

**Review of the
East Sussex County Council
Best and Final Bid to DfT
for the
Bexhill to Hastings Link Road**



**MTRU
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1 Introduction

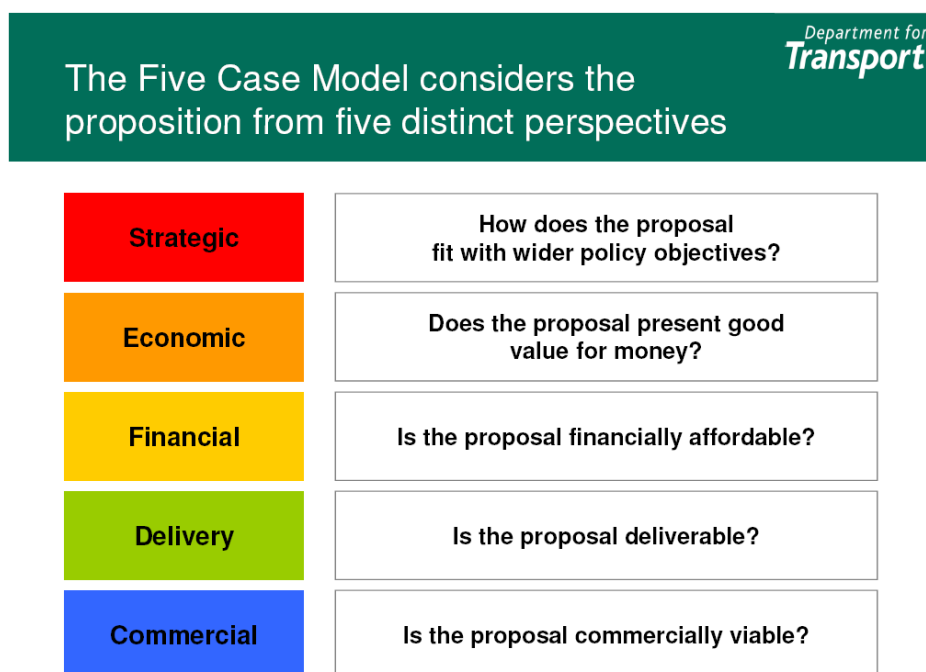
MTRU has been commissioned by Campaign for Better Transport and the Hastings Alliance to review the Best and Final Bid (BAFB) for the Bexhill to Hastings Link Road (BHLR). This has taken the form of analysing the evidence submitted to DfT, and undertaking a site visit. This included the Combe Haven area to explore the landscape issues; tracing the proposed route in Bexhill; and visiting the key junctions at both ends of the BHLR.

Before setting out the findings of this study, it is important to describe the key areas in DfT and Treasury guidance which the BAFB should have followed. The scheme as presented in the BAFB can then be assessed according to the guidance.

First it must be recognised that the BAFB document is a competitive bid into a Pool of schemes not all of which will be funded. Guidance specific to the Pool process has been issued during the course of this year.

NATA and the 5 Case Model

The previous appraisal framework (NATA) has been replacedⁱ, although much of the detailed advice contained on the Government’s website for transport appraisal (Webtagⁱⁱ) is unchanged. One key feature of NATA was the “Appraisal Summary Table” (AST). The key change is a greater emphasis on the “Five Case Model” and using these as the basis for appraisal. NATA, Webtag, and the 5 Cases all comply with Treasury Green Book Guidanceⁱⁱⁱ. In their engagement process with transport practitioners^{iv}, DfT have usefully set out the 5 Case model structure.



They also supplied an indication of how to translate the content of an AST into the 5 case model, as part of the latest Guidance^v. This is reproduced below.

Analyses & Study outputs		Development of evidence for business case					
		Strategic case	Economic case	Financial case	Management case	Commercial case	
Guidance available in WebTAG	Stage 1: Option development	Outputs from EAST	✓	✓	✓	✓	✓
		Options Assessment Report	✓	✓	✓	✓	✓
		Appraisal Specification Report					
	Stage 2: Further Appraisal	Appraisal Summary Table	✓	✓	✓		✓
		Transport Economic Efficiency table		✓			✓
		Public Accounts		✓	✓		
		Analysis of Monetised Costs and Benefits		✓			
		Greenhouse gas worksheet	✓	✓			
		Noise worksheet	✓	✓			
		Air quality worksheet	✓	✓			
Social and Distributional Impact matrix worksheet	✓	✓					
Other guidance & tools	Social Research evidence, guidance and tools (to understand and assess the needs, attitudes and behaviours of the target and/or affected population)	✓					
	Carbon Tool for Local Authorities	✓	✓				
	Value for Money guidance		✓				
	Advice on Public Private Partnership (PPP) and Private Finance Initiative (PFI)					✓	
	DfT's Evaluation guidance including evaluation plans and benefits realisation				✓		
	Efficiency & Reform Group Gateway Review Guidance				✓		
	Network Rail's management & control process for enhancements (GRIP)	✓	✓	✓	✓	✓	
Highway Agency's project control framework (PCF)	✓	✓	✓	✓	✓		

Consistency on key issues

However, the underlying principles for scheme development and appraisal have not changed. In particular, the need for an intervention is defined as occurring where Government objectives are not being met. Where intervention is planned, a range of alternative solutions must be assessed if value for money is to be achieved. This is set out in the Green Book.


