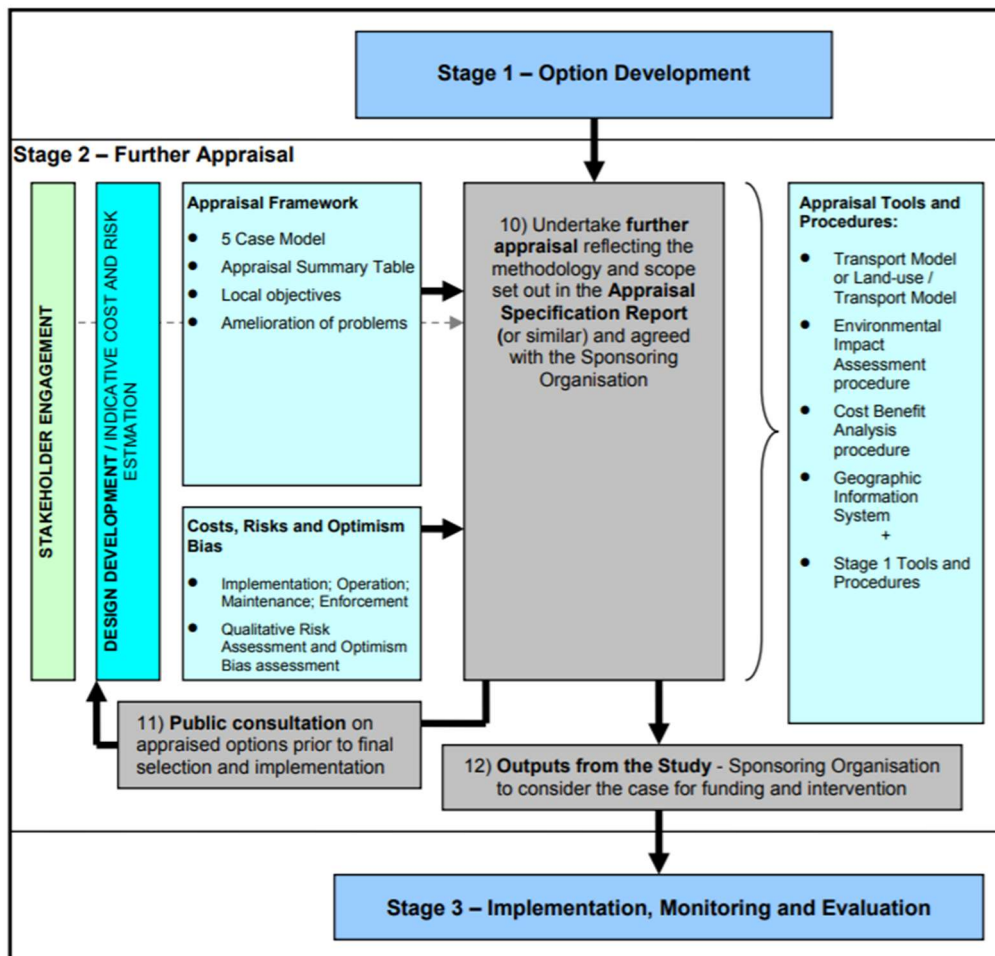
Figure 2.1: Steps in Stage 1 of the Transport Appraisal Process



Source: p4, Transport Analysis Guidance – The Transport Appraisal Process (DfT, May 2018)

Figure 2.2 indicates steps 10 to 12 in Stage 1 of the Transport Appraisal Process.

Figure 2.2: Steps in Stage 2 of the Transport Appraisal Process



Source: p21, Transport Analysis Guidance – The Transport Appraisal Process (DfT, May 2018)

To allow the peer review team to assess the Hereford Transport Package, technical and governance documents were provided to support the package by the client team. To guide this review and ensure the supporting documents cover the steps necessary to develop and appraise a major transport scheme according to TAG, the Hereford Transport Package and its supporting documents were initially assessed using the following criteria:

1. Are the current context of the package and future conditions explained?
2. Have the problem(s) the scheme will be addressing been clearly identified – including evidence of the extent of the problem(s), specific barriers / challenges, and how the scheme will overcome them (including the scale of impact)?
3. Has the impact of not progressing the package been set out, including supporting evidence? Is there adequate rationale to support why the package is needed?
4. Transport policy compliance "A transport network that supports growth enabling the provision of new jobs and houses, whilst providing the conditions for safe and active travel, which

reduces congestion and increases accessibility by less polluting and healthier forms of transport than the private car."⁴

5. Land use planning policy compliance "To improve access to services in rural areas and movement and air quality within urban areas by ensuring new developments support the provision of an accessible, integrated, safe and sustainable transport network and improved traffic management schemes"⁵.
6. Land use planning policy compliance "To strengthen Hereford's role as a focus for the county, through city centre expansion as part of wider city regeneration and through the provision of a balanced package of transport measures including park and ride, bus priority schemes and a relief road including a second river crossing"⁶.
7. Would emerging policies, particularly in response to the declared climate emergency⁷, result in different outcome/preferred option if the appraisal process were to be undertaken now?
8. Is there a set of specific, measurable, achievable, realistic, time-bound (SMART) objectives for the package to address the problem(s) identified?
9. Are the expected outcomes clear? How will it be possible to know when the objectives have been met, and what will 'success' mean?
10. Does the geographical area of impact consistent across Appraisal Steps 1, 2, 3 and 5 (i.e. existing, future and options)?
11. Do the options identified reflect a range of modes, approaches and scales of intervention? Is there evidence to support the source of these options, for example stakeholder feedback, workshops, benchmarking or research?
12. Is there a robust assessment of different package options, including the reasons for any options being discounted? Has an EAST options appraisal (or similar) been undertaken?
13. Have the options taken forward following the sift been developed with an enough level of design/specification and collecting enough evidence to be able to distinguish the relative costs, benefits and impacts of the options under consideration?
14. Have the main stakeholder groups and their contribution to the project been defined? This should include any potential conflicts between different stakeholder groups and their demands.
15. Have details of stakeholder and public consultation been provided?
16. Is there a clear description of the components of the package and how it fits with the aims and objectives of the local authority and DfT?
17. Is there an Option Assessment Report (or similar) which outlines the option development process?
18. Is there an Appraisal Specification Report (or similar) which clarifies the methodology for further appraisal of the better performing options? (Consider proportionality of appraisal)
19. Does any associated Council Governance report tally with the evidence base, decision reports and recommendations and confirmed decisions?

⁴ [Herefordshire Council Local Transport Plan 2016 - 2031 Strategy](#), page 5

⁵ Herefordshire Core Strategy 2011 – 2031, objective number 5

⁶ Herefordshire Core Strategy 2011 – 2031, objective number 7

⁷ Draft Herefordshire Council Carbon Management Plan 2020/21 – 2025/26

3 Context of the Hereford Transport Package

In summary, the Hereford Transport Package comprises a western bypass, information technology to manage demand along key corridors into Hereford City, HGV restrictions within central Hereford and active travel options consisting of new and improved motorised traffic free routes, road crossing improvements, reallocation of public highway space, junction accessibility improvements and a proposed 20mph speed limit on all streets north of river (except A roads).

3.1 Introduction to the package and appraisal work undertaken by Herefordshire Council

The HTP is based on multiple studies and a full list of documents that have been prepared to develop the HTP are listed in Appendix A.

Historically, technical documents were prepared to inform the evidence base associated with the Local Plan Core Strategy, which identified the need for the development of a bypass scheme for Hereford.

More recent business case documents have been developed for the HTP. These have been developed in line with TAP and provide more up to date appraisal of the issues identified and performance being addressed through the package.

Given that the appraisal process has a lengthy timeline, where key policy documents are likely to have changed within the timeframe. This update in policy and appraisal requirements should be reflected throughout the technical documents, to develop the scheme in accordance with TAG. The peer review described in Section 4 provides a commentary in respect of this.

Transport and economic studies assessing Hereford's transport issues and options for transport strategy has been ongoing since 2003. The Hereford Multi Modal Forecast Report published in September 2009 to feed into the developing Core Strategy indicated that either an eastern or western aligned relief road was forecast to alleviate adverse effects anticipated from additional housing. The Hereford Relief Road Study of Options in September 2010 considered inner and outer route corridors for eastern and western relief roads concluding that the inner western corridor would be preferable and the that an eastern alignment presents too high a risk for delivery due to environmental concerns – a conclusion supported by consequent independent reviews.

The Herefordshire Local Plan Core Strategy, included an objective⁸ to provide a relief road including a second river crossing:

"To strengthen Hereford's role as a focus for the county, through city centre expansion as part of wider city regeneration and through the provision of a balanced package of transport measures including park and ride, bus priority schemes and a relief road including a second river crossing".

⁸ Figure 3.1, p23 – 25 Strategic Objective 7, Herefordshire Local Plan Core Strategy 2011-2031

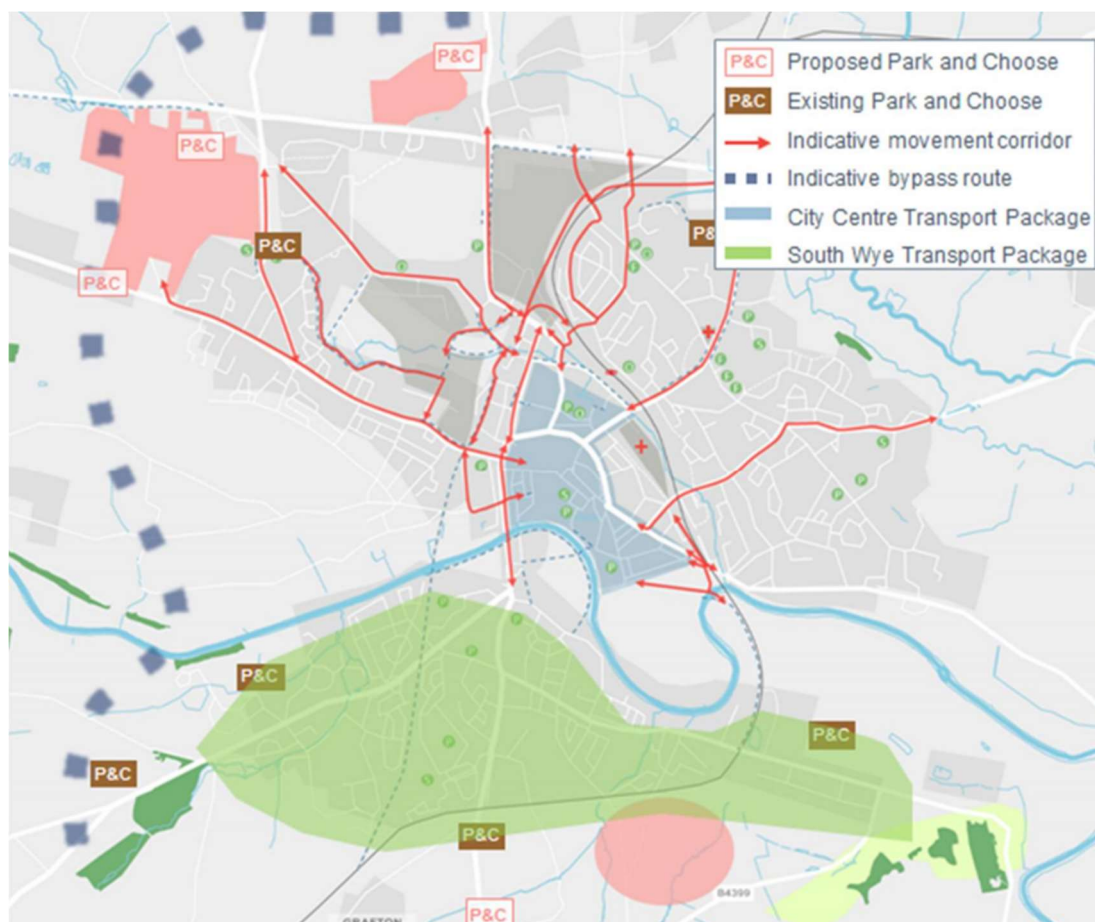
Following adoption of the Core Strategy, work was undertaken to assess the transport requirements for the city, taking into account those identified through Core Strategy development. More detail is provided in Section 3.3 regarding the Core Strategy.

