SC1 - Scheme Description and Plan(s)

Key Elements of the Scheme

- The Hereford Transport Strategy (HTS) will provide significant benefits to Hereford, the Marches region and the wider economy. The scheme is a package that combines the provision of a much needed relief road with interventions to make Hereford easier to move around.
- There will be traffic calming on major roads in the Hereford area in combination with providing an alternative route from the south and north of the city known as the 'Western Relief Road'.
- Congestion will be eased on the A49 & A465 and at key junctions on these roads. This will improve urban areas of Hereford by:
  - Reducing severance on main roads in urban areas;
  - Reducing air and noise pollution which is a direct consequence of traffic volume reductions and the removal of most HGV traffic from residential and commercial areas;
  - Enabling better public transport services which run on less congested roads.
- The relief road will enable further development at the Hereford Enterprise Zone (HEZ), by reducing congestion, thereby attracting investment. The linking of the A465 to the A49 without the need for vehicles to travel through the congested Wye Bridge link provides significant journey time savings.
- Large proportions of traffic, especially HGVs, will be redirected away from the City Centre which will:
  - Provide a safer and more pleasant environment for visitors and promote shopping.
  - Enable commercial development.
  - Protect the city's heritage assets.
- The scheme will increase the capacity for commercial and residential development in the city core and the emerging modern retail expansion in the city.

Summary Plan

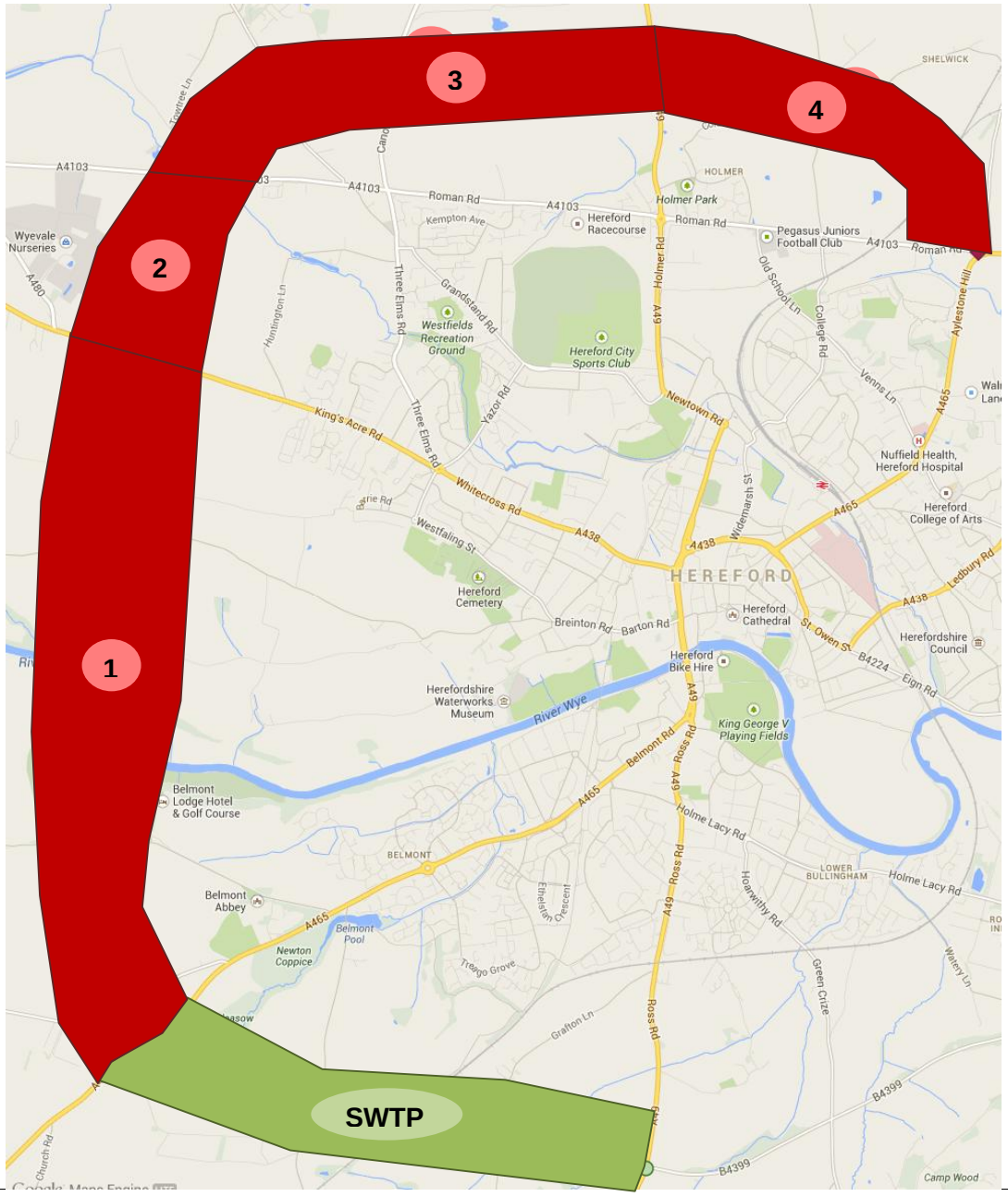
- The Western Relief Road is to join north and south of Hereford, comprising of the following sections which predominately go through open countryside:
  1. Wye Link
     - From A465 south west of the city (end of SWTP) to A438 west of the city.
     - Route requires a second crossing of the River Wye.
  2. Three Elms Link
     - From A438 west of the city to A4103 Roman Road north west of the city.
  3. Holmer West Link
     - Rejoins the relief road to the A49 in the north of the city, north of Starting Gate junction.
  4. Holmer East Link

SC1 - Scheme Description and Plan(s)

- Continues from the A49 to the A4103 Roman Road to the north east of the city.

- Connects to the South Wye Link, assumed to be already in place following implementation of the South Wye Transport Package.
- Provides an additional crossing of the River Wye.
- Additional online improvements along key trunk roads, such as the A49 & A465.