Webtag is equally clear that the process should begin with underlying problems, not just symptoms, and that these are mode neutral and not scheme specific. This summarised in Unit 1.1 as follows.

“1.4.3 In all cases, however, the process of identifying solutions should be broadly similar and:

- be easily comprehensible, to those commissioning, steering and undertaking the work; and where possible to a wider public;
- avoid leading to a particular outcome simply by virtue of the method or process adopted;
- enable a wide range of solutions and the synergy between combinations of components to be investigated in a cost-effective manner;
- enable a preferred solution to be developed which addresses the objectives and problems at which it is aimed; and
- provide a means by which the acceptability of the solution to the public can be tested and taken into account.

This section is unchanged in the new draft guidance, apart from a new paragraph number (1.4.6).

The need for a range of solutions to be considered was repeated in the specific Pool guidance. For example, in BAFB workshop DfT showed the following slide.



Consultation, Engagement and Alternatives Department for
Transport


- Ministers are keen to understand why schemes might be seen as controversial by local residents
 - Keen to understand potential alternatives & why these haven't been chosen

- Keen to understand overall levels of support and there will be specific requirements to make this clear
 - *if you haven't consulted recently – start thinking about it*

- Views of Statutory Bodies will be important

This is particularly relevant to this scheme, where the local umbrella group has consistently called for an alternative package to be tested, and has identified elements which could be included in such a package. Some of these elements were included in the LTP 1 proposals for East Sussex, were supported by local people, but have not been progressed.

In the same DfT workshop, this was reiterated in the following slide:



Strategic Department for
Transport

- Objectives
 - *Are they clear? Alignment with Government policy*
- Strategic importance among stakeholders
 - *Meaningful input from LEPS/business*
- Option generation
 - *How robust? Confidence that this is right scheme/mode?*

This also includes mention of strategic objectives, which is a second major area of concern with this scheme.

The strategic objectives provide the material for the first of the 5 cases. It is here that the “fit” against national objectives, particularly for economic growth and carbon reduction, need to be reflected. Reducing greenhouse gas emissions was the subject of much discussion during the NATA Refresh process in 2009/10, in particular the problems of valuing small changes in carbon emissions between Do Minimum (DM) and Do Something (DS), in the specific situation where the Do Minimum shows a failure to meet the transport sector national targets.

If this happens, there are two key issues. First is that there can be no real test of strategic fit unless it is reported somewhere that both DM and DS fail to meet the target. This is because there has to be a test of the cost effectiveness of transport interventions in achieving the carbon target.

This means that the strategic assessment of the carbon (as opposed to the value for money test) should set out the details of the transport sector emissions, with and without the scheme in place, and compare them to the overall sector specific target.

It would be extraordinary not to do so, given that this is a key Government objective, and that in transport terms, the indicator required is clear. For example, in the *Transport Carbon Reduction Delivery Plan* of March 2010, total transport emissions are a Tier 1 Indicator and emissions from the separate modes are Tier 2 Indicators^{vi}.

While not every transport intervention in an area must comply, for every one that does not, compensating reductions over and above target must be found somewhere. The fact that a package or major intervention involving public money does not, should cause an alert at the DfT, and they would have to ensure that there are sufficient savings in other schemes to restore the balance. Until this is done, it is clear that schemes which do not meet the target should not proceed, or at least have a very low priority.

The DfT are using the Red- Amber-Green (RAG) approach to give a general indication of strategic fit. In relation to carbon this scheme should clearly be red. This is in addition to the detailed monetisation of the difference between DM and DS. However, the logical approach would be, having understood that the intervention did not achieve a key national objective, to see if an alternative intervention would do so. In a sense this would produce a more realistic Do Minimum. After all, is it right to assume that the sum total of local and national Government transport interventions in the Bexhill Hastings area up to and including 2020 will be to fail by a very significant margin to meet carbon reduction targets?

The failure to address the carbon issue either in the strategic analysis, or by creating a sensible Do Minimum (equivalent to proper testing of alternatives) mean that the scheme has not passed the first test in the 5 Case Model. An overall assessment of strategic fit is given in Section 3 of this report.

BCR only part of the appraisal

The BCRs of all transport schemes have been rising as a result of new approaches to monetising costs and benefits. There is considerable potential for double counting, since items such as reliability and agglomeration are often modelled in such a way as to be highly correlated with traditional time savings. Too much attention has been paid to BCRs, as the DfT has stated in its presentations on appraisal, and in its recent response to the Select Committee^{vii}.

“Economic appraisal is an important part of the Department’s decision making process. However, it is only one part. Decisions are made with reference to all five parts of a business case – the strategic, economic, financial, commercial and management cases.

The Benefit to Cost Ratio (BCR) summarises a lot of information in a single metric that lends itself to the comparison of proposals. However, it should be remembered that a BCR only captures those impacts that are amenable to quantitative analysis and monetisation, and obscures the detailed trade-offs that are being made within its calculation. As such, it can be a useful device for a first comparison of many different proposals, but not a substitute for a more detailed consideration of the impacts or, indeed, reasoned discretion when making decisions.”

Getting the BCR in proportion has become even more of an issue because of the newly monetised elements which have been introduced. Apart from the accuracy of the monetary values themselves (a not insignificant issue) double counting between time savings, reliability and wider impacts is a clear danger. In these circumstances the fixed land use assumptions (apart from new development) used in most models become increasingly unrealistic.

Why do BCRs for the same scheme change so much?

