0
Summary

A summary of
the Weston Package Phase 1

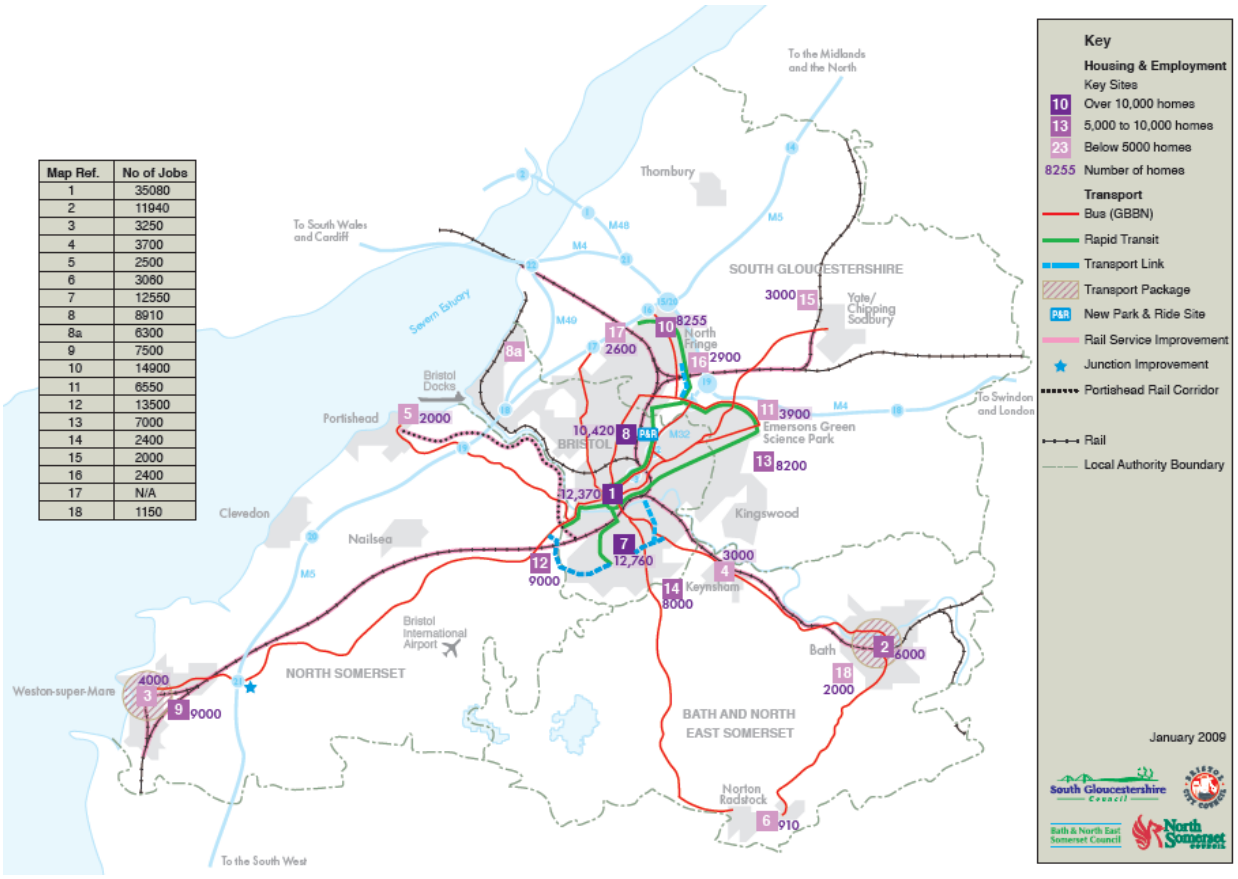
West of England Partnership
Bath & North East Somerset Council
Bristol City Council
North Somerset Council
South Gloucestershire Council
South West RDA

Summary

0.1 Context

The West of England is the economic hub of the South West. The strong economy is set to continue to grow with the South West of England draft Regional Spatial Strategy [RSS] identifying up to 138,500 new dwellings. Forecasts suggest that by 2026 the West of England economy would need to support an additional 138,000 jobs with a population increase of over 200,000 people. The proposed location of development identified across the West of England in the draft RSS is shown in Figure 0.1.