The HTP (Hereford Bypass) Corridor Assessment Framework in January 2018 identified a long list of 24 possible route options in the inner western corridor and a short list of seven were subject to analysis and appraisal in the HTP Preferred Route Report in June 2018 and the HTP Route Selection Report in July 2018. The 'red route' performed best in this review and, as two phases of public consultation, in 2017 and 2018, indicated no preference this was taken forward as the preferred route.

The public consultation exercises undertaken supported active travel improvements being included in the HTP. These include walking, cycling, bus and public space improvements and are set out in 11 movement corridors as defined in the HTP Active Travel Measures at Option Development Stage report from June 2018.

The indicative bypass route and the 11 movement corridors are summarised in Figure 3.1.

Figure 3.1: Hereford Transport Package indicative bypass route and movement corridors



Source: HTP Active Travel Measures Report, WSP, June 2018

3.2 Governance decisions

Governance decision documents record Herefordshire Council's resolutions to advance the Hereford Transport Package. Decisions supporting the development of the HTP were based on evidence and proposals put forward in the technical documents.

Governance decisions related to the development of the HTP are detailed below in Table 3.1.

Table 3.1: Governance decisions for the development of the HTP

Document	Outline	Summary
16.09.2010 - Cabinet - Publication of Core Strategy Option paper	To seek approval for the publication of the Herefordshire Core Strategy: Hereford Preferred Option paper for consultation purposes.	Core Strategy sets guidelines for developments across Herefordshire up to 2026. The (western) Hereford Relief Road and a package of other transport measures including walking and cycling links is considered under new infrastructure requirements. Background papers: - Hereford Preferred Option Paper - Place Shaping Paper Consultation January 2010 - Hereford Relief Road – Study of Options August 2010
28.07.2011 - Cabinet - Economic Development Strategy LDF and LTP3	To consider the Economic Development Strategy for recommendation to Council on 18 November 2011; To agree a revised strategy for the Local Development Framework; To agree further consultation arrangements, including a community poll; To ensure that the strong linkages between the Economic Development Strategy, the Local Development Framework and the Local Transport Plan 3 are firmly embedded in each evolving strategy.	Among other things, recommends that the Cabinet approves 'the principles of the Local Development Framework Core Strategy Revised Preferred Option for the purposes of consultation, including the plan period' and notes 'the critical linkages between the adoption of the Local Transport Plan 3 and the Local Development Framework Strategy and the outcome of consultation on the Hereford Relief Road'. The three strategies (appendices) represent key mechanisms for planning and delivering growth and regeneration in Herefordshire. Appendices: - Economic Development Strategy - Local Development Framework - Local Transport Plan
19.07.2013 - Council - Core Strategy Approval	To approve the Herefordshire Local Plan - Core Strategy 2011 - 2031 (draft) for pre-submission publication in accordance with regulation 19 of the Town and Country Planning (Local Development) (England) (Amendment) Regulations 2012 (as amended).	Approved and adopted in 2015
16.10.2015 - Council - Adoption of Core Strategy	To consider the adoption of the Herefordshire local plan core strategy 2011-2031.	Recommendation that the Council should adopt the Core Strategy as the existing unitary development plan (2007) is out of date and the development of the Core Strategy has been lengthy (since 2008) and includes the provision of a relief road to the west of Hereford.
20.05.2016 - Council - Adoption of Local Transport Plan	To adopt the local transport plan (2016-2031).	Transport Plan aligns with the Core Strategy and includes proposals for the Hereford relief road, and

Document	Outline	Summary
		continuing development of walking and cycling networks.
16.06.2016 - Cabinet - Approval to Develop the Hereford Relief Road	To seek approval to commence work to develop Hereford relief road (Hereford bypass) in support of proposals within the adopted Core Strategy in the context of the overall transport strategy for the city	Recommends that funding of £600k be approved to support works necessary to inform route selection; and to progress the Hereford bypass to route selection within the resources available. States that the bypass is key infrastructure in the LTP and enables housing and employment growth objectives if in place to connect to the SLR by 2027.
18.01.2018 - Cabinet - HTP Phase 1 consultation feedback and approval of Phase 2 Options consultation	To consider feedback to HTP Phase 1 consultation and confirm scope of Phase 2 consultation and progress to consultation.	Recommends that the shortlisted route corridor options be approved, a consultation of the shortlisted options should be undertaken, and a decision be taken to authorise to determine a preferred route for the bypass and a package of active travel measures with a maximum budget of £1 million.
18.07.2018 - GSC - HTP General Scrutiny Report Preferred Route	To undertake pre-decision call in scrutiny of the Cabinet's proposed decision to select a preferred route for Hereford bypass as part of Hereford Transport Package.	Recommendation that the committee determine any recommendations it wishes to make to the executive to consider.
27.07.2018 - Cabinet - HTP Preferred Route for Development	To consider: feedback to the HTP Phase 2 consultation, assessment of the shortlist of possible bypass route corridor options, the recommended preferred bypass route corridor, the development of associated walking, cycling, bus and public realm (active travel) improvements and to confirm the scope of the Phase 3 consultation.	Following Phase 2 consultation on the shortlisted bypass options, recommends that the red route be approved as the preferred red route, a Phase 3 consultation on the red route and associated active travel measures and detailed design and consultation for the HTP be progressed on the HTP to a maximum cost of £2.45m.

3.3 Planning policy context of the package

The Herefordshire Core Strategy, which runs for the period between 2011 and 2031, was a key driver indicating the need for infrastructure. This requirement led to technical work being progressed to support the Core Strategy, which was then developed further as part of the Hereford Transport Package and the South Wye Transport Package. The Core Strategy was adopted in 2015 following an Examination in Public. The Core Strategy provides important context regarding the history of the two packages however, it should be noted, this review is not intended to be an evaluation of all the transport infrastructure aspects informing the Core Strategy

Paragraph 3.21 of the Core Strategy explains that the areas earmarked for developments are regarded as the most suitable for future development, due to their easy access to services and facilities. The Hereford Relief Road is considered important in meeting the Core Strategy housing target and ensuring that the necessary infrastructure is coordinated with the developments.

Appendix 5 – SS3: Necessary Infrastructure for Strategic Sites provides an indication of net levels of housing which can be delivered before and after infrastructure coming forward, with critical dates for the delivery of infrastructure specified. In the case of the Hereford Relief Road,

circa 3,250 dwellings can be delivered, with the Southern Link and river crossing anticipated to be required by 2022. 4,800 dwellings can come forward prior to the relief road interconnecting with the A49 north and south by 2027.

The Core Strategy states that *“A key element of the long-term Hereford transport strategy is the requirement for a Relief Road. This vital addition to the city’s transport network will enable the reallocation of existing highway for bus priorities and walking and cycling measures and the re-routing of the existing A49 Trunk Road (managed by the Highways England) removing longer distance traffic from the centre of the city”*.

The Core Strategy transport infrastructure requirements were underpinned by a considerable technical evidence base including:

- Hereford Relief Road Study of Options (report 551497/SO/003 Issue 2A, 10/09/2010, Amey)
- Independent Review of Hereford Relief Road Technical Studies (report 3511200A-ZEV Final, 15/07/11, Parsons Brinckerhoff)
- Local Plan Core Strategy Modelling: Non-Technical Summary (June 2013, Amey)
- Hereford Transport Strategy Phasing Study: Transport Strategy Review (Issue number 4, 20/05/2014, JMP)
- Hereford Transport Strategy Phasing Study: Strategic Prioritisation (Issue number 5, 29/05/2014, JMP).

The Local Plan Core Strategy Modelling: Non-Technical Summary (paragraphs 4.2.1 and 4.2.2) concludes that:

“The results from this initial group of tests demonstrate clearly that the ‘with road’ option is the only option which can help deliver the Core Strategy and meet HA requirements for nil detriment in journey times on the A49. Nevertheless, it also identifies that whilst this option will deliver these economic objectives, and to some extent objectives regarding public transport, it makes little improvement in terms of increased health through active travel. Whilst overall CO2 emissions in the ‘With Road’ option increase due to traffic on the Western Relief road, actual levels in the city will reduce”.

In addition to the Core Strategy, The Local Transport Plan 2016 – 2031⁹, notes that *“Additional highway capacity [will be required] to meet the increased demands resulting from growth, Improved access to and within the central area, Improvements to encourage more active travel within the urban area through increased supply of pedestrian, cycling and bus networks, supporting safer routes to school and improved health and access to and integration with rail”*.

Conclusion: The level of detail involved in the scheme’s development has moved on since the adoption of the Core Strategy. However, it is clear that the infrastructure proposals in the Core Strategy is required to support the development policies contained within this document. The proposals in the form of the HTP and the SWTP have been tested and challenged in an appropriate way through technical studies and Examination in Public, to enable them to be adopted within the Local Plan.

The important implication for developing a TAG-compliant scheme beyond the adoption of the Core Strategy is to ensure that the case for the package (i.e. the 19 questions noted in Section 2 of this report) was reviewed. This is considered further in Section 4 of this report.

⁹ https://www.herefordshire.gov.uk/download/downloads/id/2912/local_transport_plan_2016-2031_strategy.pdf

4 Peer review

This section encompasses the main body of the report and provides the findings of the peer review. A cohesive list of documents reviewed in each stage is detailed in an incoming document register, in Appendix A.

The peer review has been undertaken in line with the key aims of the commission in mind, namely to:

- Establish whether each package has been developed in accordance with the major transport scheme process as laid out in TAG
- Establish whether the packages including their major road scheme components (the western bypass in the HTP) are based on a sound evidence base
- Clarify whether the decisions to progress these packages were sound and justified in line with the recommendations of the technical work.

The review also considers responses by the Herefordshire Council team and technical team made to queries raised by the review team. The comments and recommendations made regarding each document is summarised in terms of:

- Looking backwards – issues identified which should be clarified or amended.
- Looking to the future – generally technical issues related to transport modelling and appraisal which may need to be revisited if the package is progressed further in future. This point also considers environmental, climate change and net zero issues which could lead to a different vision for the package.

4.1 Documents reviewed

The documents supplied to Mott MacDonald by Herefordshire Council are listed and outlined in Table 4.1. This suite of documents provides a timeline of the inception of the scheme, through the identification of a need for infrastructure to support the level of development proposed in the Core Strategy, identification and sifting of preferred options and refinement of the options for highways and active travel within the package.