Leading on from this is the point that public confidence in BCRs is not helped by the way in which successive BCRs are produced using the same basic transport model, for the same basic scheme, but change very significantly, sometimes in an unexpected direction. Such changes can occur within a year or two, sometimes within months. It must be noted that this can happen quite independently from the new categories which are being monetised on a developmental basis and are at an early stage: landscape, reliability, and wider economic benefits^{viii}.

In the competitive Pool the aim of promoters is inevitably to power up the BCR and this leads to seeking benefits where evidence is perhaps not as strong as it should be. For example, adding in night and weekend benefits where there is no validated model for these conditions and only limited count data can significantly boost the BCR, but also cause other unexplained effects.

In this case 25.5% of all the benefits are from night and weekends, including 32.0% of the business benefits and 48.8% of the public finance benefits. There is a modest balancing effect since 49.8% of the carbon costs are also from night and weekends, although there are two very different carbon calculations in the supporting material for the BAFB. In particular, the AST has a small carbon cost (£0.35mn) while the Economic Assessment Report shows £11.2mn.

If both costs benefits from the night and weekend were excluded, in this case the BCR would fall from 3.18 to 2.37. It should also be noted that the BAFB form BCR is higher (3.46) than the TUBA only base in the Economic Assessment report (3.18) and in the the AST worksheet (3.26). This has been clarified and the definitions are in each case slightly different. All the money values are from the ESCC tables and have not been adjusted, for example accidents have been given full value despite concerns about how they have been calculated.

Table 1 Change in BCR with various costs and benefits included

BCR	N & WE	Reliability	Wider Impacts	Noise	Accidents	Landscape
1.14 ⁺	✗	✓	✓	✓	✓	✓ DfT value
1.95 ⁺	✓	✓	✓	✓	✓	✓ DfT value
2.37	✗	✗	✗	✗	✗	✗
2.8 [*]	✓	✗	✗	✓	✓	✓ ESCC value
3.18	✓	✗	✗	✗	✗	✗
3.26	✓	✗	✗	✓	✓	✗
3.46	✓	✓	✓	✓	✓	✗

^{*} ESCC also include housing benefits with reduced landscape costs ⁺ Calculated by MTRU from ESCC table

This can only reinforce public concern about the number of different BCRs in play.

2 Overview of the scheme and impacts

What follows is an overview of the BHLR and its impacts, focussing on the requirements of the 5 Case Model.

a) It is a clear to all concerned this is a particularly damaging scheme in terms of the unique Combe Haven valley, but this is not properly represented in the appraisal. At least this should be severely adverse in the AST. The valuation is artificially reduced by the promoters by what is considered to be excessive allowance for mitigation, where there is little likelihood of such high levels being achieved.

b) There is a surprising lack of serious study of alternatives, despite:

- clear potential – the area is starting from a low base, for example a lack of travel plans, bus priority, or Quality Bus Partnerships. These were planned in the LTP 1 process, but the Bexhill schemes have been dropped, and only one implemented in Hastings
- even the limited test by the consultants shows huge potential for benefit from smarter choices – over 20% reduction in AM Peak, more than enough traffic reduction to compensate for increases from new development
- several self-evident rail opportunities to the East and West (for example see the local MP's recent letter in Modern Railways on a link to Ashford, long discussed service improvements between Eastbourne, Bexhill and Hastings) and for new stations (most obviously Glyne Gap)
- recommendation of SoCoMMS that complimentary measures were critical to any package, prior to wide availability of smarter choices techniques and good practice
- further report by one of the SoCoMMS lead consultants recommending a demand management package
- consistent requests to study an alternative package by local groups and their professional advisers
- clear guidance from the DfT, most recently in relation to the BAFB (see above).

c) There is an increase in carbon across the area predicted as a direct result of the scheme, and best estimate of the Do Minimum fails to meet national targets. No description and thus no exploration of this issue is provided. It is possible to see that the Do Something in 2020 has about 3% more carbon emissions than 2013 (AST worksheet, BAFB Assessment of Impacts, page 47).

d) There is a lack of transparency leading to uncertainty over local authority funding – it is not clear exactly what else would have been done with the money pledged towards the scheme.

e) There are serious modelling issues which involve:

- the high car mode share predicted
- stability of the demand model and the need to use cost damping
- the very limited bus network in the model – only 2 routes running through Glyne Gap

f) In addition to demand management, traffic management is not considered, for example no study of speed limits or HGV bans on the BHLR to limit environmental damage, especially particulates

g) Given the link road has both ends in a busy network and there are some significant traffic increases, particularly through the junctions at each end, the overall impression is one of moving traffic around the area rather than making a step change – in fact there are clear disbenefits to traffic in the Bexhill area

h) Related to h), there is no “flagship effect” to attract new inward investment by businesses, this is supported by the lack of direct financial contributions identified from the private sector

i) By contrast, other local regeneration projects are having some success, for example in education, Hastings Town Centre and Bexhill sea front – would it be better to invest in these rather than the BHLR?

j) In fact there have been major regeneration successes without the BHLR, for example SAGA are locating 800 jobs in Priory Square, Hastings, with their CEO saying:

“Hastings is an ideal location. Priory Square is in the town centre and has good public transport links and the building will provide a great working environment. We aim to attract, train and keep the best talent that Hastings has to offer.”^x

k) There will be damage to a unique environmental asset on the doorstep of Bexhill and Hastings – environment is a key attractor for inward investment. The MTRU site visit and earlier consultants who visited the site confirms the value of the area in its own right, but it has a role in attracting business which has not been considered.