Figure 0.1: West of England draft RSS Development Areas and RFA Transport Schemes

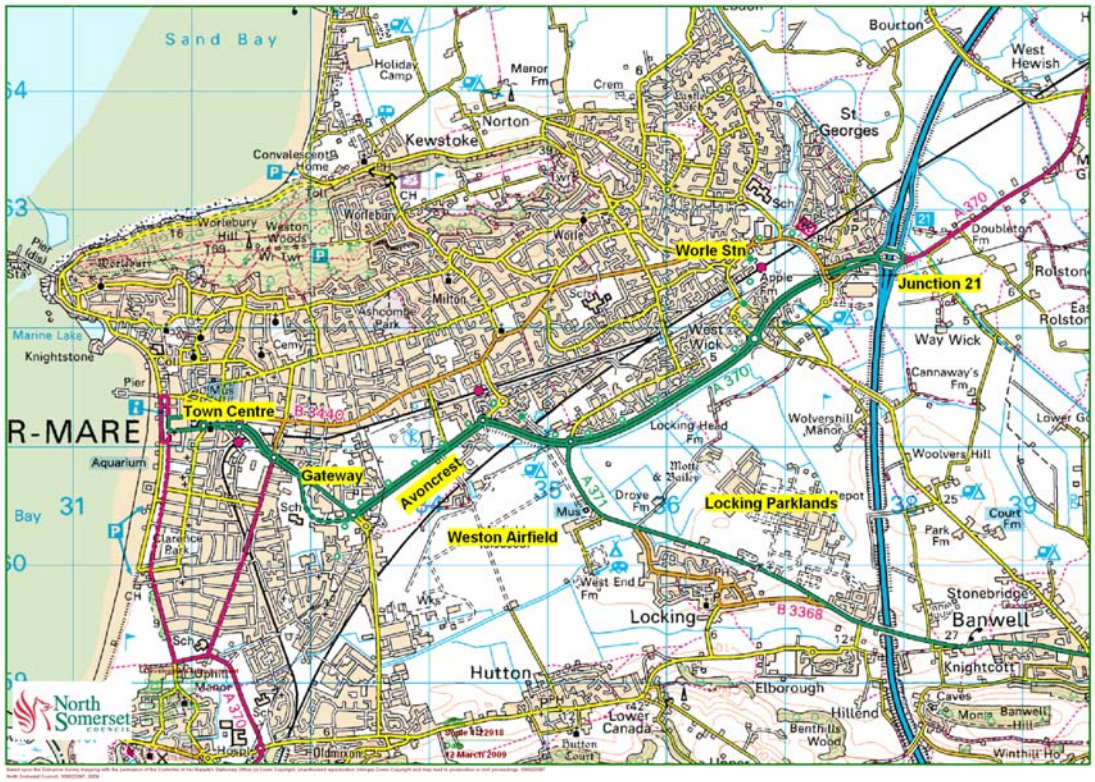


The West of England also faces significant transport challenges. Large scale housing growth and economic development over a number of years has not been accompanied by sufficient investment in transport infrastructure, and this, compounded by an unreliable public transport system, has resulted in high levels of car commuting. Major transport schemes identified in the Regional Funding Allocation [RFA] would address both existing and future transport issues (see Figure 0.1 above); the Weston Package Phase 1 [WP1] is one of these schemes.

Weston-super-Mare [Weston] lies within North Somerset, one of four unitary authorities in the West of England (Bath & North East Somerset, Bristol City, South Gloucestershire) that have joined together to deliver transport improvements through the Joint Local Transport Plan [JLTP].

Weston has a population of 76,312 and the draft RSS proposes significant development at Weston in the plan period comprising about 10,000 jobs and 12,000 dwellings, of which 9,000 would be accommodated on sites in an area of search to the south-east of the town. The main potential development sites are shown in Figure 0.2; the two largest are a former airfield (Weston Airfield) and a former RAF camp at Locking (Locking Parklands area) plus adjacent land.