Scheme Drawings



SC2 - Problems and Evidence of Scheme Contribution to their Resolution

Transport Problems

- Congestion on main trunk roads leads to an average speed of 5 mph through Hereford on the A49 during peak periods. The provision of the relief road between would increase A49 end to end speeds to 20 mph southbound and 19 mph northbound.
- There have been significant impacts on the economy as a result of incidents on the River Wye crossing, which is a critical capacity limitation on the road network. This has resulted in Hereford coming to a standstill through accidents, breakdowns, bridge strike or maintenance works. The level of resilience in the roading network is low.
- High proportion of car usage for short distance trips, the 2001 census revealed that 50% of travel to work is a car trip less than 5 km in length.
- Large volume of traffic on main trunk roads hinders access to public transport and use of other modes of transport.
- Poor public transport access to rural areas.
- Congested access to and egress from REZ, especially via City Centre.
- High level of congestion at key junctions, such as Starting Gate junction (A49).
- Congested City Centre used as through route for high volumes of traffic, including HGVs.
- No quick, direct access between outer regions of the City.

Wider Policy Problems

- MOSAIC study shows 45% of South Wye areas (such as Belmont) are in the worst group with regards to social deprivation. Indices relevant to transport that score poorly in these areas are:
    - Car Ownership
    - Obesity (busy roads make walking and cycling difficult and unsafe)
    - Access to public transport
- Market failure:
    - Major congestion on the A49 is the key factor holding back development of 3000 houses in south Hereford. The Highways Agency have recently recognised the A49 as 77th worst for journey time reliability in the country.
    - Smaller schemes have been assessed aimed at enabling further development at the HEZ. These indicate that the ability to provide additional capacity or net benefits from these proposals are negligible. Only 8% of the proposed development at HEZ can be realised by 2018 through online options.
    - High proportion of housing growth to the north of the city, currently poor access to this area and near to key network pinch points including Starting Gate junction.
    - Proposed employment and residential development in Three Elms area.

Contribution of the Scheme to Problem Resolution

CONTEXT	INPUT	OUTPUT	OUTCOMES	IMPACT
Trunk road Congestion	HTS	Alternative, more direct route between City regions.	Significant reduction in traffic volume on key roads, such as A49, A465, A438 & A4103.	Improved journey times around and into the City.
Low resilience in network		- Second river crossing - Lower traffic volumes using A49 river crossing	A49 crossing is less of a capacity pinch point and also less critical.	Reliability of network increases, reducing negative economic impact of closures and increasing reputation of area for business.
- High car use for short trips - Poor access to public transport and other modes of transport - Poor public transport access to rural areas		Lowering traffic volume on main roads through urban areas	- Improved severance enabling better and safer access to public transport - Better public transport services enabled on less congested roads	Subsequent reduction in traffic volume, further improving situation.
Congestion at key junctions		Alternative routes to existing trunk roads	Reducing demand at junctions between key trunk roads (Starting Gate junction)	Housing growth to the north of the City no longer restricted by Starting Gate junction (A49)
		Alternative route around	Large volumes of traffic (especially	Removing necessity of

	Congested City Centre		City Centre	HGVs) don't travel via City Centre	car travel via City Centre increases feasibility of sustainable – transport-modes-only schemes.
	Social deprivation in South Wye areas		Improved public transport services and improved severance owing to lower traffic.	Sufficient alternative transport to cars will reduce impact of low access to cars. Improved severance will enable more walking, cycling and better use of public transport.	Lowering social deprivation, increasing opportunities, standard of living and land value.
	Market failure		- Congestion eased on existing trunk roads - New, direct, faster access to more remote development areas.	- Further development enabled in HEZ - Development of 3000 houses can begin in 2015 - Employment and residential developments enabled in more remote Three Elms area.	

SC3 – Consequences of Failing to Implement the Scheme

Consequences in the Absence of the Scheme

Market failure - Congestion on the existing trunk roads and some key junctions will continue to hold back commercial developments at the HEZ, city centre and commercial/residential developments to the south, north and north west of the City.

Worsening car use problem (especially short trips) – increase in traffic will lower accessibility to public transport and use of roads for walking/cycling. This will result in more car use and a continually worsening situation.

Extended social deprivation – As more reliance is placed on cars for transport, areas of Hereford will become further isolated and deprived, which will be detrimental to the quality of life of residents.

Resilience of network decreases – Increased traffic and congestion will increase the risk of a network failure resulting from the critical single river crossing being closed and additionally the severity of such an occurrence. This will decrease reliability of the network and deter investment both commercially and from future residents.

City Centre image damaged – If traffic passing through the centre isn't lowered (let alone increased) the appeal to live and shop in Hereford City Centre will be damaged. In addition to the detrimental effect to user-experience, heritage assets will be damaged by HGVs travelling in close proximity of them.

SC4 – Aims and Objectives

Scheme Objectives

Summary of how the HTS will achieve the local objectives detailed in the Local Transport Plan (LTP) and Local Development Framework (LDF) and linked to regional and national objectives.

LOCAL OBJECTIVE	RELEVANT ASPECT OF HTS SCHEME
LTP 1a	Migrating traffic to relief road will improve severance on existing trunk roads, enabling walking to destinations and access to public transport stops – reducing the reliability on cars for easy/safe travel.
LTP 1b	Providing alternative route around the City Centre will reducing traffic volume through historic core, especially HGVs which cause most detrimental noise, sound and vibration effects.
LTP 1c	Inner city roads less congested, existing buildings more appealing to commercial investors and surrounding areas able to be used for expansion of shopping areas as access is improved by outer relief road.
LTP 1d	Relief road enables quicker access to Rotherwas and increases catchment, improving the standard of companies likely to invest.
LTP 2a	Large proportion of traffic would be using a brand new road. Wear and tear reduced on existing roads by shifting volume and especially the most demanding traffic (HGVs)
LTP 2b	Better access around City for those in rural areas. More pleasant access via either car or public transport from rural areas to city centre as existing roads become quieter.
LTP 2c	Relief road can be supported by circular bus route for quick, direct access between zones. Durations of longer distance journeys into city centre via public transport will be shortened as congestion is lowered.
LDF 1d	- More direct routes lessen extent of travelling. Improved severance, public transport access and cycling/walking conditions will reduce need for personal travel. - Relief road will facilitate the provision of developments within suitable distance from facilities by increasing the number of roads which are fit for walking, cycling and quick public transport – therefore increasing possible locations for such developments.
LDF 1e	- See LTP 2b - Introduction of relief road will reduce volume of traffic and subsequently amount of standing traffic. Especially relevant to types of traffic with most detrimental impact on space and air quality (i.e. HGVs)
LDF 2b	- Relief road & second river crossing provided. - This will also enable optimum Park and Ride facilities around outer zones and reduce congestion entering city centre to speed up the park and ride services into the centre. - Bus priority will be enabled by lowering volume of traffic on trunk roads, making it feasible to restrict a lane to busses (and bikes).
LDF 3b	Offering a more direct and efficient route of transport for the majority of traffic going to existing and planned developments.
LDF 3c	- See LTP1b for built, historical and cultural assets. - HTS will have some detrimental effect on natural areas owing to the construction of a relief road; however the impact of this can be managed through careful highway design, improving on the current situation of congestion on trunk roads through rural areas.