3 Analysis of BAFB in terms of the DfT 5 Cases

3.1 Strategic case

This summarises the impact on strategic policies and classifies them using the Red – Amber - Green (RAG) approach which used by DfT to assess modelling.

Greenhouse gas

- Carbon increases compared to Do Minimum, both are significantly over target in 2020 (Middle of CCC budget period 3)
- Cost effectiveness of transport expenditure in relation to target: negative not positive value
RED

Environmental capital

- Serious damage to a unique landscape area with no comparable replacement
RED

Economy

- No direct evidence of business commitment to BHLR, for example through committed S106
- Development is predicted by the modelling to be car dominated, contrary to the National Policy Planning Framework’s emphasis on sustainable development
- Housing does not depend on BHLR – access links would need to be provided and funded, and alternative brownfield sites would reduce the transport external costs, and thus improve the economic uplift of the housing
- Opportunity cost is not considered – would the available money be better employed, either in regeneration or other, more cost effective transport interventions?
AMBER/RED

Health

- No disbenefits from increased car share considered
- “Greenway” proposed but no study of its potential nor the damage to open space which can be accessed by active travel modes
AMBER/RED

3.2 Value for Money case

Lack of alternatives

This topic was a major discussion point during the NATA Refresh process and beyond, both in written papers and in the seminars which were held by DfT and others (for example UKTRC). The Department is asking for a “Options Assessment Report” and the guidance on this was underpinned by external research. The issue of alternatives is prominent in the DfT’s initial presentation for the Pool process, its Q&A summary document and the DfT presentation on the replacement for NATA. Its provenance is well established, for almost a decade, both in the Treasury Green Book and in the opening section and diagram in Webtag.

The Local Authority has consistently relied upon SoCoMMS to avoid any need to test an alternative package, and indeed to state that they would not work. This reliance is clearly based on a serious misunderstanding of this study.

The SoCoMMS report, published in 2002, well before much of the research on the impact of Smarter Choices was published, says

***“Ensuring Balance - Demand Management** Each of the above strategy elements will only be effective if a state of equilibrium is achieved between the demand for travel by car and other modes of transport. To ensure this, the strategy must have at its core measures that seek to control the overall level of future car usage, particularly in locations where there are, or will be, good alternative transport systems.”* (Summary, page 13)

It goes on to recommend a range of measures including workplace parking controls and concludes:

“It is this final component that will determine the overall success of the strategy itself.”

Subsequent to this, an independent consultant was engaged by local groups to consider this view, the report is careful not to address the merits of the link road, but only the issue of whether alternatives have been considered. The concluding paragraph is reproduced in full below.

“The question asked of me was: “Judging from the Hastings Strategy Development Plan document produced as part of the South Coast Corridor multi-modal study, were alternative options to the proposed Bexhill to Hastings Link Road thoroughly and properly investigated in SoCoMMS, in line with current best technical practice and Government guidance?”.

My answer is that, relative to the evidence that I would have expected to see, there is little in the Hastings Strategy Development Plan prepared as part of SoCoMMS to show that the problems on the A259 and their causes were analysed in detail and that the full range of potential solutions which logically follow from these analyses of the problems and their causes was investigated, as recommended in the Government’s advice which should have guided the conduct of SoCoMMS. In saying this, I am not expressing a view on whether the Link Road is the right or wrong answer. As I said in paragraph 3, I have only seen the documents listed in paragraph 2 and I have no information about whether or not there have been any more analyses of the alternatives to the Link Road than shown in these documents.”

It is clear that, apart from the limited smarter choice test reported in the BAFB, there has been no testing of a suitable package, and most of the demand management measures set out by SoCoMMS, and seen as essential to its strategy, have not been implemented nor do they appear to have any immediate likelihood of being implemented.

This is further evidenced in the claim that public transport options have been considered. In fact, only two bus services were modelled (those that travel through Glyne Gap). This is guaranteed to underestimate traffic impacts, because a reduction in traffic elsewhere in the area through better bus services would cause reassignment which may well benefit the A259 at Glyne Gap. In addition there is the following statement in the BAFB Forecasting Report:

11.3.8 *The results of the assessment are that the improved bus services increased car available bus trips by about 34% for those journeys which would benefit from an improved frequency and additional services. The corresponding reduction in highway trips for these journeys is less than 1%, and the effect on Glyne Gap traffic even smaller. The reasons for this are:*

- *Including the new assumed services serving North East Bexhill, there are already 9 buses per hour between Bexhill and Hastings. Service frequency is unlikely to be the main reason for not travelling by bus.*
- *For most car journeys on the A259 at Glyne Gap, the origin and/or destination of the trip is not close to a bus stop on a direct bus route. Although an improved bus frequency could reduce waiting time at bus stops, and bus priority measures would reduce bus journey times, access times to and from bus stops would be unchanged.*

Thus it is clear that services which could not possibly serve the patterns of demand generated by car users were chosen to test whether car users could be diverted to public transport. This is not a valid test.