Table 4.1: Key documents provided for review

Document	Outline	Summary
September 2009 - Hereford Multi Modal Model Forecast Report (JMP)	Study to examine the implications of potential housing development up to 2026 as proposed in the Regional Spatial Strategy (RSS) and its impact on the road network within Hereford and its surrounding area.	Report on implications of potential housing development (proposed in the Regional Spatial Strategy) and its impact on the road network. Modelled scenarios assessed in terms of flow relief, stress and link speed for 2026 as a single future year (AM and PM peak hours). Model runs reveal additional housing trips have detrimental effects on Hereford highway network. An Outer Distributor Road is forecast to provide some relief.
August 2010 – Hereford Relief Road Engineering Assessment (Amey)	Scheme Assessment in accordance with the Highways Agency Design Manual for Roads and Bridges Scheme Assessment Reporting to	Scheme Assessment to provide supporting information and problem identification for future analysis.

Document	Outline	Summary
	provide the necessary supporting information and problem identification for future analysis.	Builds on Stage 1 Engineering Assessment in inform appraisal (in line with WebTAG process). Assesses the engineering constraints and impacts of the proposed Hereford Relief Road options (either east or west of the city and an inner and outer option for each) with associated link roads.
August 2010 – Hereford Relief Road Environmental Assessment (Amey)	Study to identify environmental and engineering advantages and disadvantages associated specifically with the introduction of a Relief Road to Hereford along the broad corridors identified.	Study to determine environmental and engineering advantages and disadvantages associated with the introduction of a Hereford relief road (eastern and western options).
August 2010 - Hereford Relief Road Engineering Sustainable Option Packages (TPi)	Study to examine the findings of implementing sustainable option packages for the Herefordshire region.	Report considers sustainable option packages for Hereford and the results on the road network - with and without the relief road.
August 2010 – Hereford Relief Road Stage 1 Assessment (Amey)	Stage 1 Assessment to assess the advantages and disadvantages of the broadly defined transport infrastructure improvements from the consultation and modelling work done to date.	Assesses the advantages and disadvantages of the transport infrastructure improvements in the Hereford Core Strategy.
September 2010 - Hereford Relief Road Study of Options Report (Amey)	Considering the evidence to date on the transport options for Hereford leading towards the establishment of a core strategy.	Study to identify the engineering and environmental advantages and disadvantages associated with the Relief Road options. Follows on from Stage 1 Assessment to identify environmental and engineering issues along relief road corridors.
September 2010 - Draft Preferred Option	Follow on consultation from the place shaping consultation leading towards the establishment of a core strategy.	Paper issued for public consultation to form a Core Strategy which will establish a policy framework and the broad locations for development - to be adopted in 2011. Outlines Hereford Vision (including the provision of a relief road), with issues and opportunities, the spatial strategy and policies needed to achieve them.
March 2011 - Interim Forecast Report Rev East Route Options (TPi)	Further study considering the traffic implications of using a revised eastern route corridor with the same growth as proposed within the 'Preferred Options: Hereford' and also with reduced growth.	This study considers traffic implications of using a revised eastern route corridor. Four scenarios are tested.
July 2011 - Local Development Framework	Report on progress with the Local Development Framework	The Local Development Framework replaced the Unitary Development Plan. This plan period provided a statutory planning framework for the county to 2013.
July 2011 – Independent Review of the Hereford Relief Road Studies (PB)	High level independent review of the Hereford Relief Road technical studies and Core Strategy Preferred Option: Hereford.	Review of the Relief Road technical studies and Core Strategy Preferred Option, focusing on environmental topics (with some focus on planning and transportation), to review

Document	Outline	Summary
		preferred route of the inner western corridor.
November 2012 - Interim Forecasting Report Addendum (Amey)	Report examining a revised housing and employment allocation for the proposed Local Development Framework.	Addendum to the Hereford Relief Road Study of Options Report (Amey 2010). Examines a revised housing and employment allocation for the proposed Local Development Framework.
March 2013 - Draft Core Strategy	Draft Herefordshire Local Plan - Core Strategy 2011 – 2031.	Numerous planning documents form the Local Plan to guide Herefordshire development for 20 years. Includes strategic and development management policy.
August 2017 - HTP Phase 1 Consultation Report (WSP)	Report summarises the approach and findings of the first phase of HTP consultation.	This report summarises the approach and findings of the first of three public consultation phases during the HTP development
January 2018 - HTP (Hereford Bypass) Corridor Assessment Framework (WSP)	Report outlining the way in which a long list of possible route corridors for the Hereford Bypass has been developed and explains how these have been assessed to identify a short list of possible route corridors.	Report details how a long list of possible route corridors for the Hereford Bypass has been developed. 24 possible route corridors were identified. 7 route corridors recommended to proceed to the short list, to be subjected to detailed analysis and appraisal.
June 2018 - HTP Active Travel Measures Report (WSP)	Report outlining work to develop the walking, cycling, bus and public space improvements for the HTP.	Outlines work done in developing walking, cycling, bus and public space improvements for the HTP. Also sets out next steps for further developing active travel improvements and a business case. 11 movement corridors and traffic management improvements - informed by 2 phases of public consultation.
June 2018 - HTP Equality Impact Assessment (WSP)	Equality Impact Assessment (EqIA) screening of the Hereford Bypass short list route options.	Equality Impact Assessment (EqIA) screening report to consider the impact of the HTP on persons who share characteristics which are protected under Section 4 of the Equality Act 2010. Offers development and design considerations and construction considerations for key elements which could disproportionately affect vulnerable groups. Recommends a full EqIA for each of the short-listed options before the third stage of public consultation.
June 2018 - HTP Preferred Route Report (WSP)	Report presenting the findings of technical and environment assessment work as well as the Phase 2 Public Consultation, to inform the selection of the Red Route Corridor option as the recommended Preferred Route for the Hereford Bypass.	Presents findings from technical and environmental assessment work and Phase 2 public consultation. The route selection report gave red route as best performing, whilst the public consultation found no clear preference and a final assessment of both of the above concluded the red route should be taken forward as the preferred route

Document	Outline	Summary
June 2018 - HTP Stage 2 Scheme Assessment Report (WSP)	Stage 2 SAR which develops upon the stage 1 SAR.	Builds on from Stage 1 Assessment, which identified shortlisted bypass options, to inform the preferred route report to be taken forward to the Cabinet for a decision. Report assesses impact of a bypass on air quality, noise, landscape, ecology, heritage, water environment, people and communities, materials and waste, geology and soils, climate change. A preferred route is not offered.
July 2018 - HTP Phase 2 Consultation Report (WSP)	Report summarises the approach and findings of the HTP Phase 2 consultation.	Majority of questionnaire respondents approve of the HTP objectives and the bypass. Respondents did not show a clear overall preference for any of the shortlisted route options. Feedback from this consultation will be used in planning the next, final, stage of consultation (late 2018) and will influence the selection of a single route for Phase 3.
July 2018 - HTP Route Selection Report (WSP)	Report describing how and why the seven route corridor options were assessed and concludes with a recommendation for the best technical performing route for the Hereford Bypass.	Describes how and why the 7 route options were assessed. Structured assessment and the Stage 2 public consultation were used to establish the overall best performing route within the corridor. Concludes that the red route should be recommended as the preferred route for the bypass.
July 2018 - HTP Stage 2 Environmental Assessment Report (WSP)	Report presenting the findings of an environmental review and assessment of the potential environmental impacts and effects of the short list of seven possible route options for the Hereford Bypass	Environmental review and assessment of the shortlist of seven route options for the Hereford bypass. Environmental constraints to the proposed scheme including; ecological constraints from ancient woodlands, important trees and viaduct over the River Wye SAC; cultural heritage assets and buried archaeological matter; landscape effects to historic views within the Wye Valley; noise effects for proximal residents; and effects to Grade 1 and 2 agricultural land
Hereford Transport Package Strategic Outline Business Case	HTP Strategic Outline Case (SOC) Proforma	A pro-forma SOC which covers some of the issues in a very cursory manner. Some of the strategic issues are explained but dealt with briefly and without supporting evidence.
March 2019 – HTP Feasibility Business Case	An internal business case/governance document as to whether to continue the development of the compliant transport Outline Business Case work	This Feasibility Business Case contains information that describes the justification for continuing the development of outline Business Case for Hereford Transport Package (HTP) project from the

Document	Outline	Summary
		Strategic Outline Business Case (SOBC).
Hereford Transport Review Local Multi-Modal Study (February 2003)	The development of key documents in the review package (2009 – 2010) refer back to this study	

Once an initial inspection was undertaken of the documents which underpinned the package's development was completed, Herefordshire Council provided some additional documents for the peer review as shown in Table 4.2. This suite of documents provides more detail on the modelling and appraisal work undertaken to inform the package. It should be noted that this collection are not all published documents.

Table 4.2: Modelling and appraisal documents reviewed

Document Pack	Outline
Large Local Majors Bid Business Case Documents	A set of business case documents for HTP were being prepared for submission as for a Large Local Majors bid. These were not finished documents but the working drafts to provide some additional information, particularly regarding the latest position on the strategic case
HTP Option Assessment Report (OAR)	This provides the Options Appraisal Report prepared in 2018 for HTP
HTP Strategic Outline Business Case (SOBC)	This is strategic outline business case prepared in 2018 for HTP
Traffic Modelling Reports	A traffic forecasting report prepared in 2018 for HTP and the local demand model validation report prepared for the Hereford Transport Model in 2018

4.2 Initial review

At the start of the project Mott MacDonald undertook an initial rapid review of the documents listed in Table 4.1 in line with the process described in Section 1.4. The findings of this work were described in Technical Note 417997-MMD-MAN-XX-TN-TA-0005 (available on request).

An initial review of the second set of documents shown in Table 4.2 was also carried out and this is summarised in Technical Note 417997-MMD-MAN-XX-TN-TA-0007 (available on request).

These initial inspections allowed the peer review team to familiarise themselves with the package and the work undertaken to develop the scheme. On completion of the initial review, discussions were held with Herefordshire Council and WSP in order to attain clarifications and additional data. A tracker showing the key comments made and the responses received is provided in Appendix B.

4.3 Peer review

Following this initial review and verification with the client and technical teams for the package, more inspection was undertaken of the documents considered to be those pivotal to the case for and appraisal of the scheme over time. The peer review has centred on the following:

- HTP Option Assessment Report (70024065WSP-XX-XX-RP-TP-00010 Revision 3, December 2018)
- Hereford Transport Package Strategic Outline Business Case Large Local Majors (Strategic Case) (70058524 Draft SOBC v2, June 2019)

- HTP Strategic Outline Business Case (70043845 SOBC-001, July 2018, Draft)
- HTP Traffic Forecasting Report (3512983BP -WSP-DEV-001-TFR02, Revision 1, December 2018)
- Hereford Transport Model Local Model Validation Report (70029880-571\1\3, Third Draft, September 2019)
- HTP Hereford Bypass Stage 2 Environmental Assessment (70024065-WSP-XX- XX-RP-EN-00007_V02, Version 2, 05/07/18)

Each document has been reviewed (where appropriate) by key disciplines including transport planning, appraisal and economics; transport modelling; environment; climate change and carbon.