Contribution to Wider Objectives

Hereford LTP and LDF overarching objectives:

LTP Overall Objectives	LDF Overall Objectives
LTP 1: Reduce congestion and increase accessibility without relying on the car LTP 2: Maintain access for rural residents and those without car access.	LDF 1: Social Progress LDF 2: Economic Prosperity LDF 3: Environmental Quality

Hereford LTP and LDF sub-objectives and their relevance to wider objectives:

Local Objective	Objective Description	Relevant National Objective(s)	Relevant Regional Objective(s)
LTP 1a	Reduce short distance car based trips	DT 1 NR 3, 4, 5, 7 DCLG 2, 3	LTB 1b
LTP 1b	Reduce impact of car access in historic core	DT 2,3,4 NR 6, 9 DCLG 2, 3, 6	LTB 1a
LTP 1c	Support regeneration of central area by facilitating expansion and ensuring integration with existing shopping areas	DT 3, 5 NR 6, 8	LTB 1a
LTP 1d	Support successful investment in jobs at Rotherwas Enterprise Zone	DT 3, 5 NR 1, 6, 9	LTB 1a, 1c, 2, 4
LTP 2a	Ensure County's highway network remains fit for purpose and safe	DT 2, 3, 4 NR 8, 11 DCLG 1	LTB 1a, 1c
LTP 2b	Review transport services to ensure access provided for those in need	DT 4 NR 8 DCLG 3, 5	-
LTP 2c	Provide alternatives to cars for longer distance commutes	DT 1, 4 NR 2, 3, 8 DCLG 2	LTB 1a, 1b
LDF 1d	Lessen harmful impacts of traffic growth by: - Reducing need to travel - Locating developments within suitable distance of facilities to enable walking, cycling or public transport.	DT 1, 4 NR 3, 7, 8 DCLG 2	LTB 1b
LDF 1e	Ensure new developments support an accessible, integrated, safe and sustainable transport network, to: - Improve access to services in rural areas - Improve movement and air quality within urban areas	DT 1-5 NR 3, 7, 8, 9, 11 DCLG 2, 3, 5	LTB 1a, 1b
LDF 2b	City expansion with balanced transport measures including park and ride, bus priority schemes and a relief road including a second river crossing.	DT 2, 3 NR 6, 8, 9 DCLG 1	LTB 1a, 1c, 2
LDF 3b	To address the causes and impacts of climate change by ensuring new developments are sustainable.	DT 1 NR 2, 3, 4, 5, 7 DCLG 4	LTB 1b
LDF 3c	To conserve, promote, utilise and enjoy our natural, built, historic and cultural assets for the fullest benefits to the whole community	DT 3 NR 1, 6, 9 DCLG 6	LTB 2, 4

Wider Objectives

1 NATIONAL OBJECTIVES

1.1 (DfT WebTAG)

DfT Objective	Objective Description
DT1	**ENVIRONMENT** – To protect and build the natural environment
DT2	**SAFETY** – To improve safety
DT3	**ECONOMY** – To support sustainable economic activity and get good value for money
DT4	**ACCESSIBILITY**- to improve access to facilities for those without a car and to reduce severance
DT5	**INTEGRATION** - to ensure that all decisions are taken in the context of the Government's integrated transport policy

1.2 Highways Agency

Currently fulfils the same objectives as WebTAG. Route Based Strategy (RBS) including A49 yet to outline objectives, expected in 2015.

1.3 Network Rail

All Network Rail objectives can be grouped under DfT objectives:

Relevant DfT Objective	Network Rail Objective(s)	Objective(s) Description
DT1	NR2 NR3 NR4 NR5 NR7	- Efficient use of natural resources; - Energy efficient; - Low carbon energy; - Resilient to changes in climate; - Reduce air, water & land pollution
DT2	NR11	- Health and safety
DT3	NR1 NR6	- Value for money; - Manage land as to increase value
DT4	NR8	- Improve accessibility and inclusivity
DT5	NR9	- Positive contribution to neighbours and communities

1.4 Department for Communities and Local Government (NPPF Objectives)

The Department for Communities and Local Government (DCLG) has many overarching objectives similar to DfT.

Transport specific objectives below:

Relevant DfT Objective	DCLG Objective(s)	Objective(s) Description
DT1	DCLG 4	- Incorporate facilities for charging plug-in and other ultra-low emission vehicles

DT2	DCLG 3	- Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones
DT3	DCLG 1 DCLG 6	- Accommodate the efficient delivery of goods and supplies - Conserve heritage assets
DT4	DCLG 2 DCLG 5	- Give priority to pedestrian and cycle movements, and have access to high quality public transport facilities - Consider the needs of people with disabilities by all modes of transport
DT5	Overall statement is to 'support local strategies to deliver sufficient facilities and services'.	

2 REGIONAL OBJECTIVES

2.1 Marches Local Transport Board (LTB) – Relevant Strategic Objectives

Relevant DfT Objective	LTB Objective(s)	Objective(s) Description
DT1	LTB 1b	- Reduce carbon emissions
DT2		
DT3	LTB 1a LTB 2 LTB 4	- Deliver the transport priorities needed to support the adopted economic growth of the Marches Sub-Region - Work with the LEP to secure access to other transport funding opportunities - Scrutinise business case work submitted by the scheme promoters, with particular regard to deliverability and value for money
DT4		
DT5	LTB 1c	- Deliver the transport priorities needed to support the transport strategies of the Marches sub-region.

SC5 – Key Beneficiaries

Groups of People

- *The key beneficiaries of the scheme include:*
  - Visitors to Hereford will be better able to get to and move around the city.
  - Improved access to the City will increase the number of visitors.
  - Residents that are being bypassed by traffic on the WRR who will see less traffic, fewer HGVs, improvements in air quality and greater opportunities to use active transport modes which will enhance health and fitness;
  - Users of public transport into and within the city that will benefit from lower volumes of traffic and congestion on their journeys
  - Unemployed residents as the ability to deliver employment land will improve their opportunities to find work.
  - Through traffic which will no longer be trapped in city bound traffic.