A realistic alternative

A logical approach (similar to that recommended in the Coombe report) would be:

- 1 Create a programme of travel planning, starting with employer and school surveys and interviews. This helps to identify potential demand (a key role of smarter choice programmes).
- 2 Using the outputs from the initial exercise, identify where public transport services need to be expanded, or new services are required, and what cycling facilities are needed (not just routes but critically secure and convenient parking). This will include new generation bus priority (probably not continuous lanes) which achieve most of the benefits of traditional lanes but with minimal disruption to traffic. These include bus “gates” and opportunities for such measures were evident on the A259 through Bexhill on the site visit. A Bus Quality Partnership was considered in LTP 1, but has not obtained funding.
- 3 Create an action plan from this package with timings and potential funding sources. In this case it is likely that rail schemes will feature prominently, in view of the obvious potential to east and west, and for the station at Glyne Gap – the subject of at least two favourable consultants’ studies and a site visit from Network Rail. Resignalling of Hastings to Eastbourne is due to complete in 2013 and this could provide an opportunity to significantly improve train services and times from Bexhill to London. It is also worth noting that this station and several other rail and bus schemes are supported in the Rother District Core Strategy, but have no definite funding. In view of the significant disbenefits in Bexhill and to the West and North from the BHLR, this would be a far better economic stimulus for these areas.
- 4 Begin a second stage involving leisure and retail travel planning, develop a wider parking strategy for controls and pricing which can help fund future projects and manage demand.
- 5 Travel planning is a dynamic transport intervention, thus it requires ongoing interaction between the travellers and the travel planners and this includes not only monitoring the effects but also discovering any barriers. This means having a travel planner leading the specific initiative (ESCC

already have one) working closely with businesses, with the operators and with the Council’s existing bus support and planning staff.

Potential costs and benefits of an alternative approach

It is clear from the financial assessment (see below) that the cost of an alternative sustainable transport package is significantly less than the sum the Council is committing towards the road scheme. If it could be made effective, it would reduce local funding as remove the need for national taxpayer support. Even a capital item such as Glyne Gap station, would be below £1million, the traffic management and bus priority measures in the Bexhill Hastings package from LTP1 was £1.5million^x. Workplace travel plans can be very successful, and require small “nudge” funding to change behaviour. Spending £500,000 a year for five years would have a transformational impact.

Some testing has been undertaken by ESCC in relation to Smarter Choices, which is reported as reducing trips by “less than 5%”. This was taken to be the 24 hour day, and would be many times higher in the AM peak because the most powerful elements in the ESCC package are workplace and school travel plans. The extract from the Forecasting Report is shown below.

Table 11-2: Smarter Choice Measures assumptions summary

	High Intensity
Hastings and Battle Quality Bus Partnership	42% increase in bus passengers with 30% transfer from car
Bexhill Bus Improvements	42% increase in bus passengers with 30% transfer from car
School Travel Plans	15% reduction in school trips by car
Workplace Travel Plans	30% reduction in car commuter trips for LDF developments and other employment areas
Rail Schemes	44% of total new rail trips removed from car matrices past station locations

However, a more detailed test has been supplied, showing travel planning applied to a limited number of business trips – only 7.1% of the AM peak hour total – and assuming that education trips were a small proportion of AM peak hour trips – 6.9%. This is way below national averages and shows the limited number of business sites and education trips which have been included.

Obviously, if the base number of trips covered by travel planning is low, the impact will be low. This issues is known as the level of “roll out”. Within a genuine programme of Smarter Choices, larger workplaces are targeted first, but groups of businesses, and indeed whole areas, can be, and need to be, included.

Fortunately it is possible to use the data from the forecasting report to apply the same ESCC levels of reduction, but affecting more businesses. To avoid double counting, the rail and bus benefits assumed by ESCC have been excluded. Thus the level of reduction would result in a variety of responses including walk, cycle and car share, but also generating demand for bus and rail services,

and helping to design them so that they can capture a reasonable number of trips previously made by car.

The results are shown in the Table below.

Table 2
Changes in AM peak hour car trips, ESCC levels of reduction, different assumptions on “roll out”

AM Peak Hour 2028	Base car trips	Varying % workplace trips covered by travel planning		
Journey Purpose		7.1%	25%	50%
Other (inc. education)	9,315	8,979	8,979	8,979
Total workplace	20,399	19,768	15,299	10,200
Car total	29,714	28,747	24,278	19,179
		3%	18%	35%
		Education trips as different % of AM peak hour car trips		
		6.9%	15%	20%
Other	9,315	8,979	8,585	8,341
Total workplace	20399	19768	15299.25	10199.5
	29,714	28,747	23,884	18,540
% reduction		3%	20%	38%

Source: ESCC response to question, MTRU spreadsheet

As can be seen, the peak hour reduction, even at a modest 25% level of roll out across the area, would be significant, at 18-20%. It is worth noting that, even using the pessimistic roll out from ESCC, the level of reduction would be sufficient to allow for all the additional trips from the new development which is said to be dependent on the road scheme (4.1% reduction^{xi} compared to 3.5% additional car trips^{xii}).

Distribution of costs and benefits

Considering the stated aim of benefitting Bexhill, it is surprising that all trips in the Bexhill area, apart from those between Hastings and Bexhill, disbenefit more than they benefit from the road scheme. This should have caused serious concern in terms of economic impact and the key aim of regenerating Bexhill, and rebalancing the position with Hastings. Extracts from the table, from the BAFB Economic Assessment Report, and the zones to which it refers, from the BAFB Forecasting Report, are reproduced below.

What is clear is that moving the pressure on the road network to the West causes significant problems, amounting to a cost of over £8million a year (2002 prices).