The format of the review provides a concise commentary on the document provided, notes any issues identified by the review team and concludes with a summary of each document. The summary classifies whether the points made are:

- Looking backwards – issues identified which should be clarified or amended. Categorised **red** where the point made is deemed to be a significant issue, **green** if the premise is sound however things could have been covered differently (i.e. a technical recommendation which could be reconsidered).
- Looking to the future – generally technical issues which could be revisited if the packages are progressed further, as well as environmental, climate change and net zero issues which could lead to a different vision for the package. These are all categorised as **amber**, on the premise that these points would be considered in the future before the package was progressed further.

4.3.1 HTP Option Assessment Report (OAR)

4.3.1.1 Transport appraisal

In terms of reporting structure and the format of the assessment, the OAR has been produced in accordance with the guidance within the TAG Transport Appraisal Process (TAP), May 2018. There is clear definition of the TAP Steps 1 to 8.

Step 1 Understand the current context and conditions in the study area

The OAR contains a thorough review of (then current) local, regional and national policies which have implications on the study and selection of options to resolve issues in Hereford. There is a comprehensive assessment of baseline transport conditions for all modes including active travel and public transport.

Network resilience resulting from a single river crossing and the consequent impacts of incidents is a current issue.

It is not clear as to which trips are seen to be the issue i.e. through trips, Hereford internal trips, external-internal trips. HC have clarified that the main role of the proposed road infrastructure has always been considered in relation to providing local traffic relief rather than through trips and therefore provides legitimacy to modify the network within the city in support of more sustainable modes and demand management.

There is no indication of parking supply or demand within Hereford.

Conclusion: A clearer indication of the trips which are considered to be the issue would aid weight to what the issues are that the package is trying to resolve (i.e. strengthens the case for an intervention) but it would not be justified to revisit the OAR on the basis of this point alone.

Step 2 Understand future context and conditions in the study area

The adopted Core Strategy is used as the basis for projected growth in housing and employment through Hereford in future years. Changes to the transport system in future years include the Hereford City Centre Package, the SWTP and the Hereford High Town Package.

The future performance of the network has been predicted using the Hereford Highway Assignment Model. The additional growth in trips generated by development is shown to result in increases in total network queue and delay, whilst journey times will go up on the 10 specified routes in each of the AM, interpeak and PM peaks compared to the base scenario.

Conclusion: No action required. This is commentary to explain how the package meets Step 2 of TAP.

Step 3 Establish the need for intervention

The Core Strategy commits to growth and notes that infrastructure is required to accommodate this. A predicted outcome of future development is that without further intervention the growth would lead to additional delays, unreliable journeys, deteriorating environmental conditions, road safety problems, walking, cycling and bus use being undesirable, and health impacts.

In Section 4.2 it is stated *“The planned growth for Hereford and Herefordshire cannot be accommodated on the highway network. Without intervention, the network will experience a poor level of service with more significant delays and capacity issues. Highways England anticipate that additional road capacity improvements will be required to support the economic growth over the medium to longer term and that without intervention, economic growth in the area may suffer”*.

In the OAR it could be construed that the planned development will occur regardless of a transport intervention, whilst also suggesting that it should not occur without a transport intervention.

Conclusion: The peer review is not commenting on whether the development is or is not dependent on the infrastructure. This comment merely notes inconsistencies presented within the reporting which could be addressed in future iterations of documentation to support the package but do not in themselves warrant a fundamental issue.

Step 4 Identify intervention-specific objectives / Define geographical area for intervention to address

A logic map is provided that shows the connections between the underlying causes of issues and the problems to the desired outputs. Objectives then appear to have form from those desired outputs.

The geographic scope for the area of impact has been given as the area to which the scheme promoter wants to impact i.e. Hereford. The OAR does not consider whether there would be impacts would extend beyond the city which would require the assessment of transport impact to extend further.

Conclusion: No action required. The process of forming objectives in the OAR has been undertaken correctly. The commentary provided is to explain how the document meets Step 4 of TAP.

Step 5 Generate options, reflecting a range of modes, approaches and scales of intervention

A large range of options have been considered, partially taken from previous studies but also from stakeholder engagements. In total 39 options were generated covering road, rail, bus and active travel.

Whilst the road options are specific, most active travel options are generic which could impact on the perceived feasibility during scoring. Demand management options such as a parking review and road user charging are included albeit with general descriptions. It is acknowledged that road elements are specific as more detailed work was done on these as part of the Core Strategy's development. It would not necessarily be reasonable to either develop significant detail of the active travel elements at this stage or to disregard the detail held on the road elements to 'level up' the two sets of options.

In preparing the draft peer review report it was noted that a high-occupancy vehicle lane is included as a public transport option rather than a road option. It is likely that the vast majority of vehicles using such a facility would be private vehicles. WSP advised on 08/07/20 that the "HOV lane is described in Table 28 as ".... permitting only vehicles with 2 or more occupants, including buses,". It could have been categorised as either part of the 'Public Transport Options' or 'Road Options'".

Conclusion: No action required. This is commentary to explain how the package considers Step 5 of TAP and the comment made regarding the high-occupancy vehicle is a point requiring clarity rather than reworking.

Step 6 Undertake initial sift. Discard options that would fail to address objectives or are unlikely to pass key viability and acceptability criteria

EAST was used to appraise the options and conduct initial sift from the long list. Options were scored on 7-point scale both against objectives, and other assessment criteria. The objectives were assessed under strategic case whilst the remaining assessment criteria were classified under economic, managerial, financial and commercial cases.

The long-list options have been appraised against the scenario year 2032 based on:

- The population, housing and employment growth set out in Section 3.2 and Section 3.4 and the transport infrastructure associated with the South Wye Transport Package, Hereford City Centre Transport Package and High Town Package.

The end of the section not well structured. A list of the top 10 highest scoring options is provided. Then a list of the rejected options is provided however there is no mention that some of the 10 highest scoring options are also in the rejected list. Other unrejected options are not mentioned anywhere. It should have been stated that twelve options were to be taken forward to the next assessment (it is noted that this statement appears at the beginning of the next section, however even then one of those 12 options is then rejected and not included in any package).

Conclusion 6a: Presentation issues relating to the structure can be resolved and do not question the validity of the report.

One (or more) of five reasons is given as to why options are discounted after the initial sifting. 13 of the options were discounted due to being "assigned to other packages of funding streams". When questioned as to why this was the case, the response from Herefordshire was that most of these discounted options were revenue not capital schemes.

This discounting of options presents several issues for the remainder of the assessment. Firstly, the idea that these schemes included within other funded packages would suggest that they are in some way committed and the HTP assessment does not need to consider them as they could be done anyway. However, none of these options are included in the forecast exercise in Step 2. The key question then becomes, should some or all 13 of these discounted options be implemented, would there be the need to implement any or all of the remaining 12 schemes from this OAR? This leaves a critical gap in the business case process as to whether there is a need for the selected scheme or package.

The peer review considers that the 13 discounted options should have been taken forwards to the next step of assessment unless there are other clear reasons not to. Following further development (to the same extent as the other options), they would also be scored as part of one or more packages before a final judgement is made on the preferred package of measures to take to OBC stage.

In preparing the draft peer review report the following questions related to discounting options were raised with the technical team. Responses dated 08/07/20 are provided below in italics:

Q1. 13 options have been put through the initial scoring exercise only to be discounted due to them being looked at as part of other studies rather than their ability to contribute to objectives or to be delivered. Why were they assessed at all if this was the known outcome?

A1. *“in accordance with WebTAG (Step 5), we were keen to develop a long list of options which reflected the full range of options available to HC. It was only during this process that several of the options were considered to be not feasible, outside the remit of HC, or assigned to another HC package or funding stream”.*

Q2. Should some or all of these 13 options be delivered in separate studies would there still be a need to progress with the preferred package?

A2. *“this is a theoretical question as we did not know, and still do not know, whether some or all of the options will be delivered in Hereford and, if they are, the scale of that intervention”.*

Q3. Should some or all of these 13 discounted schemes be included as part of the active travel, park & ride, or low-cost packages in the second stage of assessments, would the end result be the same?

A3. *“We do not know. However, this is unlikely as, given they were being developed in separate ways, they would need to be in both the DM and DS”.*

Conclusion 6b: Some options which were discounted, due to being appraised in different studies, should have been taken through the full process to determine if they had the opportunity to fulfil the objectives of the scheme. If the HTP Strategic Outline Business Case is progressed, we would recommend those discounted options are reconsidered.

Step 7 Develop and assess potential options, to identify the better performing ones. Undertake public consultation on potential options

The remaining 11 options (following the short bypass being sifted out in this step rather than the previous step) were then placed into one or more of four packages.

In the strategic fit assessment area, the road package has been scored overall as “moderate beneficial” against meeting intervention objectives. This is due to having:

- a significant positive contribution to 3 objectives
- a positive contribution to 1 objective

- a slight positive contribution to 2 objectives
- no contribution to 2 objectives.

No measures are provided for what constitutes a particular score against objectives.

The Park & Ride option has been discarded as it doesn't meet as many of the objectives to the same level as road or active travel. It is acknowledged that there are issues around revenue funding being required to subsidise Park & Ride services beyond, however the peer review team remains on the view that options have been discounted too quickly.

Should the OAR have not discounted several other options on the basis they will be looked at elsewhere, the Park and Ride may have produced higher scores against objectives. For example, a comprehensive review of city centre parking resulting in higher prices and reduced supply could significantly increase the ability of a Park & Ride scheme to improve performance of the network.

There has been no consideration of the Park and Ride package in combination with active travel package. Together, these packages would achieve the following:

- a significant positive contribution to 3 objectives
- a positive contribution to 3 objectives
- a slight contribution to 2 objectives

The Park & Ride and Active Travel package could therefore fulfil every objective of the HTP study for a lower cost than the preferred Road and Active Travel package. In combination with some of the discounted options that are being considered for funding elsewhere, that performance could be improved further. However, this opportunity has not been considered and is not taken forward as a low-cost alternative to the strategic outline business case as per the guidance in Step 8 of TAP.

If the package is progressed, in Stage 2 it will be important to demonstrate how the road package helps to deliver the active travel package. It is acknowledged that the reduction in traffic on the A49 may encourage more active travel users but there is no evidence provided to quantify:

- What (negative) mode shift does building a bypass create? What (positive) mode shift do the active measures create?
- What (negative and positive) mode shift do they create in combination?

The peer review team asked if *“data (could) be provided on the actual impact of the packaged active travel measures with road as opposed to the individual assessment on mode share (i.e. by combining the active travel element with the road is there model data that shows increased active travel use to back up the change from slight beneficial when considered as active travel only and moderate beneficial when packaged with the road)”*.

WSP advised that *“there is model data which shows that the bypass would reduce traffic flows on key corridors within Hereford. This is the basis by which the report states that there is ‘potential’ for more successful active travel measures with a bypass being constructed, and this is what led to the ‘moderate beneficial’ entry. At this point in the process, we did not have modelling information to evidence this”*.

The conclusion for Step 7 and 8 is provided on the following page.

Step 8 Produce Option Assessment Report, or similar

The outcome of the OAR process in Step 8 of TAP is to identify the better performing options (including a low-cost option) for progressing to Stage 2 of the appraisal process. The preferred package is a combination of the road package and active travel package.