SC6 – Communications, Consultation and Stakeholder Management

Communications Strategy

- The HTS Communications Strategy was activated in May 2013 with the Project Initiation Document from HC. That document set out the key communications required to take the project forward. This has been supplemented by the direction of the Project Board.
- Methods of communications will be through a combination of letter, email, press releases, public events, workshops, formal public consultation and through the Herefordshire Council website.
- The key stakeholders have been grouped into the following, with a full list of stakeholders available on request:

Key Stakeholders	
Group	**Members**
Client - Management	• Director for Places & Communities • Assistant Director Place Based Commissioning • Project Steering Group
Client - Technical	• Project Manager • Transportation Department • Economics Department • Property Department • Conservation Department • Forward Planning Department • Development Control Department
Statutory Authorities	• Highways Agency • Environment Agency • Natural England
Elected Representatives	• Cabinet Members • Local Councillors
Non-Statutory Authorities	• Utility Service Providers (BT / E-On / Welsh Water etc.) • Emergency Services
Others	• Landowners (directly affected) • Local Resident (indirectly affected) • Community Groups • General Public

- The key messages for the project will change over time. There are however a number of high level issues that have been identified early and had mitigation measures developed to deal with these. They are summarised below:

Key Issues	
Issue	**Detail**
Community Expectations	• Need for information / involvement
Historical Issues	• Previous issues / legacies (i.e. Rotherwas Access Road) • Dissatisfaction from landowners with respect to options / preferred route selected
Other Projects	• Need for a consistent approach between different projects (i.e. Destination Hereford)
Environmental Impacts	• Ecology • Noise • Air Quality • Water Quality • Visual Amenity
Engineering Impacts	• Construction (noise / vibration) • Access to property / land • Local traffic movement
Social Impacts	• Visual and noise impacts – changes to recreational amenity

- The current stage in the development process for the scheme is Stage 2 of the 7 stage process summarised below:

Stage 1 – Preliminary Option identification

Stage 2 – Preferred Option identification

Stage 3 – Statutory Procedures

Stage 4 – Pre-Contract Design Stage

Stage 5 – Contract Award Stage

Stage 6 – Construction Stage

Stage 7 – Post-construction Stage

- The purpose and type of communications for each stage will vary. The current stage key objectives and purpose are shown below:

Objectives

1. Update relevant stakeholders.
2. Inform relevant stakeholders of progress on the development of a preferred route and gain feedback as part of the scheme development process.

Stakeholders could include:	Purpose:
Affected Landowners Landowners	• Advise on likely impact on property • Advise on compensation, mitigation measures, accommodation works etc. • Advise on land acquisition process • Entry permission for surveys
The Public Local Residents Local Lobby Groups Local Traders Road Users	• Detail the basis for selecting the preferred option • Detail the preferred option • Seek feedback on preferred option • Outline the next stage – "Statutory Procedures" • Confirm the benefits of the scheme • Reaffirm timescales for the scheme
Elected Representatives Local Council MP's	
Other Interested Parties Consultees to Environmental Statement	• Seek comment on the proposals

Consultation

- The Communications Plan proposes to keep stakeholders informed on the progress of the project and to gain feedback. This will be actively achieved through engagement by public meetings, workshop and information drop.
- The WRR in particular has a high profile locally in the media and amongst the population. A key important communications approach is to manage the likely level of interest to take account of the wide interest groups. All communications will be recorded in a central register to enable ongoing engagement with interested parties.
- Key changes in the project will be communicated as required and through a regular series of information drops. Decisions on when and how to communicate are made in the Project Control Group meetings and, when required, through the Board.
- Information provided to the public will be in a non technical format and available in a variety of accessible means.

Stakeholder Management

- The communications will be targeted at a variety of different audiences as outlined above. This will be particularly important for the directly affected parties who require more detailed information.
- The general public will be able to engage with the project through public meetings and open days at which they can register their feedback.

SC7 - High Level Constraints and Inter-dependencies

Constraints and Inter-dependencies

- Please provide a brief summary of any high level constraints and inter-dependencies upon which the scheme relies, possibly to include:

- The most significant scheme within the package – the Western Relief Road – requires Local Development Framework (LDF) policies to allocate land for its route and residential development policies to include the requirement for contributions to the scheme. Other smaller schemes, including car parks for park and ride or park and cycle will also require planning policies to allocate land. The LDF has yet to be adopted, so there is a risk that these policies may not be achieved.
- There are no substantial technical constraints as the scheme is standard highway and structures.
- The package is linked to a number of developments in Hereford, which cannot be delivered without the scheme. Contributions to the scheme costs will be secured through the planning process.
- Other than the developer contributions the scheme will require funding from the LEP. There are no non-public sector contributors.
- The package primarily relies upon the Southern Link Road being delivered as part of the South Wye Transport Package.

SC8 – Option Assessment Report (OAR)

Option Assessment Report (OAR)

- A full OAR was prepared in 2003 identifying the key problems and those options best placed to mitigate.
- This work indicated that a package of multi modal measures was required to meet Herefords growing transport problems. The blended package as it was known, required the following elements to provide a balanced network:
  - Walking – Review of footway provision and pedestrian crossing facilities, dropped kerbs, pedestrianise city centre.
  - Cycling – Completed network of cycle routes covering all main radial direction.
  - Public Transport – Four park and ride schemes implemented. Monday to Saturday each week. Major bus priority on all radials and Inner Relief Road. Signal priority at junctions for buses. New rail stations at Rotherwas and Withington.
  - Highways – 20mph zones in residential areas. Junction improvements to accommodate bus priorities. Western distributor road
  - Parking – In accordance with Herefordshire Council Parking Strategy, ensure PNR/Publicly available balance is biased in favour of publicly available through development control. Increase existing provision to 2800 off street spaces and 800 Park and Ride spaces. Introduce on street charging related to Park and Ride provision.
  - Behavioural Change – Persuade 6% of car drivers by 2011 and 12% by 2031 to change mode over and above scheme generated modal shift.
- The OAR has been supplemented over time by a number of update reports. A selection of those are referenced below, representing a significant investment in understanding the implications of a relief road:

Table 1: Background Studies	
Report / Study	**Date**
Rotherwas Enterprise Zone – Base Transport Assessment	April 2013
Hereford Relief Road Study of Options, Interim Forecasting Report Addendum: Reduced Housing and Employment Option	January 2012
Hereford Relief Road Addendum to Study of Options Environmental Assessment Report	September 2011
Hereford Relief Road Study of Options	September 2010
Hereford Relief Road Interim Forecasting Report, Sustainable Option Packages	August 2010
Stage 1 Assessment Report, Herefordshire Council, Hereford Relief Road (Issue 2)	August 2010
Highways Agency (HA) – Hereford Enterprise Zone, Draft Local Development Order Consultation	May 2010
Rotherwas Industrial Estate Phase 1 & 2 – Transport Assessment	May 2010
Rotherwas Access Road Annex E Submission – Traffic Forecasting Report	July 2004
Rotherwas Access Road Annex E Submission – Local Model Validation Report.	July 2004
Rotherwas Industrial Estate Access Study	June 2000

- A key change for the relief road was the award of an Enterprise Zone to Hereford. This meant that the there was additional market pressures to prioritise the Southern Link, a key lead infrastructure requirement. This is not included in the HTS as it is being progressed separately by HC.