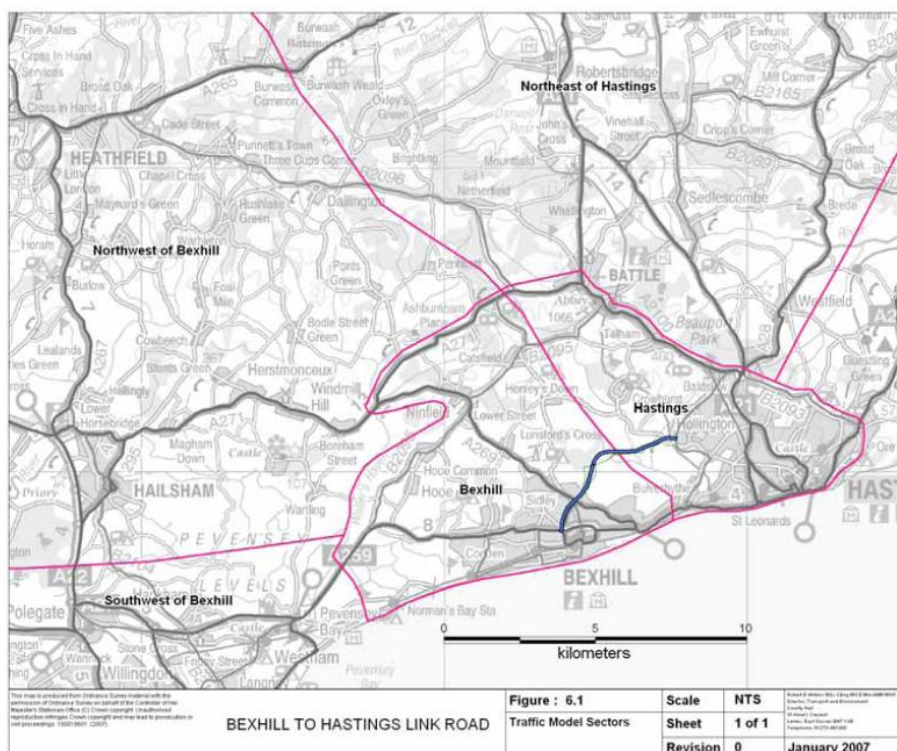
Table 3
Weekday daytime benefits in '000 by sector

	Hastings	Bexhill	SW Bexhill	NW Bexhill	SE Hastings	NE Hastings
Hastings	12,718	55,661	7,247	2,557	377	-4,253
Bexhill	38,944	-19,104	-4,444	-4,214	3,741	8,714
SW Bexhill	27,509	-3,806	64	-218	219	440
NW Bexhill	5,668	-276	312	-22	122	300
SE Hastings	-41	5,139	195	-70	17	-151
NE Hastings	-1,602	14,217	505	241	-210	-44

Source: Table 5-3, BAFB EAR,

Figure 1

Key Zones used in Table 3



Extract from Figure 6.1 BAFB Forecasting Report

While the total benefits outweigh the Bexhill disbenefits, the long term effects, in terms of economic structure, of this imbalance are not explored or reflected in the BHLR appraisal.

Landscape valuation

A key area of uncertainty, and controversy, has been the value applied to the serious damage done to the Combe Haven Valley. It is accepted that this is one of three areas of monetisation that are in an early stage. The others are reliability benefits, and wider economic effects. All are subject to ongoing debates which are not the subject of this report. While indicative costs and benefits can be calculated, they should be treated with caution.

In this case the DfT assigned a cost to the landscape damage of £76.13million. It should be noted that this cannot be said to be the complete damage cost. It is in fact based on a ribbon of land 500metres on each side of the road, which is valued according to its classification, for example, intensive agriculture, extensive agriculture, semi-natural.

This seems to be a reasonable indicator of one type of damage. However it does not cover a whole swathe of effects such as overall views from further away than 500 metres, the scale of the effect in relation to the whole area (the sum is greater than the sum of the parts), the impact of noise in an extensive and very tranquil place. Visiting the site is enough to understand the complex nature of this ancient former estuary. The added archaeological complexity of this being a possible landing site for William the Conqueror means that any construction cost which did not allow for the likely discovery of artefacts leading to archaeological investigation is bound to be too low. It is understood that a contingency sum mentioned at the Public Inquiry is not included in current costs.

While the standard valuation is only part of the picture, there has been an assertion that the DfT valuation was too high by the BHLR consultants.

The first point is that there is some argument that the DfT is too low. It depends upon the idea that damage can be mitigated, for example by planting trees. This may work visually, but is very limited in terms of noise, particularly important in this case. DfT assumed a simple 30% reduction in cost due to mitigation.

The BAFB Landscape report, which at least calls its estimate a “Best Guess” is surprisingly precise about mitigation, applying different levels to different road sections. This in itself could be justified, for example where the road is not within the Combe Haven Valley but leading into it.

It is the high level of mitigation and the precision of the figures used which are worthy of comment. These are as follows:

Section 2	48% reduction
Section 3	75% reduction
Section 4	57% reduction.

The changes reduce the cost to £40.85million, a reduction of 46%. The consultants say

“This has been undertaken by interrogating the Additional Habitat Continuity Drawings (208-31-032)2 and using a rapid AutoCAD calculation to determine the amount of mitigation included within

each of the DfT prescribed Sections.”