Subsequent to Stage 1 of TAP, Stage 2 (paragraph 3.1.2) requires “a small number of better performing options in order to obtain sufficient information to enable decision-makers to make a rational and auditable decision about whether or not to proceed with intervention”. The mainly qualitative appraisal of the options in the OAR is not sufficient to have got to a final preferred option.

Conclusion: The concern with the approach taken to combine the strongest performing interventions, namely the road and active travel measures, at the end of Stage 1 is that it could appear that a preferred package has been settled at this point. It is fully acknowledged that this remaining option needs to be (and is) subject to further appraisal in Stage 2. However, the option assessment process has shown there is an alternative option which could achieve all HTP objectives. Typically, the options which are shown to meet all objectives would be carried forward to further appraisal in Stage 2 “to produce evidence sufficiently robust to support the business case¹⁰”. If the scheme is progressed further, in updating the SOBC, it should be demonstrated that this has been addressed by the scheme promoters.

4.3.1.2 Environment, climate change and carbon

The report identifies numerous key transport-related environmental drivers in national, regional and local policy, including the switch to sustainable modes of transport to reduce carbon emissions, along with overall reductions in vehicle traffic and freight. Air Quality and Noise impacts are the key environmental topics of focus, with no significant discussion of the importance of flood risk. As would be expected, the environmental issues are framed within the desire for improved transport outcomes and of the eight strategic scheme outcomes, environmental issues are focused on air quality and noise within Hereford centre. Shortlisting of options was therefore limited to the strategic outcomes of focus, although this has taken carbon emissions into account in section 8.3. A wider set of environmental topics are assessed for the preferred packages, with adverse effects predicted for noise, landscape, historic environment, biodiversity and the water environment, and a neutral effect on greenhouse gases. A beneficial effect is predicted for air quality.

Section 8.3 of the OAR took account of carbon and states that there will be a neutral effect on greenhouse gases. However, this conclusion does not necessarily align on review of the Appraisal Summary Tables (ASTs), particularly when moving strategic trips to the bypass that reduces congestion and improved journey times will encourage more car trips from local users which will increase regional greenhouse gas emissions. These discrepancies and the light touch given to Climate Change indicates that it is open to challenge in terms of Net Zero and alignment with the Paris Agreement.

Conclusion: Overall, the assessment is in accordance with the guidance at the time. Should the package be progressed further, the adverse effects predicted on various environmental topics fall short of current Net Gain, Net Zero requirements and the Climate Emergency context and would need revisiting as a result.

¹⁰ Page 5, Transport Analysis Guidance for the Technical Project Manager, May 2018

4.3.1.3 OAR overall conclusions

The OAR produced for HTP follows the structure and format of the transport appraisal process as set out in TAG, where each of the steps 1-7 are set out in turn and reported within an OAR (Step 8). However, the following remain of concern following this review of the OAR:

Some options were discounted, due to being appraised in different studies, should have been taken through a full process to determine if they had the opportunity to fulfil the objectives of the scheme. If the HTP Strategic Outline Business Case is progressed, we would recommend those discounted options are reconsidered.

The concern with the approach taken to combine the strongest performing interventions, namely the road and active travel measures, at the end of Stage 1 is that it could appear that a preferred package has been settled at this point. It is fully acknowledged that this remaining option needs to be (and is) subject to further appraisal in Stage 2. However, the option assessment process has shown there is an alternative option which could achieve all HTP objectives. Typically, the options which are shown to meet all objectives would be carried forward to further appraisal in Stage 2 “to produce evidence sufficiently robust to support the business case”. If the scheme is progressed further, in updating the SOBC, it should be demonstrated that this has been addressed by the scheme promoters.

4.3.2 Large Local Majors bid business case documents

4.3.2.1 Transport

The content of these documents are essentially the same as the Strategic Outline Business Case reviewed below and therefore the issues are considered in Section 4.3.2 below.

4.3.2.2 Environment, climate change and carbon

Environmental issues in these reports focus on air quality and noise issues within Hereford City Centre, with no other environmental topics addressed. In reporting the outcome of public consultation, a key concern raised relates to the environmental impact of the bypass.

Conclusion: Overall, aside from noise and air quality, there is a lack of the broader environmental topics and fall short of the Net Gain requirements.

Climate change and resilience, carbon or greenhouse gases have not been adequately considered in these documents, which is in keeping with the guidance at the time of writing but is an issue in terms of the requirements of the Government's 2019 Net Zero legislation.

4.3.3 HTP Strategic Outline Business Case (SOBC)

4.3.3.1 Transport planning, modelling, appraisal and economics

It is important to note that the SOBC is a work in progress document which has not been published / submitted. The SOBC follows on from the work in the Option Assessment Report and includes much of that documentation as directly copied source material. As a result, the issues noted for the OAR are carried over to the SOBC. This includes:

- That there are concerns in that some positive options appear to have been discarded before being fully assessed prior to the preferred package being arrived at
- That the OAR failed to recommend several best performing options including a low-cost option for more detailed assessment at SOBC

Notwithstanding the above, a detailed review of the SOBC has been undertaken. To understand how the SOBC complies with standard process, the structure has been reviewed against the DfT's *Transport Business Cases* best practice, 2013.

The Strategic Case

The format of the strategic case follows the standard structure. The impact of not changing, internal drivers for change and external drivers for change sections are incorporated into a single section, however this does not present any issue.

There is a significant amount of information regarding the use of the Highway Assignment Model for forecasting that wasn't included within the Traffic Forecasting Report (TFR). However, this seems to be primarily focussed on the combined impact of the HTP and the Southern Link Road (SLR) rather than drawing comparisons between the HTP and a Do Minimum (DM) scenario that includes the SLR.

Network statistics are as per the TFR and confusingly present the results against a DM that doesn't include the SLR.

Whilst a section has been titled 'constraints', it refers only to a risk register that contains five risks (table 7.4 of the report). It is expected that a comprehensive understanding of the type, location and scale of physical environmental, planning and engineering delivery risks would be provided at this stage. How different options are impacted by these risks should then be part of the appraisal.

The 'scheme' is presented in detail with information as to how its impacts on the network. In providing evidence of how wide the scale of impact will be, a concern over how the geographic scope was defined in the OAR has been answered. As previously mentioned, it is expected that the level of assessment at SOBC would be applied to a range of better performing options but that has not been done in this instance.

The Economic Case

The structure of the Economic Case follows the DfT Business Case guidance.

The way in which the Economic Case has been produced provides a risk of confusion. It isn't clear which of the Do Minimum (DM) and Do Something (DS1) introduced within the Strategic Case is being referred to as the DM in the Economic Case. Absolute clarity is required that the DM here includes the SLR and is therefore actually DS1 from the Strategic Case. If the SLR is only included within the Do Something, then the assessment should not be claiming benefits for that scheme. It must be noted that the VfM Statement (in Appendix B of the report) suggests the DM includes the SLR, however this should have been made clear throughout the report.

Scheme costs are stated as being assumed to be £153m. It is unclear why this is the case.

The calculation of reliability benefits uses different annualisation factors to the TUBA.

In reviewing this document, a number of other more detailed technical comments relating to traffic modelling were made. Noting that these are issues which could be addressed if the HTP is taken forward, these constitute advice on how the evidence base could be strengthened if it is developed further. In order to aid the flow of the report and to answer the three key questions in the brief for the peer review, these detailed points are provided as Appendix C.

Financial, Commercial and Management Cases

The final three cases contain limited information, which is as to be expected at SOBC stage.

The Financial Case mentions 7 alignments of the bypass. This is the first mention of any alignment options having been generated or appraised. It is unclear why the strategic and economic cases make no mention of these alignments.

The Financial Case alludes to Optimism Bias being included within the scheme cost and set at 32% of the Bill of Materials. At this stage of a project, the Optimism Bias should be 44% as set out in the Green Book Supplementary Guidance. Whilst mention to mitigation is given, the justification is missing and it appears that the text may have been taken from a different report.

However, it should also be noted Optimism Bias should not be considered within the calculation of scheme costs within a Financial Case (it is used only for the Economic Case as per TAG A1.2). Instead there should be a Quantified Risk Assessment undertaken and a justified monetised value of risk added to the scheme cost.

Conclusion: The SOBC structure for the HTP follows the DfT Transport Business Cases guidance closely. The primary concern with the SOBC is that it only considers one option, the preferred package, that has been taken from the OAR. This limited assessment is not in keeping with the principles of TAP which would suggest that more than one option (including a low-cost option) are considered at SOBC stage and have been assessed in comparative detail. Acknowledging that this is a draft document, should the HTP be progressed, these matters should be looked at again.

4.3.3.2 Environment, climate change and carbon

As with other HTP documents, the key environmental problem identified is air and noise pollution in Hereford City centre. Where sustainable development is discussed, as in Section 2.4, this appears to focus predominantly on the economic and social spheres, with the environmental focus covered separately (and focused on noise and air quality as previously identified). For the key topics covered in the Appraisal Summary Table, increased noise is predicted as a result of the bypass, increased air pollution along the bypass route (although some reduction in air pollution in the city centre), increased greenhouse gas emissions due to the increased travel distance, negative landscape, historic environment and biodiversity effects, and no water environment effects presented (although these may be likely).

Conclusion: Overall, whilst the assessment is in accordance with the guidance at the time, the assessment associated with the predicted rise in greenhouse gas emissions falls short of the government's current Net Zero requirement.

4.3.4 HTP Traffic Forecasting Report

In reviewing this document, a number of detailed technical comments relating to traffic forecasting and modelling were made. In order to aid the flow of the report and to answer the three key questions in the brief for the peer review, the detailed points are provided as Appendix C.

Conclusion: A series of comments have been made in respect of the TFR. These are points of clarification which should be considered further by the scheme promoters and technical team in the future if the package is progressed further. This in no way implies the work done is incorrect, it merely is intended to provide a 'critical friend' approach to what may need to be inspected again in the future.

4.3.5 Hereford Transport Local Modal Validation Report (LMVR)

Although the LMVR is a comprehensive document, with the information providing a clear understanding of the model and its validation results, a number of queries were raised in the

rapid review of the document. As part of the clarification between draft and final peer review reporting, Herefordshire Council and WSP have advised that DfT were in the process of reviewing the LMVR at the time work on the package was paused and hence hadn't reached sign off. As such, it was agreed a more detailed review of the report was not required by the peer review team.

4.3.6 HTP Hereford Bypass Stage 2 Environmental Assessment

This is a comprehensive environmental report which covers a wider range of environmental topics in detail. It is necessarily focused on the western bypass solution “the scheme” and relative merits of various western routes. As such it doesn't seek to answer the fundamental question whether a bypass is required or not, although there is some commentary on the 2010 report on eastern and western options.

The report is up to date for time of production, and does reference Climate Change Act, however it pre-dates net zero by 2050, net gain or the climate emergency. The assessment applies the then-current Design Manual for Roads and Bridges (DMRB) methodology, however this is now updated.