Economic Case (EC)

EC1 – Scope of Modelling and Economic Appraisal

Appraisal Specification Report (ASR)

- See attached.

EC2 – Value for Money (Transport User Benefits)

Transport User Benefits

- *The proposed package will deliver benefits as follows:*
  - Journey time savings for business users, individuals and transport providers through the provision of additional highway capacity reducing city congestion and providing a bypass for non-Hereford traffic.
  - The additional capacity will reduce the contribution that incidents and congestion make to reliability
  - A substantial increase in employment land will lead to additional jobs which in turn will regenerate both employment and residential areas of the city due to additional income being spent.

- The highway scheme elements of the HTS have been assessed and have the following BCR values taken from Herefordshire Transport Strategy – Prioritisation Study (JMP, 2014):
    - Wye Link: 13.39
    - Three Elms: 8.73
    - Holmer West: 12.04
    - Holmer East: 7.81
    - Half Moon (Wye Link to Holmer West): 12.6
    - Full route (Wye Link to Holmer East): 10.5
- The above BCR elements are under review by Herefordshire Councils consultant.

Appraisal Summary Table

- Although the AST is not required at this stage we have used it as a template to guide the initial assessment of the various issues that need to be addressed. It should be noted that this is an initial assessment based primarily on qualitative work.
- The full AST will be completed as per DfT guidance, at the Outline Business Case stage (see DfT (2013) "Transport Analysis Guidance – Guidance for the Senior Responsible Officer" para 1.2.10).
- The preliminary AST is attached.

EC3 – Value for Money (Wider Economic Benefits)

Wider Economic Benefits

- *What will be the impact of the package on wider economic benefits, for example:*
    - There will be a positive reduction in the costs of travel to businesses, as freight to the B2 / B8 sites at HEZ will experience less congestion, freight serving the light industries and retailers in the city centre will experience less congestion and business travellers will have faster and more reliable journeys due to additional capacity being provided in the highway network.
    - It is unlikely there will be new markets opened up which were previously unviable because of transport barriers.
    - There will be the removal of substantial barriers to inward investment which are primarily associated with transport challenges on the A49 corridor – this applies to both residential and employment development.
    - Several sites will become viable – residential sites at #### and employment sites at the HEZ, Three Elms Trading Estate, Three Elms urban expansion and Westfield trading estate with the potential for 5134 jobs to be created (JMP draft report table 5.1)
    - There will be little impact on access to employment markets.
    - The package does not contribute to keeping people in education, but stronger local businesses are more likely to keep them in employment.
    - It is unlikely that there will be a direct impact of the scheme on the

ability for local businesses to do business with one another.

Economic Indicators

- Creation of jobs is taken from JMP study and is estimated to be 5,000 jobs – based on both the Southern Corridor Link and the Western Relief Road being in place when compared to neither being provided.
- Housing land will become available as constraints on development rate related to highway capacity issues will be removed, each development will include affordable housing.
- Increases in business to business transactions within the Marches as the main scheme in the package removes the barrier of the congested A49 within the Hereford city boundary.

Appraisal Summary Table

- Although the AST is not required at this stage we have used it as a template to guide the initial assessment of the various issues that need to be addressed. It should be noted that this is an initial assessment based primarily on qualitative work.
- The full AST will be completed as per DfT guidance, at the Outline Business Case stage (see DfT (2013) "Transport Analysis Guidance – Guidance for the Senior Responsible Officer" para 1.2.10).
- The preliminary AST is attached.

EC4 – Value for Money (Environmental Impacts)

Environmental Impacts

The follow information below has been established by reviewing the existing environmental assessment and survey work undertaken to date to support the Strategic Outline Case.

Noise

The study area (600m either side of the off route and on route options) currently experiences low levels of background noise, being dominated by the local road network and villages around the outskirts of Hereford. The greatest volumes of traffic are on the A49, the main route through Hereford. There is also the A438 and A4103 that will contribute to background noise to varying degrees. There are a number of minor roads in the study area with lower volumes.

Sensitive receptors in the area are generally houses. Non residential sensitive receptors are along the online routes, A49 and A465 in particular.

There is likely to be a considerable rise in noise levels for sensitive receptors close to the off route options during the construction stage, however this will only be temporary. All sensitive receptors will experience an increase in noise levels from the operational phase of all the off route options.

Air Quality

The study area is located in a rural environment, dominated by the local road network and villages around the southern and western outskirts of Hereford City

Centre.
The nearest continuous monitoring station is located within the Air Quality Management Area (AQMA) on Edgar Street in Hereford City Centre. Hereford City AQMA has been designated within the City of Hereford, covering the A49 from Blackmarstone to Widemarsh and part of the A438 joining the A49. The AQMA is linked to road traffic emissions and is for exceedence of the annual mean nitrogen dioxide (NO2) objective. Herefordshire Council report that the AQMA is likely to be extended soon as a result of diffusion tube monitoring showing exceedance of the annual mean NO2 objective along the A438.

The construction phase of any of the off route options is likely to generate a considerable amount of nuisance dust, however this will only be temporary. The operational phase would see an improvement in air quality in areas currently experiencing high levels of vehicle congestion. Implementation of sustainable transport options will help improve air quality by encouraging cleaner modes of transport.

Greenhouse Gases
The amount of greenhouse gases produced is related to the length of the route as emissions are dependent on vehicle kilometres travelled. Therefore the longer the route, the more emissions will be produced.

Landscape
There are visual receptors where residents, road users, cyclists, ramblers and commuters will be able to view the construction phase of the off route options. Road users will also be affected by the construction works where the tie in of the new route links to existing routes.

All visual receptors will be affected by the construction phase since they all experience views of the site however some properties have limited views due to the mature planting within their private garden areas and through the natural topography of the land. The distance to the proposed route will depend on the preferred option chosen and will of course affect the effect on each receptor. Construction machinery, materials and stockpiling of topsoil will alter the conditions, views and visual amenity that the receptors enjoy at the moment.