In addition, the proximity of the AONB and SSSI are dismissed, for example saying that,

“views from the AONB would be over 1km away from the nearest part of the Scheme, and the movement of vehicles through the landscape from this distance would be barely perceptible”.

This is a very subjective judgement and the idea that any intrusion into a landscape is barely perceptible (in terms of view or sound) at a 1km distance is simply not appropriate in a situation where tranquillity is very high at present, and there are extended views from many parts of the valley which will be interrupted by the road (as evident and recorded during the site visit).

Overall the safest approach is to use the unmitigated value, and set out a high and low mitigation rate where this appropriate. It has to be recognised that sometimes mitigation is simply not a viable option.

A clue to the mitigation cost can be found in the approach to carbon pricing, where DfT and DECC use an “abatement cost”. This is simply the cost of an option which would reduce the emissions of carbon by the required amount. The equivalent in this case would be constructing the road in such a way that any intrusion on the landscape would be minimised. Such an option for BHLR was set out in a consultation leaflet in February 2004. This would still have had a negative landscape cost, but lower than DfT, and would have cost an additional £85million (approximately equivalent to 2002 prices). This should help to put the low landscape value proposed by ESCC into context.

It remains the case, however, that the unique nature of Combe Haven valley, with its estuarial history and thus several small valleys leading into it, and its integrity as a site, is not being properly reflected in the appraisal. The current “moderate adverse” score in the AST is not supported by any independent assessor, including TRL and the original Countryside Commission report. This report reaches exactly the same conclusion^{xiii}, that BHLR would severely damage a unique environmental (and thus economic) asset.

Accidents

The Economic assessment includes a sum for accident savings. Much of this is derived by transferring traffic from roads which have an above average accident rate to the new road which is assumed to have an average accident rate. This is shown in the Table from the BAFB Economic Report reproduced below.

Table 3-2: Accident Rate Comparison

	Local Accident Rate	National Average Accident Rate
A271 (B2096 - A2100)	0.32	0.24
B2095 (B2094 - A2100)	0.37	0.29
Ballards Hill (Henleys Down - Crowhurst)	0.66	0.29
A259 Glyne Gap	0.51	0.24
Scheme – Bexhill end		0.24
Scheme – Hastings end		0.07

The real question is why the existing A259 and other roads have an above average number of accidents, and what could be done about it. If it were associated with a particular behaviour or land use it would not change. If it is due to a lack of remedial design, this should be costed and implemented as part of an alternative package.

The sum of £16.4million is considered far too high because it relies upon a poor performing base.

Overall verdict: **RED**

3.3 Financial case

Since the Expression of Interest the Council has decided to allocate a significant sum of money (£19million) to the BHLR scheme from its own resources. The profile is shown in the Table below.

**Table 4
BHLR Local funding profile**

Expenditure	Pre11/12	2011/12	2012/13	2013/14	2014/15	2015/16	Total
Programme Entry	7.71	0.32	0	0	0.03	1.82	9.88
BAFB	7.76	0.11	4.95	10.57	3.66	1.82	28.87
Increase	0.05	-0.21	4.95	10.57	3.63	0	18.99

Source: BAFB form

In Section 4.7 of the BAFB form several alternatives for Local Authority funding are set out and rejected. These are:

- Tax increment financing
- Tolls
- Developer contributions
- Wind turbines

It goes on to say in Section 4.10

“The local authority contribution required as set out in paragraphs 4.3 and 4.4 will be prioritised and allocated from current and projected medium term resources available. There are no plans to rely on income or third party contributions.”

The precise source of funding is therefore somewhat vague, and since it is from existing resources, must mean that other expenditure is postponed, or that there is a new surplus which has been found. This would of course, be available for other initiatives, for example building on the successful projects already undertaken to regenerate Bexhill and Hastings. There is an opportunity cost to this money which is not considered in the BAFB.

The key point is that, given

- a) the high potential benefits from a Smarter Choices package,
- b) that such a package would cost less than the local authority contribution to the BHLR, and
- c) there are significant disbenefits to many trips in Bexhill and connected areas to the West,

in relation to the scheme objectives and strategic objectives, the local money set aside for the BHLR would be better spent on an alternative package.

Overall verdict: **RED/AMBER**

4 Detailed modelling issues

Limited bus network and consequent problems

The modelling for the BHLR only includes bus services which pass through Glyne Gap, of which there are two. The reason for this is to avoid complex modelling and focus on conditions through Glyne Gap on the A259.

This creates issues of sense, for example if car users transfer to bus elsewhere car trips would change their routing patterns in the model (as well as real life), and of model structure, for example undertaking variable demand modelling over the whole network with only a small part of the bus network in place. It is not clear from the analysis we have undertaken in the short time available how this has influenced other modelling issues, for example the extensive work undertaken on cost damping to get Diadem to behave within the desired parameters. Diadem is the part of the model which decides mode share and destination choice.

With only two routes, the bus mode share, for example, is incredibly low. It remains at 1% in 2011, and the same in 2015 and 2028. Obviously in reality there is far more bus use, it is just missing from the model. Rail use is more reasonable, at 10-12%. Walking and cycling are not included in the model, despite the obvious potential. It is important to remember that the choice of destination is a key factor in the process of variable demand modelling, as used in this case.