Adverse environmental effects are identified across numerous topics: Air Quality (both beneficial (city centre) and adverse effects - elsewhere), Noise ('slight' adverse according to the methodology), Landscape and Visual (numerous large adverse effects), Heritage (numerous adverse effects due to the footprint and also visual setting), Ecology (habitat loss, veteran trees, loss of connectivity, species), geology/land quality (impacts on Agricultural land, above Source Protection Zones, potential groundwater effects).

In the assessment of the water topic, a 35% increase in flows has been allowed for the predicted effects of climate change. This appears to be sufficient for the date of the assessment, however the further floods in Feb 2020 following Storm Dennis led to the River Wye reaching its highest ever level. Potential impacts identified include the need for stream realignment/ culverting, and some increase in fluvial flood risk. These conclusions may no longer be acceptable given the 2020 floods.

The materials topic is not focused on carbon impacts but more on materials availability, which would have been standard at the time. No carbon assessment is made.

The people and communities topic presents a mixed picture. There are some transport benefits (as would be expected), but numerous adverse effects.

The climate section applies UKCP09 scenarios as it just pre-dated the UKCP18 scenarios.

Conclusion: Since they pre-date these policy and guidance updates, and the latest UKCP18 climate scenarios, unfortunately all this Stage 2 Environmental assessment falls short of current ambition in these areas. Whilst a wide range of topics are assessment, there is insufficient assessment of carbon and climate impacts compared to current requirements (although the assessment was valid at the time). The documents also pre-date the exceptional floods and record-breaking water levels in the River Wye in Feb 2020. Taken this into account and given the policy changes it is likely that the Climate Emergency, Net Zero and Net Gain would now be strategic objectives against which options would need to be assessed and progressed as part of any future work on the package.

4.4 Summary of findings

Table 4.3 provides a summary of the peer review team's conclusions in respect of how the key documents to support the development of the package meet the three aims of the review. They are categorised in line with the RAG criteria explained at the start of this section.

Table 4.3: Summary of findings by document

Document	Conclusion as to whether the document meets the peer review aims
HTP Option Assessment Report (OAR)	The OAR produced for HTP follows the structure and format of the transport appraisal process as set out in TAG, where each of the steps 1-7 are set out in turn and reported within an OAR (Step 8). However, two points remain of concern following this review of the OAR: - Some options were discounted, due to being appraised in different studies, should have been taken through a full process to determine if they had the opportunity to fulfil the objectives of the scheme. If the HTP Strategic Outline Business Case is progressed, we would recommend those discounted options are reconsidered. - The concern with the approach taken to combine the strongest performing interventions, namely the road and active travel measures, at the end of Stage 1 is that it could appear that a preferred package has been settled at this point. It is fully acknowledged that this remaining option needs to be (and is) subject to further appraisal in Stage 2. However, the option assessment process has shown there is an alternative option which could achieve all HTP objectives. Typically, the options which are shown to meet all objectives would be carried forward to further appraisal in Stage 2 "to produce evidence sufficiently robust to support the business case". If the scheme is progressed further, in updating the SOBC, it should be demonstrated that this has been addressed by the scheme promoters.
Hereford Transport Package Strategic Outline Business Case Large Local Majors	The content of these documents are essentially the same as the Strategic Outline Business Case reviewed below and therefore the issues are considered below.
HTP Strategic Outline Business Case (SOBC)	The SOBC for the HTP follows the DfT Transport Business Cases guidance closely. The primary concern with the SOBC is that it only considers one option, the preferred package, that has been taken from the OAR. This limited assessment is not in keeping with the principles of TAP which would suggest that more than one option (including a low-cost option) is considered at SOBC stage and have been assessed in comparative detail.
HTP Traffic Forecasting Report (TFR)	A series of comments have been made in respect of the TFR. These are points of clarification which should be considered further by the scheme promoters and technical team in the future if the package is progressed further. This in no way implies the work done is incorrect, it merely is intended to provide a 'critical friend' approach to what may need to be inspected again in the future.
Hereford Transport Model Local Model Validation Report (LMVR)	As part of the clarification between draft and final peer review reporting, Herefordshire Council and WSP have advised that DfT were in the process of reviewing the LMVR at the time work on the package was paused and hence hadn't reached sign off. As such, it was agreed a more detailed review of the report was not required by the peer review team.
HTP Hereford Bypass Stage 2 Environmental Assessment	Since they pre-date these policy and guidance updates, and the latest UKCP18 climate scenarios, unfortunately all this Stage 2 Environmental assessment falls short of current ambition in these areas. Whilst a wide range of topics are assessed, there is insufficient assessment of carbon and climate impacts compared to current requirements (although the assessment was valid at the time). The documents also pre-date the exceptional floods and record-breaking water levels in the River Wye in Feb 2020. Taken this into account and given the policy changes it is likely that the Climate Emergency, Net Zero and Net Gain would now be strategic objectives against which options would need to be assessed and progressed as part of any future work on the package.

Notes:

- Aim 1 In accordance with TAG
- Aim 2 Sound evidence base
- Aim 3 Decisions sound
- Red = looking backwards – issue which should be clarified
- Green = looking backwards – sound but issue could have been done differently
- Amber = looking forwards – issue to be considered if package progressed further in the future
- Black = not applicable

5 Future requirements

Environmental issues, climate emergency and net zero policy has been considered separately to the individual documents that formed a part of the appraisal review. This section explains the relative overarching policies and how these have changed and adapted throughout the appraisal process. The policies used at the start of the process, albeit correct at the time of the HTP's earlier development, are now out of date.

A fundamental shift in Government policy and ambition in the area of the environment, climate and carbon has occurred since the HTP assessment documents were produced. The United Nation's Paris Agreement called on all countries to engage in climate action to maintain the global average temperature increase below 2°C and aim to limit it to below 1.5°C compared to pre-industrial levels. In 2018, the Intergovernmental Panel on Climate Change (IPCC) Special Report concluded limiting global warming to 1.5°C would require “unprecedented” and “deep emissions reductions in all sectors” and a decrease in global CO₂ emissions by about 45% by 2030 compared to 2010, reaching net zero by 2050. Central UK Government declared a Climate Emergency in May 2019, followed in June 2019 with the target for 100% reduction in GHG emissions by 2050 (Net Zero). This materially affects investment decisions, especially in the area of transport infrastructure. Updates to the NPPF in 2018 embedded the principle of environmental “net gain” in relation to new development. Taken together, these provide grounds for challenge to any scheme which does not demonstrably provide environmental benefit and contribute to significant reduction in carbon emissions. The forthcoming Environment Bill is expected to reinforce this trajectory.

Legal challenge to both transport policy and major infrastructure projects has also gathered momentum in recent years, epitomised in the February 2020 Court of Appeal ruling regarding Heathrow's third runway. In this case the court of appeal ruled that ministers did not adequately take into account the government's commitments to tackle the climate crisis. More specifically that at the time that the UK commitment to the Paris Agreement was put into law, the Transport Minister should have instructed the Department for Transport to review the national policy statement on aviation to ensure that it remained a 'legal' policy statement in the context of the UK revised commitments with respect to carbon.

Assessment approaches and guidance are still catching up with policy. It remains possible for schemes to fully meet current assessment criteria and yet fall short of the high standards set by policy. TAG Unit A3 (Environmental Impacts) predominantly dates back to 2015 (although Air Quality sections were updated in 2019) and is not explicitly aligned with the policy of 100% reduction in GHG emissions by 2050, although there is a “strong preference” for Net Gain in regard to biodiversity. The latest DMRB guidance on climate change (LA 114) is from October 2019 and does reference the Net Zero target and take account of current climate change scenarios (UKCP18).

Since they pre-date these policy and guidance updates, and the latest UKCP18 climate scenarios, unfortunately all the HTP documents would now fall short of current ambition in these areas. Whilst issues around Air Quality and Noise are rightly identified, there is insufficient assessment of carbon and climate impacts compared to current requirements (although the assessment was valid at the time). The documents also pre-date the exceptional floods and record-breaking water levels in the River Wye in Feb 2020. These points are not intended to indicate that there was any deficiency in the work undertaken, merely that more recent policy

and guidance would mean that these issues should be considered again if the existing work is taken forward.

Taking this into account and given the policy changes it is likely that the Climate Emergency, Net Zero and Net Gain would now be strategic objectives against which options for HTP (and indeed any highway / transport infrastructure scheme) would need to be assessed and progressed, likely leading to different solutions to those chosen to date.

6 Summary and conclusions

6.1 Preamble

This report provides the findings of the peer review work that has been undertaken on the governance and technical documents used to develop the Hereford Transport Package.

The aims of the peer review are to:

- Establish whether the package has been developed in accordance with the major transport scheme process as laid out in TAG
- Establish whether the package including their major road scheme components (the southern link road in the HTP) are based on a sound evidence base
- Clarify whether the decisions to progress these packages were sound and justified in line with the recommendations of the technical work.

The comments and recommendations made regarding each document is summarised in terms of:

- Looking backwards – issues identified which should be clarified or amended.
- Looking to the future – generally technical issues related to transport modelling and appraisal which may need to be revisited if the package are progressed further in the future. This point also considers environmental, climate change and net zero issues which could lead to a different vision for the package.

The format of the review provides a concise commentary on the document provided, notes any issues identified by the review team and concludes with a summary of each document.

The review also considered responses by the Herefordshire Council team and technical team made to queries raised by the review team.

6.2 Documents reviewed

It is clear that a large volume of information has been produced to support the development of the package. Following an initial rapid review of all supplied documents, the peer review focussed upon the following:

- HTP Option Assessment Report (70024065WSP-XX-XX-RP-TP-00010 Revision 3, December 2018)
- Hereford Transport Package Strategic Outline Business Case Large Local Majors (Strategic Case) (70058524 Draft SOBC v2, June 2019)
- HTP Strategic Outline Business Case (70043845 SOBC-001, July 2018)
- HTP Traffic Forecasting Report (3512983BP -WSP-DEV-001-TFR02, Revision 1, December 2018)
- Hereford Transport Model Local Model Validation Report (70029880-571\1\3, Third Draft, September 2019)

6.3 Classification of review comments

The comments made have been classified in terms of:

- Looking backwards – issues identified which should be clarified or amended. Categorised **red** where the point made is deemed to be a significant issue, **green** if the premise is sound

however things could have been covered differently (i.e. a technical recommendation which could be reconsidered).

- Looking to the future – generally technical issues which could be revisited if the packages are progressed further, as well as environmental, climate change and net zero issues which could lead to a different vision for the package. These are all categorised as **amber**, on the premise that these points would be considered in the future before the package was progressed further.

6.4 Peer review conclusions

A volume of technical work has been reviewed to assess the case for the package. The findings are summarised below.