As the scheme involves the building of a new road within a rural setting which is mainly agricultural land. For most of the properties, the distances between properties and the new road will change. Visibility from several over receptors will be increased through the removal of the trees and hedgerow and the re-contouring of the land.

The introduction of replacement tree planting and mixed species hedgerow should help screen the new road within the landscape and enhance biodiversity.

Townscape
The introduction of a bus lane and the widening of the carriageway will result in a minor change in layout at a very local scale. The effects are likely to be felt most by residents who stand to lose some of the garden space from the front of their properties as a result of widening.

The sustainable transport elements of the Transport Package will have slight adverse effects on the layout and appearance of the townscape, and slight beneficial effects on the human interaction characteristics of the townscape. The magnitude of the effects on the layout and human characteristics are assessed as minor, whilst the magnitude of effect on the appearance of the townscape is negligible. All of these effects are experienced only at a local level and will not significantly effect the wider townscape of the area. Therefore the overall effects of these elements are assessed to be neutral.

The offline options will have no indirect beneficial effects on the townscape of the area.

Heritage

There were no impacts on Scheduled Ancient Monuments by any offline or online options; they all are assessed as having a slight/slight to moderate impact on Listed Buildings.

All offline options would have an unknown impact upon the sites of findspots.

There is the risk that unknown archaeological remains may be encountered during ground-breaking operations. Discussions should be held with Herefordshire County Archaeologists to determine and agree a practicable approach to limiting and mitigating this scenario.

Biodiversity

A review of biodiversity is in progress. Previous work has indicated the most significant effect that the offline sections will have on biodiversity is the reduction and fragmentation of semi-natural woodland stands.

Most of the habitat types removed through creation of an offline section will be of lower importance and therefore are of minor significance to the local biodiversity. These habitats include arable land and improved grassland fields, both of which are very common in the local area. The areas of these habitat types lost are an extremely small fraction of that of the total areas in the local vicinity. Loss of these habitat types is of minor significance to local biodiversity.

Water Environment and Flooding

The study area falls within the Wye catchment located within the Severn River Basin District, the third largest river basin district in England and Wales which covers an area of 21,590 km

As well as the River Severn and its main tributaries, the Avon and the Teme, this district includes rivers in southeast Wales, including the Wye, the Usk and the Taff and others which discharge to the Severn Estuary.

The Environment Agency Flood Zone Map illustrates the worst-case scenario as it does not include the effect of any flood defence structures. According to the EA Map the study area contains no areas at risk of flooding.

Even with mitigation measures in place, there is potential for significant effects from construction of the offline tour options on the surface water environment. It is assessed that there is potential for slight adverse effects to water quality during the earthworks stage and construction of the culverts

Appraisal Summary Table

- Although the AST is not required at this stage we have used it as a template to guide the initial assessment of the various issues that need to be addressed. It should be noted that this is an initial assessment based primarily on qualitative work.
- The full AST will be completed as per DfT guidance, at the Outline Business Case stage (see DfT (2013) "Transport Analysis Guidance – Guidance for the Senior Responsible Officer" para 1.2.10).
- The preliminary AST is attached.

Liaison with Environmental Organisations

- Consultation has been undertaken with the Parks and Countryside Services of Herefordshire Council who have raised concerns over the impact of noise on the public enjoyment.
- Previous consultation responses from Herefordshire Council County Archaeologist highlighted some potential sites of interest.
- English Heritage response reiterates its comments from previous consultations for the southern core options, namely concerns regarding setting and impact on listed buildings and the need for the assessment process to consider all heritage assets. Their response also highlights that work is on-going on assessing assets in Hereford area.
- The Environment Agency has been consulted on the impacts on local water resources and any potential increase in flood risk which could be generated by the Transport Package options.

EC5 – Value for Money (Social Impacts)

Social Impacts

All offline options will result in severance or disruption to Public Rights Of Ways (PROWs). Although all the offline options will have a combined footpath/cycleway, the proximity to traffic along the offline options compared to the traffic free routes along the PROWs, will not fully mitigate against the severance of rights of way. Therefore it is assessed to have a moderate adverse effect on pedestrians.

Stopping up of Grafton Lane is assessed to have a large adverse effect on pedestrians and cyclists due to severance of a section of National Cycle Network 46.

The provision of sustainable transport measures along the A465/A49 will have a slight beneficial effect on physical fitness by encouraging alternative methods of transport to the car.

It is assessed that all the offline route options will have a neutral effect on traveller care.

Travellers' views will generally be improved for travellers along the offline routes from the existing route along the A49 and A465 on the urban outskirts of Hereford. Although views in areas of cut will be restricted to side slopes and landscaping along the slopes, overall it is assessed that the effect on travellers' views will be slight beneficial.

The provision of a new route between the A49 and A465 will have a moderate beneficial effect on traveller stress by allowing drivers to avoid the centre of Hereford.

- *How will the package impact (positively or negatively) on the following:*
    - Commuting and other users – POSITIVELY by reducing congestion on accesses to employment areas and within the city centre retail area.
    - Reliability impacts on commuting and other users – POSITIVELY as additional infrastructure will provide alternative routes in the event of an incident.
    - Physical activity – POSITIVELY as the main bypass scheme will release highway land for walking and cycling infrastructure
    - Journey quality – POSITIVELY as travel which does not need to be made through the city centre will have a high quality newly constructed carriageway and that within the city will experience less congestion.
    - Accidents – NEUTRAL – there will be reductions in accidents due to there being less traffic in the urban area, but collisions on rural roads are characterised by greater severity of casualties. Accident rates will be minimised by road safety audits during the design process.
    - Security – NO IMPACT
    - Access to services – POSITIVE – as reductions in congestion along with improved walk and cycle infrastructure will reduce the barriers to services experienced by residents of Hereford.
    - Affordability – NO IMPACT
    - Severance – POSITIVE – as reduced traffic volumes and increased walking and cycling provision will make travel within the city better for those with business in the city.
    - Option values – NOT ASSESSED

Appraisal Summary Table

- Although the AST is not required at this stage we have used it as a template to guide the initial assessment of the various issues that need to be addressed. It should be noted that this is an initial assessment based primarily on qualitative work.
- The full AST will be completed as per DfT guidance, at the Outline Business Case stage (see DfT (2013) "Transport Analysis Guidance – Guidance for the Senior Responsible Officer" para 1.2.10).
- The preliminary AST is attached.

EC6 – Value for Money (Public Accounts)

Public Accounts

- Herefordshire Council recognises the importance of the HTS in delivering significant changes in line with the Local Transport Plan. The combination of benefits associated with this scheme has given it a high priority in the council's budgets.