Car journeys which are too long to walk, or to cycle, can be replaced with journeys to similar destinations which can be. An example would be walking to shop to buy a paper instead of driving to a more distant shop. This combination of changing mode and destination at the same time is common in reality, but is difficult for models to replicate because they operate sequentially. It is possible to imitate the effect, but this has not been done and is not necessarily reliable. This is why Smarter Choice modelling is often done by adjusting the number of trips of different types (commuting, school run, shopping etc) using benchmarks (i.e. x% reduction of y number of trips). This is exactly what ESCC did for their Smarter Choice test.

This leaves the problem of how the limited bus network has itself limited the impact of bus use in the model. It is hard to know exactly what the impact has been, but it is clear that, for the modelling to be robust, the full network should have been included, at least in the Hastings and Bexhill area.

Distribution of time savings by size

The modelling for the Public Inquiry (PI) and the BAFB show significant differences. These are set out in the Table below, although the time categories were different for the PI and the BAFB, the <2minute category is very different. At the PI the benefits and disbenefits to drivers in this category pretty much cancelled each other out, in the BAFB there is a large negative figure for non-work users. This is shown in the Table below. The fact that there should be widespread disbenefits for some users seems logical, given that the BHLR begins and ends in busy urban road networks and in view of the sectoral analysis set out earlier. The fact that the modelling can change so much, shows that there may well be some instability in the interaction between the assignment and redistribution parts of the model. This in turn may be linked to the bus network problem, bus mode share, and issues around stabilising Diadem.

Table 5
Time savings by size of saving, Public Inquiry and BAFB

Total Benefits: BAFB total £,000 (2002 prices)				
	0 to 2min	2 to 5 min	>5 min	Total
All users	-27209	72929	122286	168006
	-16.2%	43.4%	72.8%	100%
Benefits 2013 PI				
All users	0 to 2min	>2 min		
<i>Losses</i>	-3.668	-0.073		
<i>Gains</i>	4.03	4.239		
Total	0.362	4.166		4.528
	8.0%	92.0%		100%

What can be said with confidence is that the modelling outputs are clearly very different from those presented at the Public Inquiry.

5 Summary of Conclusions

The scheme fails in 3 of the 5 cases:

Does not achieve strategic objectives: especially failure to meet carbon targets, development is predicted to be unsustainable in terms of mode share, severe environmental damage to unique area of Combe Haven

Likely poor value for money since: no alternatives considered, high landscape damage costs, model has produced variable results

Uncertain local authority finance and alternative uses not assessed.

Recommendation

A programme of smarter choices leading to revised bus services which would meet local needs and a programme of rail improvements, starting with a new station at Glyne Gap and investigation of a faster rail link from Bexhill to London, should be developed as soon as possible.

This would cost less than the Local Authority's proposed contribution to BHLR and allow more cost effective use of DfT's funding for the Development pool.

References

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- ⁱ Ministerial decision of 27th April 2011
- ⁱⁱ <http://www.dft.gov.uk/webtag/index.php>
- ⁱⁱⁱ The Green Book is the starting point for all appraisal across Government Departments. It is clear about why any Government intervention should be contemplated. First the objectives are defined. These are not scheme specific, thus building a piece of infrastructure is not an objective, it is only valued as a means to achieving an objective.
- “5.1 The purpose of option appraisal is to help develop a value for money solution that meets the objectives of government action. Creating and reviewing options helps decision-makers understand the potential range of action that they may take.”*
- And under “Creating Options, it goes on:
- “5.3 This step involves preparing a list of the range of actions which government could possibly take to achieve the identified objectives. The list should include an option where government takes the minimum amount of action necessary (the ‘do minimum option’), so that the reasons for more interventionist actions can be judged.”*
- ^{iv} For example see: *Prioritising Transport Investment in England*, 30th June 2011
- ^v *The Transport Business Case*, DfT, April 2011
- ^{vi} See para **2.13**
- “At the top of the pyramid (tiers 1-2) are transport greenhouse gas emissions in total, and by transport mode. Since we are ultimately aiming for total greenhouse gas emissions to reduce, it will be important for overall transport emissions to decrease. However, we may expect relative mode shares of transport emissions to change with some potentially increasing, for example if we saw significant modal shift to lower carbon modes. It is a reduction in the level of overall transport emissions that is important.”*
- ^{vii} *Transport and the economy: Government response to the Committee’s Third Report of Session 2010–12, May 2011*
- ^{viii} For example, Webtag says of reliability (Unit 3.5.7)
- “This Unit represents the current state of knowledge. This is a rapidly developing area where we are likely to learn from further research.”*
- Wider Economic Impacts is a consultation unit (3.5.14), the status of which is described as follows:
- “It may change substantially before being released as ‘in draft’ guidance. Guidance reflects the findings of current research, experience from professionals working in the area in the UK and in other countries. Through the consultation period, this Unit is under review and so we would like to hear from you where the advice may be improved.”*
- ^{ix} <http://www.saga.co.uk/newsroom/press-releases/2010/up-to-800-new-jobs-as-saga-commits-to-hastings.aspx>
- ^x LTP1 Appendix L, Bexhill and Hastings Package, 2002 prices
- ^{xi} See *Note on Smarter Choices Modelling* as supplied by ESCC in response to questions for this report
- ^{xii} See paragraph 7.5.1 and Table 7-7 from *Public Inquiry Proof ESCC 6/1 Transport and Economics, Ian Johnston, October 2009*
- ^{xiii} A comprehensive set of MTRU photographs from lines of sight along the line of the road from the valley and the 1066 path are available.