Figure 0.2 Weston-super-Mare



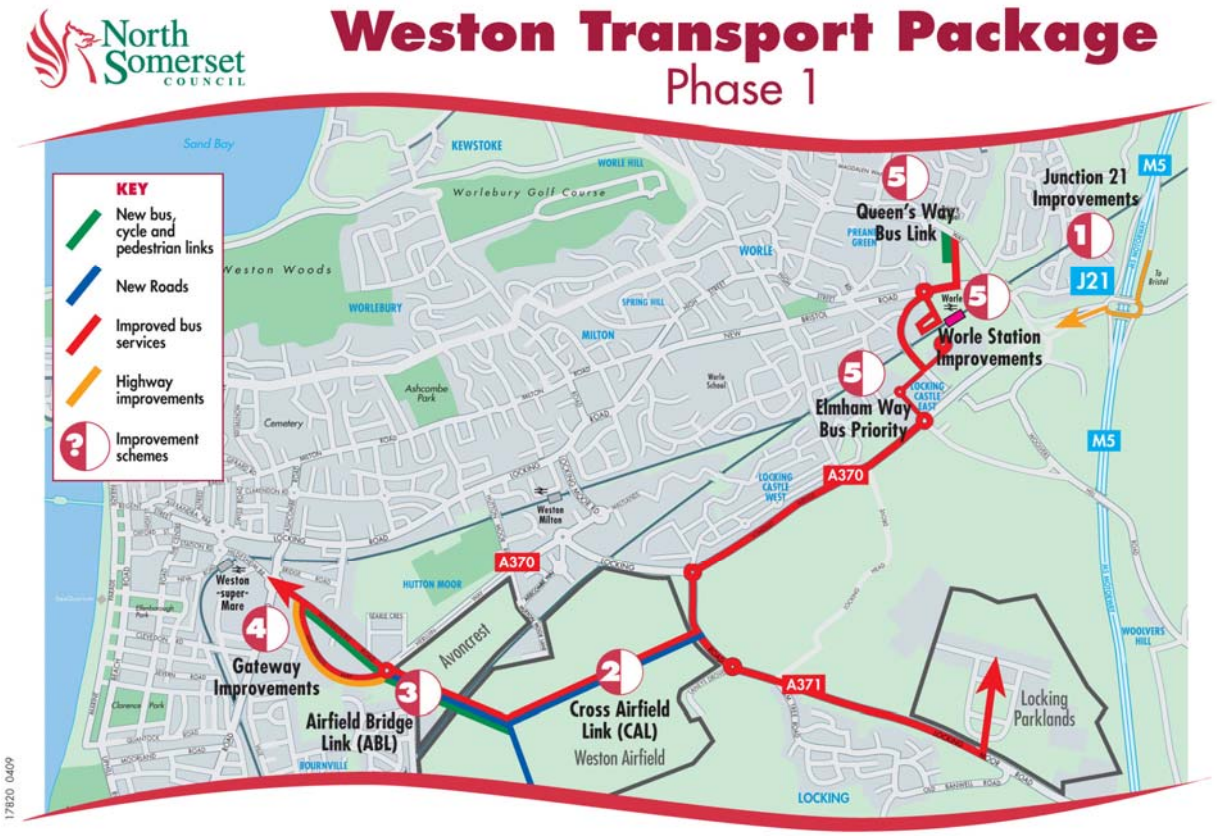
0.2 Scheme Description

WP1 comprises a series of improvements to the transport infrastructure of Weston, which would benefit a wide range of users and, of crucial importance, support the employment-led regeneration of Weston as defined in the draft RSS. There are two options and the council is seeking to decouple the scheme components contained in the 'Low Cost Option' from those additional scheme components in the 'Preferred Scheme'.

Preferred Scheme

A summary plan of WP1 is shown in Figure 0.3 below and the package of schemes is described below.

Figure 0.3: The Weston Package Phase 1



1 – M5 Junction 21

WP1 would provide targeted capacity improvements, namely: widening the southbound off-slip, the A370 (east) approach and A370 (west) exit from 2 to 3 lanes; marking out 3 lanes on the roundabout; and new traffic signals on the M5 off-slips and the A370 (east) approaches. All these improvements are within the highway boundary.

The scheme would reduce queues on the M5 off-slips and A370, especially in the PM peak period; it would reduce the incidences of queuing back onto the M5 itself which will benefit strategic traffic movement on a regional level. It is supported in principle by the Highways Agency.

2 – The Cross-Airfield Link [CAL]

The CAL would provide a new single carriageway highway across the former Weston Airfield, one of two large regeneration sites at Weston. The CAL

would connect Winterstoke Road and the A371 Locking Moor Road and provide a strategic transport link between Somerset, south and west Weston and the M5 Junction 21. It would also provide access to the Airfield regeneration site and relief for the increasingly congested sections of the A370. The roundabouts at either end of the CAL are in the Do Minimum as they will be provided by developers outside of this scheme to provide access to the Airfield development.

The CAL has outline planning approval (April 2008), as part of the first phase of employment development on the site, subject to the agreement of a Section 106.

3 - The Airfield Bridge Link [ABL]

The ABL is the key to overcoming the barrier of the railway by providing a new route between the Airfield and wider regeneration area and the town centre. The scheme consists of a new all purpose single carriageway road and bridge linking the CAL and Winterstoke Road via the Avoncrest redevelopment site. The land required on the north of the railway is owned by the council (but with a long-term lease to a developer). The land to the south of the railway is part of the Airfield redevelopment site. The owners of the development sites through which the ABL would pass have indicated support for the ABL in principle, but further detailed negotiations would be required.