Document	Conclusion as to whether the document meets the peer review aims
HTP Option Assessment Report	The OAR produced for HTP follows the structure and format of the transport appraisal process as set out in TAG, where each of the steps 1-7 are set out in turn and reported within an OAR (Step 8). However, two points remain of concern following this review of the OAR: - Some options were discounted, due to being appraised in different studies, should have been taken through a full process to determine if they had the opportunity to fulfil the objectives of the scheme. If the HTP Strategic Outline Business Case is progressed, we would recommend those discounted options are reconsidered - The concern with the approach taken to combine the strongest performing interventions, namely the road and active travel measures, at the end of Stage 1 is that it could appear that a preferred package has been settled at this point. It is fully acknowledged that this remaining option needs to be (and is) subject to further appraisal in Stage 2. However, the option assessment process has shown there is an alternative option which could achieve all HTP objectives. Typically, the options which are shown to meet all objectives would be carried forward to further appraisal in Stage 2 "to produce evidence sufficiently robust to support the business case". If the scheme is progressed further, in updating the SOBC, it should be demonstrated that this has been addressed by the scheme promoters.
Hereford Transport Package Strategic Outline Business Case Large Local Majors	The content of these documents are essentially the same as the Strategic Outline Business Case reviewed below and therefore the issues are considered below.
HTP Strategic Outline Business Case	The SOBC for the HTP follows the DfT Transport Business Cases guidance closely. The primary concern with the SOBC is that it only considers one option, the preferred package, that has been taken from the OAR. This limited assessment is not in keeping with the principles of TAP which would suggest that more than one option (including a low-cost option) is considered at SOBC stage and have been assessed in comparative detail.
HTP Traffic Forecasting Report	A series of comments have been made in respect of the TFR. These are points of clarification which should be considered further by the scheme promoters and technical team in the future if the package is progressed further. This is no way implies the work done is incorrect, it merely is intended to provide a 'critical friend' approach to what may need to be inspected again in the future.
Hereford Transport Model Local Model Validation Report	As part of the clarification between draft and final peer review reporting, Herefordshire Council and WSP have advised that DfT were in the process of reviewing the LMVR at the time work on the package was paused and hence hadn't reached sign off. As such, it was agreed a more detailed review of the report was not required by the peer review team.
HTP Hereford Bypass Stage 2 Environmental Assessment	Since they pre-date these policy and guidance updates, and the latest UKCP18 climate scenarios, unfortunately all this Stage 2 Environmental assessment falls short of current ambition in these areas. Whilst a wide range of topics are assessed, there is insufficient assessment of carbon and climate impacts compared to current requirements (although the assessment was valid at the time). The documents also

Document	Conclusion as to whether the document meets the peer review aims
	pre-date the exceptional floods and record-breaking water levels in the River Wye in Feb 2020. Taken this into account and given the policy changes it is likely that the Climate Emergency, Net Zero and Net Gain would now be strategic objectives against which options would need to be assessed and progressed as part of any future work on the package.

Aim 1 of the review is considered to be met. Whilst there remain points of technical detail which may need to be addressed in the future if the package is taken forward, it is clear that the technical work undertaken since 2018 has been prepared in accordance with the DfT Transport Appraisal Process (TAP).

Aim 2 of the review, which is to establish whether the packages including their major road scheme components (the western bypass in the HTP) have been developed with a sound evidence base, is deemed to be met. The history of the package revolves around the infrastructure needs to meet the plans of the Core Strategy. Infrastructure is required to support the development policies contained within this document and the initial HTP proposals have been tested and challenged in an appropriate way through technical studies, modelling and Examination in Public, to enable them to be adopted within the Local Plan. In progressing to a preferred package there are areas which might have been done differently, particularly around alternative options. Given that work undertaken so far in Stage 2 of TAP remains at a draft stage, there is still the opportunity to address the comments raised, should the package be taken forward in the future. Notwithstanding, it is concluded that in general the technical work provides a compliant evidence base for the package.

6.5 Governance and historical development of the package

Whilst a detailed inspection of the fine print of the governance decisions would need to be undertaken by a land use or legal expert rather than the transport professionals who have undertaken the peer review, from the information considered in these documents it does appear that all decisions have been made in accordance with the recommendations of the technical evidence provided to support the Council papers at the time, i.e. the action taken was appropriate in the context of the advice and recommendations provided and the technical information available. There is a logical flow of decisions which recommend the continuation of the package, including where decisions have been called in for further scrutiny and additional information has been provided to justify the associated course of action.

One aspect which is not explicit within any of the decisions is the point at which the schemes split from a single bypass road scheme to two packages which included additional measures and a split of the two road elements. Whilst this is not considered to be a particular flaw in either package, it would be helpful to record this in future scheme timelines if the package is progressed further.

In addition to the council's governance the proposals have been tested and challenged in an appropriate way through technical studies and Examination in Public, to enable them to be adopted within the Local Plan. Since the adoption of the Core Strategy, more recent technical work has been subject to regular public consultation and council scrutiny and there is nothing to indicate that decisions have not been undertaken in accordance with the technical evidence and recommendations which were available at decision points.

Aim 3 of the review is considered to be met.

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A. Incoming document register

The following is a cohesive list of all the documents that have been reviewed throughout the peer review process:

Initial technical documents:

- September 2009 - Hereford Multi Modal Model Forecast Report (JMP)
- August 2010 – Hereford Relief Road Engineering Assessment (Amey)
- August 2010 – Hereford Relief Road Environmental Assessment (Amey)
- August 2010 - Hereford Relief Road Engineering Sustainable Option Packages (TPi)
- August 2010 – Hereford Relief Road Stage 1 Assessment (Amey)
- September 2010 - Hereford Relief Road Study of Options Report (Amey)
- September 2010 - Draft Preferred Option
- March 2011 - Interim Forecast Report Rev East Route Options (TPi)
- July 2011 - Local Development Framework
- July 2011 – Independent Review of the Hereford Relief Road Studies (PB)
- November 2012 - Interim Forecasting Report Addendum (Amey)
- March 2013 - Draft Core Strategy
- August 2017 - HTP Phase 1 Consultation Report (WSP)
- January 2018 - HTP (Hereford Bypass) Corridor Assessment Framework (WSP)
- June 2018 - HTP Active Travel Measures Report (WSP)
- June 2018 - HTP Equality Impact Assessment (WSP)
- June 2018 - HTP Preferred Route Report (WSP)
- June 2018 - HTP Stage 2 Scheme Assessment Report (WSP)
- July 2018 - HTP Phase 2 Consultation Report (WSP)
- July 2018 - HTP Route Selection Report (WSP)
- July 2018 - HTP Stage 2 Environmental Assessment Report (WSP)
- Business Case (HTP)
- HTP Feasibility Business Case

Additional technical evidence:

- HTP Option Assessment Report
- HTP Strategic Outline Business Case
- HTP SOBC Large Local Majors (Financial Case)
- HTP SOBC Large Local Majors (Commercial Case)
- HTP SOBC Large Local Majors (Management Case)
- HTP SOBC Large Local Majors (Strategic Case)
- Traffic Forecasting Report HTP
- Hereford Transport Demand Model Validation Report
- Hereford Transport Model Local Model Validation Report

Governance Decisions

- 16.09.2010 - Cabinet - Publication of Core Strategy Option paper

- 28.07.2011 - Cabinet - Economic Development Strategy LDF and LTP3
- 19.07.2013 - Council - Core Strategy Approval
- 16.10.2015 - Council - Adoption of Core Strategy
- 20.05.2016 - Council - Adoption of Local Transport Plan
- 16.06.2016 - Cabinet - Approval to Develop the Hereford Relief Road
- 18.01.2018 - Cabinet - HTP Phase 1 consultation feedback and approval of Phase 2 Options consultation
- 18.07.2018 - GSC - HTP General Scrutiny Report Preferred Route
- 27.07.2018 - Cabinet - HTP Preferred Route for Development