Appraisal Summary Table

- Although the AST is not required at this stage we have used it as a template to guide the initial assessment of the various issues that need to be addressed. It should be noted that this is an initial assessment based primarily on qualitative work.
- The full AST will be completed as per DfT guidance, at the Outline Business Case stage (see DfT (2013) "Transport Analysis Guidance – Guidance for the Senior Responsible Officer" para 1.2.10).

The preliminary AST is attached.

Financial Case (EC)

FC1 – Capital Costs

Outturn Estimated Capital Costs

- The cost of providing the HTS, including risk adjusted cost for WRR, is £165,270,000. The breakdown of package elements is shown below:

Package Element	
Western Relief Road (excluding Southern Link & with Risk adjusted)	£136,270,000
Public realm, active mode and traffic management scheme for existing route of A49	£10,000,000
Public realm, active mode and traffic management scheme for radial A routes within urban area	£10,000,000
Urban traffic control system including local management centre	£5,000,000
20 mph schemes for residential areas	£2,000,000
City wide active travel mode projects	£2,000,000

- The risk adjusted cost for the WRR represents £47,357,000 of the total cost. The other package elements have not been subject to a risk adjusted process.

Breakdown of Estimated Capital Costs

- The breakdown of costs is not available and has been commissioned by the Project Control Group.

Risk

- A risk adjustment for the relief road has been undertaken using the @RISK programme. The full list of risks by section can be provided on request.

Cost Reduction Potential

- The highway elements of the package have been subject to a risk adjustment exercise suggesting there are significant opportunities for a reduction in cost.

FC2 – LTB, Local Transport Authority and Third Party Contributions

- A summary of the potential contributions is provided below. Herefordshire Council recognise that there is a need for significant additional funding to deliver the HTS. There are preliminary discussions with the Highways Agency regarding the level of contribution they would consider. This has not advanced to any formal agreement.

Project Number	Package/project	Where	When	Cost (capital)					Cost (revenue) LTP/LST F/Other
				Growth Fund	Other Contributions	Local Transport Plan	Private sector (estimated)	Total	
	Hereford Transport Package (NB. In addition to those schemes and activities described above, where shown)								
36	Western Relief Road & Southern link (risk adjustment 54%)	Within existing route corridor	Post 2022	£68,000,000	£52,986,000		£15,284,000	£136,270,000	
87	Public realm, active mode and traffic management scheme for existing route of A49	A49 in Hereford	Post 2022	£8,000,000			£2,000,000	£10,000,000	
88	Public realm, active mode and traffic management scheme for radial A routes within urban	Radial A roads in Hereford	Post 2022	£8,000,000			£2,000,000	£10,000,000	
89	Urban traffic control system including local management centre	Hereford Urban Area	Post 2022	£4,000,000	£1,000,000			£5,000,000	
90	20 mph schemes for residential areas	Hereford Urban Area	Post 2022	£1,800,000		£ 200,000		£2,000,000	
91	city wide active travel mode projects	Hereford Urban Area	Post 2022	£1,800,000		£ 200,000		£2,000,000	
		Transport package Totals		**£91,600,000**	**£53,986,000**	**£400,000**	**£19,284,000**	**£165,270,000**	

FC3 – Whole Life Costs and Maintenance Liabilities

Whole Life Costs

- The Project Control Group has commissioned a study into the whole life cost

for the scheme and expect to complete this in March 2014.

Maintenance Liabilities

- No known maintenance liabilities are expected for this package.

Commercial Case

CC1 – Income Generation

Income Generation

- This scheme does not have an expected income generation element. This will be reconsidered at Outline Business Case stage.

CC2 – Procurement Options and Strategy

Procurement Options

- Herefordshire Council are currently exploring the options for procurement and expect to outline their position through liaison with the Project Board in March 2014.
- The procurement options will be explored in further detail at Outline Business Case in line with Department for Transport guidance.

Procurement Strategy

- The procurement options will be explored at Outline Business Case in line with Department for Transport guidance.

Management Case

MC1 – Project Programme, Risks and Deliverability

Programme

- A summary of the programme for HTS is shown below on Page 32. The HTS programme is under continual review.

Risks

- The key risks and their classification for the HTS are listed below:
  - No fixed alignment (Cost)*
  - Local Action Groups (Project and Programme)*
  - Public inquiry/legal challenge to the Core Strategy (Project and Programme)
  - Compulsory Purchase Orders (Project and Programme)*
  - Changing political administration locally (Project)
  - Programme management and governance (Project)*
  - Political approval and project decisions (Project and Programme)*
  - Ecological implications - SAC River Wye, white clawed cray fish (Environmental)*

- Impact of setting of listed buildings/parks and gardens (Environmental)
- Impact on Special wildlife site (Environmental)
- Property Blight (Cost)
- Consent of statutory undertakers (Programme)
- Delivery of development - premature or delayed (Commercial)
- Redistribution of traffic as a result of phased approach (Safety)
- Connection of successive phases – design (Project)
- Impact on local business – golf course (Cost)
- Timing and availability of public funding (Programme)*
- Council staff resources (Project and Programme)*
- Connections to existing roads (Costs)

- These risks have been assessed against a RAG Red Amber Green) scoring mechanism using the @RISK programme. The risk is assigned a risk owner to be reviewed at the Project Control Group meetings.

Deliverability

- The scheme is expected to be delivered using well understood methods of construction.
- The overall package has sub elements that can be delivered quickly, such as the online improvements, subject to approvals.

MC2 – Legal Powers and Consents

Legal Powers

- The Project Control Group is currently exploring the preferred method of implementing the scheme. A report has been commissioned for receipt in March 2014.

Environmental Consents

- The project team will investigate the consents required pending detailed design and timeframe at Outline Business Case.

MC3 – Governance

Governance Structure

- The governance structure of the scheme is summarised in the diagram below:

Management Structure.

Three elements are proposed with roles as shown:

- Project Board comprising:
  - Geoff Hughes (HC) - Chair
  - Andrew Ashcroft, Richard Ball, Steve Burgess, Mairead Lane (HC) – Customers/users
  - Paul Hillman (HA) – Customer/user
  - Andy Walford (Amey) – Supplier
  - Jeremy Callard (HC) - Project manager
  - Kevin Singleton (HC), Yvonne Coleman (HC), Russell Pryce (HC), Lee White (JMP) – project team
- Strategic Reference Group comprising the Board members, Cllrs Hamillton and Powell, Mark Pearce, Tim Harbut, Local Enterprise Partnership representative
- Stakeholder reference group comprising:
  - Environment Agency
  - Natural England
  - Welsh Water
  - English Heritage
  - Department for Transport and Homes and Communities Agency
  - Campaign for Rural England
  - Hereford Chamber of Trade and Commerce

Roles and Responsibilities

- The proposed governance arrangements for the HTSD project have been conceived to ensure project ownership at Cabinet and director level and that responsibility for task delivery can be safely delegated. A particularly important aspect of strategy design and delivery is to ensure that a detailed understanding of existing strategy element performance as well as their future performance and delivery is brought into the project.