B. Summary tracker of comments

Comment ID	Status	Issue Theme	Source report	Specific location (e.g. section,page,para)	Comment	Date	Raised by	Allocated to	Response	Date	Comment_update	Date	Response	Date	Comment_update	Date	Closed date
HTP01	Closed	Technical / future issue to address	HTP Option Assessment Report	Section 2.5	The section would benefit from having an indication of the number of external-external trips through the city centre. Is the data available?	22/6/20	MM										
HTP02	Closed	Technical / future issue to address	HTP Option Assessment Report	Section 2.5	The section would benefit from having details regarding the parking supply and demand within the town. Is the data available?	22/6/20	MM										
HTP03	Closed	Technical / future issue to address	HTP Option Assessment Report	Section 4.2	Tables on pages 156, 157, 158 state planned growth cannot be accommodated onto the network without intervention. This is contrary to the contents of Appendix 5 of the Local Plan. Suggestion that the text is amended to explain growth over and above that tested (c5000 dwellings) cannot be accommodated.	22/6/20	MM										
HTP04	Closed	Technical / future issue to address	HTP Option Assessment Report	Section 6	Quantified justification of area of impact needed (noted this is present in the SOBC)	22/6/20	MM										
HTP05	Closed	Options sifting	HTP Option Assessment Report	Table 28	What is the justification for the A49 HOV lane being a public transport instead of a highway scheme? What is the comparison of volume of buses to volume of multiple occupancy car/vans?	22/6/20	MM	WSP	The HOV lane is described in Table 28 as "... permitting only vehicles with 2 or more occupants, including buses, ...". It could have been categorised as either part of the 'Public Transport Options' or 'Road Options'.	8/7/20	Closed	9/7/20				9/7/20	
HTP06	Closed	Options sifting	HTP Option Assessment Report	Section 8.5	13 options have been put through the initial scoring exercise only to be discounted due to them being looked as part of other studies rather than their ability to contribute to objectives or to be delivered. Why were they assessed at all if this was the known outcome? Should some or all of these 13 options be delivered in separate studies would there still be a need to progress with the preferred package? Should some or all of these 13 discounted schemes be included as part of the active travel, park & ride, or low cost packages in the second stage of assessments, would the end result be the same?	22/6/20	MM	WSP	Point 1 - in accordance with WebTAG (Step 5), we were keen to develop a long list of options which reflected the full range of options available to HC. It was only during this process that several of the options were considered to be not feasible, outside the remit of HC, or assigned to another HC package or funding stream. Point 2 - this is a theoretical question as we did not know, and still do not know, whether some or all of the options will be delivered in Hereford and, if they are, the scale of that intervention. Point 3 - we do not know. However, this is unlikely as, given they were being developed in separate ways, they would need to be in both the DM and DS.	8/7/20	Closed	9/7/20				9/7/20	
HTP07	Open	Options sifting	HTP Option Assessment Report	Appendix F Value for Money - Impact on Society table 'Physical Activity' (page 312 of pdf report)	Concern that the scoring is subjective rather than quantifiable on this key point. For the impact on physical activity the road package scores "moderate adverse" as the bypass makes it easier for people to travel by car. For the impact on physical activity the active travel package scores "slight beneficial". There will be an increase in trips but this is limited as traffic still high on key routes. For the preferred package the score is "moderate beneficial" i.e. higher than the active travel package. What evidence is there for the swing in modal shift that would be required for this combined score?	22/6/20	MM	WSP	This is explained by the commentary under the Preferred Package column, namely: "Potential for more successful active travel measures when implemented in conjunction with the proposed bypass as this would reduce traffic levels on key urban corridors in Hereford."	8/7/20	Can data be provided on the actual impact of the packaged active travel measures with road as opposed to the individual assessment on mode share (i.e by combining the active travel element with the road is there model data that shows increased active travel use to back up the change from slight beneficial when considered as atm only and moderate beneficial when packaged with the road)	9/7/20	There is model data which shows that the bypass would reduce traffic flows on key corridors within Hereford. This is the basis by which the report states that there is 'potential' for more successful active travel measures with a bypass being constructed, and this is what led to the 'moderate beneficial' entry. At this point in the process, we did not have modelling information to evidence this.	15/7/20			
HTP08	Closed	Options sifting	HTP Option Assessment Report	Appendix F Strategic Fit table (page 305 of pdf) and Value for Money - Impact on Society table 'Physical Activity' (page 312 of pdf report)	Road package is assessed as having "no contribution" to Objective 5 Encouraging Healthy Lifestyles in one table but a "moderate adverse" impact on physical activity in another table. Can that discrepancy be justified?	22/6/20	MM	WSP	They are referring to different aspects. Objective 5 specifically refers to "walk and cycle from new developments to key attractors". The VFM table refers to city-wide activity.	8/7/20	Closed	9/7/20				9/7/20	
HTP09	Closed	Options scoring	HTP Option Assessment Report	Appendix F Strategic Fit table (page 305 of pdf) and Value for Money - Impact on Environment table (page 309 of pdf report)	The preferred package scores slight adverse on noise, and moderate beneficial on air quality in the impact on Environment table but is judged to have a moderate beneficial impact overall when scored against Objective 6 Air Quality and Noise. Can that discrepancy be justified?	22/6/20	MM	WSP	This is incorrect. The Preferred Package is shown as having a "positive contribution" to Objective 6, and a Large Beneficial Impact overall (ie across all eight objectives). This is not inconsistent with the individual scores for noise and air quality.	8/7/20	Closed	9/7/20				9/7/20	
HTP10	Open	Options sifting	HTP Option Assessment Report	Section 9	The assessment selects one preferred package. TAG Transport Appraisal Process indicates that the output of an OAR is the selection of the best performing options including a low cost option with the intention that those options are tested in detail at SOBC stage. What justification is there as to why that guidance has not been followed and all other option packages (even those that will potentially contribute to all objectives e.g. P&R+Active Travel) rejected for detailed appraisal?	22/6/20	MM	WSP	Section 9 of the OAR details a low cost alternative and presents a detailed assessment of how it performs against the other options. The assessment shows that other package combinations (eg P&R + Active Travel) are inferior to the Preferred Package. We have not carried out the Stage 2 assessment to which the OAR refers, and did not agree which other options were to be assessed in this greater level of detail. This would need to be considered further if the work was restarted.	8/7/20	The response to the point on park and ride indicates that the ATM and park and ride was inferior to the preferred package. Can data be provided that quantifies this inferiority?	9/7/20	The inferior nature of the Park and Ride package is described over nine pages in Table 37 in the OAR. This covers many different areas, as explained in the table. There is no simple data which can be provided to substantiate such a wide range of topics.	15/7/20			
HTP11	Closed	Technical / future issue to address	Traffic Forecasting Report HTP	Section 4.6	growth in HGVs is taken from Road Traffic Forecast 2015 (RTF15) which is substantially different to the current version Road Traffic Forecast 2018 (RTF18). Rates of growth for Other Good Vehicles (OGVs) in RTF18 are dramatically reduced from the values in the 2015 data. Will this be updated in future releases?	22/6/20	MM										
HTP12	Closed	Technical / future issue to address	Traffic Forecasting Report HTP	Section 5.1.12	it is not clear where, or how, the adjustment of traffic signals in future years was done. To be even handed it would be important to ensure that any optimisation of signals was undertaken for both the 'do minimum' (DM) and 'do something' (DS) to avoid unduly influencing the subsequent appraisal. Can clarification or explanation be provided?	22/6/20	MM										
HTP13	Closed	Technical / future issue to address	Traffic Forecasting Report HTP	Section 6.2.4	Growth in Goods Vehicle (GV) trips should be taken from either the National Transport Model (NTM) or the RTF. The National Road Traffic Forecast (NRTF) was discontinued and replaced with RTF15 and subsequently RTF18. Can this be clarified or corrected?	22/6/20	MM										
HTP14	Closed	Technical / future issue to address	Traffic Forecasting Report HTP	Section 6.6	Generalised costs are from the July 2017 TAG Databook where goods vehicle values of time have not been adjusted. The value of time for Other Goods Vehicle 1 (OGV1) and Other Goods Vehicle 2 (OGV2) is based on the driver's value of time and does not take account of the influence of owners on the routing of these vehicles. TAG Unit M3.1 paragraph 2.8.8 indicates that consideration should be given to doubling this value. Can justification be provided as to why that hasn't been considered?	22/6/20	MM										
HTP15	Closed	Technical / future issue to address	Traffic Forecasting Report HTP	Section 7	Forecast model convergence is not presented in this section. Consider inclusion for later iterations.	22/6/20	MM										
HTP16	Closed	Technical / future issue to address	Traffic Forecasting Report HTP	Section 8	The Network statistics are confusingly presented for three scenarios, including a DM scenario that doesn't include the S.L.R. Two DS scenarios are presented despite "DS1" presumably being the true Do Minimum in this case. This is inconsistent with the description of the DM provided in section 5 and makes subsequent comparisons difficult as there are no direct comparisons presented in the tables between DS1 (the actual DM) and DS2 (the actual DS). Consider revising the report to make this clearer.	22/6/20	MM										
HTP17	Closed	Technical / future issue to address	Traffic Forecasting Report HTP	Section 9	First and only mention of how traffic flows have changed in the forecasts. Having detail on this would the impacts considerably easier to understand. Consider revising the report to make this clearer.	22/6/20	MM										
HTP18	Closed	Option sifting and assessment	HTP Strategic Outline Business Case	General comment	Many of the issues with the HTP Options Assessment Report are repeated throughout the SOBC. Of key importance are issues HTP06 to HTP10 of this spreadsheet.	22/6/20	MM	WSP	Dealt with above.	8/7/20	Closed	9/7/20					9/7/20

[illegible]

C. Detailed modelling comments

As part of the peer review a number of detailed comments have been made in respect of transport modelling and forecasting. They are not intended to imply a fundamental issue with the work, these are points which the review team feels may need to be reviewed by Herefordshire Council's technical team / consultants if the package is progressed further in the future.

HTP Strategic Outline Business Case (SOBC)

Economic Case

In section 3.4 it is stated that TUBA version 1.9.9 has been used for the assessment. This version was superseded in March 2018 by v1.9.10 which should have been enough time to rerun the TUBA for a July 2018 report.

The TUBA assessment has been undertaken using data from 2026, 2032, 2041 and 2051. This raises a question as to why wasn't 2035 also included if this was available (as detailed in the TFR)?

The annualisation factors are very different from those used in the assessment of the South Wye Transport Package. The AM model is only being used for a single hour, with far greater reliance on the IP model. The annualisation factors in Table 53 of the SOBC don't tally with the associated commentary and don't reflect the lack of reliance on the AM peak – either the table, the text or both are incorrect.

The annualised trip totals in Table 54 show that the AM model is only accounting for a small proportion (9%) of trips in the assessment (compared with around 27% for the PM peak and around 64% for the IP).

It is noted that Table 61 Model Convergence refers to relative gap which is associated with variable demand modelling, however the TFR suggests that VDM was not applied. Could this be confirmed?

Sectorised benefits (Table 64) appear to be reasonably symmetrical (especially compared to the SWTP equivalent). General patterns of benefits appear sensible by purpose, time period and year.

HTP Traffic Forecasting Report

The following inconsistencies have been identified in the HTP Traffic Forecasting Report (TFR).

Need for Variable Demand Modelling (VDM)

In section 3.2, it is noted that variable demand modelling has not been applied for the forecasting undertaken in support of the "SOBC-Lite" to date but that this will be included in the ongoing work as the scheme progresses.

Future year scenarios

In section 4.1.2, six modelled years have been considered, including the SLR Design Year 2035. However, in the Southern Link Road (SLR) forecasting (described in SWTP Traffic Forecasting Report v3 - Feb 2019.pdf) the year 2035 is not modelled, with the SLR Design Year aligning with the Hereford Bypass. Additionally, paragraph 4.4.4 refers to a table not included within the report.

Growth in freight traffic

In section 4.6 growth in HGVs is taken from Road Traffic Forecast 2015 (RTF15) which is substantially different to the current version Road Traffic Forecast 2018 (RTF18). Rates of growth for Other Good Vehicles (OGVs) in RTF18 are dramatically reduced from the values in the 2015 data.

Committed highway schemes

Within section 5.1.2, four committed highway schemes have been identified and include the SLR. These mirror the schemes included in the SLR forecasts except for the Hereford Northern Urban Expansion, which is omitted. An infrastructure uncertainty log is not provided.

Traffic signals

In section 5.1.12, it is not clear where, or how, the adjustment of traffic signals in future years was done. To be even handed it would be important to ensure that any optimisation of signals was undertaken for both the 'do minimum' (DM) and 'do something' (DS) to avoid unduly influencing the subsequent appraisal.

Future year trip ends and development zones

In section 6.2.4 growth in Goods Vehicle (GV) trips should be taken from either the National Transport Model (NTM) or the RTF. The National Road Traffic Forecast (NRTF) was discontinued and replaced with RTF15 and subsequently RTF18. This may be a typing error.

Reference case matrix totals

In section 6.5 levels of GV growth are from RTF15 and are significantly higher than the current forecasts in RTF18. Also, given that the forecasts are based on a fixed trip assignment it is not clear that Transport Appraisal Guidance (TAG) guidance (Unit M4 7.4.1) has been followed with respect to fuel cost and income growth factors.

Generalised cost parameters

The generalised costs in section 6.6 are from the July 2017 TAG Databook where goods vehicle values of time have not been adjusted. The value of time for Other Goods Vehicle 1 (OGV1) and Other Goods Vehicle 2 (OGV2) is based on the driver's value of time and does not take account of the influence of owners on the routing of these vehicles. TAG Unit M3.1 paragraph 2.8.8 indicates that consideration should be given to doubling this value.

Model convergence

Chapter 7 does not cover forecast model convergence at all which is a significant omission. The section appears to be a summary of the calibration and validation results from the Local Model Validation Report (LMVR) along with a tabulation of base model convergence statistics, information that is largely repeated from chapter 2 where previous work is summarised.

Network statistics

The Network statistics in chapter 8 are confusingly presented for three scenarios, including a DM scenario that doesn't include the SLR. Two DS scenarios are presented despite "DS1" presumably being the true Do Minimum in this case. This is inconsistent with the description of the DM provided in section 5 and makes subsequent comparisons difficult as there are no direct comparisons presented in the tables between DS1 (the actual DM) and DS2 (the actual DS).

Summary and conclusions

Chapter 9 provides the first and only brief mention of forecast traffic flows within the report.

This detailed review of the HTP Traffic Forecasting Report has resulted in the above detailed queries and questions and has raised general queries about the report.

The HTP Forecasting Report is generally quite scant on detail and omits major sections that would be required in order to provide confidence that the forecasts have been undertaken appropriately. Where results have been provided these have confusingly been presented against a Do Minimum scenario that doesn't include the SLR.

Substantial elements of the report that are not provided include sections detailing:

- Forecast model convergence
- Diagrammatic presentation of forecast flows for the DM and DS scenarios
- Commentary on key changes in flow DS vs DM (including a tabulation of flows on key links)
- Commentary on key changes in delay DS vs DM
- Summary of journey times on key corridors DS vs DM
- Flow difference plots
- Select link analyses DS vs DM to show routing of trips using the bypass and other key routes.