  - The Senior Responsible Owner (SRO) will provide a key link between the Cabinet Member, Project Board and Project Team. The SRO is responsible for overall delivery of the HTS.
  - The Project Board will receive regular updates on the project and advise the project team of changes in political
  - The day to day Project Manager (PM) will focus on delivery of the programme with particular focus on managing the technical team. The PM will work with the SRO to deliver each component of the delivery programme.
  - The technical team will be responsible for delivering specific work packages contributing to the overall project delivery.
  - Key stakeholder will feed back into the project team and project board through those channels identified in the Communications Plan.

MC4 – Benefits Realisation

Benefits Realisation Strategy

- *Please set out a brief Benefits Realisation Strategy which summarises:*
  - *What will happen.*
    Most of the scheme benefits will occur as the Western Relief Road component is delivered. This infrastructure will provide additional capacity in the highway network decongesting the city centre and unlocking the economic potential of different parcels of land.
  - *Who will be responsible for delivery of the benefits?*
    The programme board will be responsible for securing the benefits and keeping stakeholders informed of progress towards delivering its major components.
    As each section of the becomes available for traffic, the programme board will initiate projects that realise benefits such as the release of highway capacity on the existing network for public transport, cycling and walking infrastructure, projects that protect the benefits such as parking strategies to maintain low levels of congestion and projects that secure the economic benefits such as developing residential and employment land.
  - *Where it will happen.*
    The benefits will happen incrementally as different sections of the WRR are delivered. The pattern of delivery will be refined during technical work which has commenced with a Phasing Study that demonstrates which elements of the WRR release the most highway capacity and facilitate access to the most development land.
  - *When the benefits will occur*
    As WRR sections open, commencing in 2018 and continuing throughout the scheme programme to 2022. Within assessment work, the scheme benefits are anticipate to increase with additional economic activity for at least 15 years.

MC5 – Monitoring and Evaluation Strategy

Monitoring and Evaluation

- Please provide an outline of a Monitoring and Evaluation Plan (MEP), focussing on:
  - The key beneficial outcomes of the package are primarily reduced travel times for through traffic which can bypass the city; reduced journey times in the city due to through traffic being removed; ability to deliver public transport, walk and cycle infrastructure to increase uptake; and the release of development land for housing and employment. The MEP will measure each of these using travel time surveys and comparing these to 2012 data and model projections; measure the delivery of infrastructure and monitor the delivery of development land by reviewing planning applications and the delivery rate of houses and employment land.
  - The intervention logic for the package, and its primary scheme, is founded on the resistance to development from statutory stakeholders due to the lack of capacity in the transport system.
  - Pre-scheme data has been collected for the development of the Hereford Multi-Modal Model and includes information on traffic flows, journey times and congestion. Collecting similar data will continue in the period of the scheme development. The post scheme data will similarly consider

traffic performance metrics.

- Lessons learnt will be captured during the project through processes explained in the project governance section.

APPENDIX A – Appraisal Summary Table for Economic Case

This table below summarises the basic questions and issues that the Appraisal Summary Report (ASR) for the Economic Case should cover, with the potentially relevant WebTAG units highlighted. In order to assist with understanding the potential scheme impacts, more detail on each of the AST categories and sub-objectives can be found in units 3.1 to 3.19 of the WebTAG guidance: http://www.dft.gov.uk/webtag/documents/expert/index.php

AST Category (and WebTAG Units)	**Questions / Issues**
Economy (3.1, 3.2, 3.5, 3.15, 3.18)	• What are the likely sources of journey time impacts that the scheme will deliver for business users and transport providers? • What is the modelling package to be used? • How will future demand for business use be forecast?
	• What are the reliability impacts of the scheme on business users and public transport services?
	• What are the impacts on any regeneration areas?
	• What are the wider impacts on the economy?
Environment (3.3)	• Will the scheme affect noise to local receptors as a result of changes to the transport network and levels of demand?
	• Is the scheme located within, or will it affect, a designated Air Quality Management Area (AQMA)?
	• Will the scheme construction and / or operation result in a significant change in greenhouse gas emissions?
	• What are the impacts on the physical and cultural characteristics of the local area and does the scheme affect any designated areas of landscape value?
	• Are there any impacts on the setting of buildings, structures and open spaces in urban areas which are of high value (in terms of visual appearance and usage by people)?
	• What are the impacts on historic resources – such as Scheduled Ancient Monuments and areas of high archaeological value?
	• Will the scheme affect the habitats of protected flora and fauna and impact on wildlife corridors?
	• Will there be a risk of water contamination and / or an increased risk of flooding as a result of the scheme?
Social (3.1, 3.2, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.15, 3.17, 3.18)	• What are the likely sources of journey time impacts that the scheme will deliver for commuters? • What is the modelling package to be used? • How will future demand for commuting be forecast?
	• What are the reliability impacts of the scheme on commuters?
	• Will the scheme lead to an increase in active travel – in particular walking and cycling?

AST Category (and WebTAG Units)	**Questions / Issues**
	• Is there likely to be a significant change in journey quality as a result of the scheme?
	• Will the scheme have any impact on highway safety – in particular predicted numbers of accidents?
	• Will the scheme have a positive impact on crime or the fear of crime?
	• Will public transport access to services such employment, education, health care, shopping and social networks be enhanced as a result of the scheme?
	• Will the scheme change the ability of people on low incomes to afford to travel?
	• Does the scheme generate or reduce severance for pedestrians in particular?
	• Will the scheme create a facility which, for trips not yet possible or undertaken by other modes, would generate a willingness to pay over and above the expected value of any such use?
Public Accounts (3.1, 3.2, 3.5)	• What is the cost of the scheme within the broad transport budget available?
	• How will the scheme affect demand for vehicle travel and hence indirect tax revenues (for example from fuel duty)?

The above list is not necessarily exhaustive and, depending on the nature of the scheme, should be discussed with the TOG and ITE in advance.

Appendix B - HTS Draft Programme