Much of the ABL is on embankments in order to cross the railway. The preferred route crosses the Avoncrest site which is an old waste disposal tip and, therefore, an extensive piled foundation over most of the route north of the railway section is proposed. The embankment to the south of the railway would be constructed on a load transfer platform piled to bedrock.

4 - Weston Gateway

The Weston Gateway is an area astride the A370 between the town centre and the regeneration area. Through the Gateway, the A370 is split into two one-way carriageways with two lanes in each direction, which not only provide the main traffic route to and from the town centre and the seafront, but also access to adjacent retail units and businesses.

WP1 proposes widening the westbound highway from two to four lanes, with associated intermediate junctions and crossings. This would be the route for through traffic in both directions. The existing eastbound highway would be remodelled as a local access route and a route for buses and cyclists. The existing roundabout at the western end would be improved and a town-bound bus lane provided. The outline designs suggest that a small element

of third party land (from the gasworks) would be required for this part of the scheme.

5 – Worle Station

The proposals for Worle station comprise a new 320 space station car park on council owned land south of the station, a bus interchange, drop-off and pick-up point, motorbike and cycle parking. The site is safeguarded for this purpose in the Local Plan. In addition, facilities in the existing north-side car park would be improved, including a bus interchange, together with improved passenger waiting facilities on the station itself. There would be complementary improvements to passenger information on the station.

A bus-only link at Queen's Way and bus priority and traffic management on Elmham Way would help buses access the station, where at present there are none. The infrastructure improvements at Elmham Way would also provide new and improved traffic signal control facilities benefiting all road users.

Bus Services Facilitated by the Package

WP1 would facilitate improvements to both existing and anticipated bus services in Weston (the latter serving new development areas).

Low Cost Option

The WP1 Low Cost option comprises all of the Preferred Schemes elements described above except the CAL and the ABL and a slightly decreased frequency of one bus service. Table 0.1 below summarises this:

Table 0.1: Elements being considered in each Option

Element	Preferred Scheme	Low Cost Option
1 – M5 Junction 21 Improvements	✓	✓
2 – Cross Airfield Link	✓	×
3 – Airfield Bridge Link	✓	×
4a – Town Centre Gateway	✓	✓
4b – Drove Roundabout	✓	✓
5a – Worle Station Improvements	✓	✓
5b – Queen's Way Bus Link	✓	✓
5c – Elmham Link Bus Priority	✓	✓

Phasing

The recession has had a significant impact on WP1. At the early stages of WP1 development in 2007 it was expected that the Airfield developer would provide the CAL before the 2016 target completion date for WP1. The CAL has outline planning approval (April 2008), as part of the first phase of employment development on the site, subject to agreement of a Section 106. Since the approval was granted, the declining economic situation has meant that agreement on the Section 106 has been delayed. As a result the timetable for completion of the CAL could not be guaranteed to coincide with the proposed timetable for WP1.

The importance of the CAL to Weston is such that it has been incorporated into the WP1 Preferred Scheme, and fully appraised on the basis of it being implemented within the RFA window. The funding for the CAL and its preparation is assumed to come in full from developer contribution, although at the time of writing this contribution is not secured.

In consequence, the council, in accordance with the DfT's guidance on 'decoupling' dated 24 February 2009, wishes to promote the Low Cost Option as a first phase, with the remaining elements of the Preferred Scheme in a second phase to be agreed with the South West of England Regional Assembly and DfT.

The Low Cost Option has been fully appraised and could be implemented within the RFA window; it would be fully funded by a combination of council capital, DfT contribution and secured (i.e. with a Section 106 agreement) contributions. The local contribution is estimated at 23% of the total scheme cost for the Low Cost Option, made up from secured developer funding, council owned land and the council's contribution toward preparation costs.

To provide a consistent basis for appraisal, the Preferred Scheme assumes the following outline programme:

- September 2009 – Programme Entry;
- March 2011 – bid for Conditional Approval;
- June 2011 – Conditional Approval;
- March 2012 – bid for Final Approval;
- April 2012 – Final Approval;
- May 2012 – construction start; and
- January 2015 – programme complete.

The outline programme for the Low Cost Option is considered realistic in the current economic environment:

- September 2009 – Programme Entry;
- December 2010 – bid for Conditional Approval;
- April 2011 – Conditional Approval;
- December 2011 – bid for Final Approval;
- January 2012 – Final Approval;
- February 2012 – construction start; and
- December 2014 – programme complete.

Progressing the Low Cost Option separately from the remaining elements in the Preferred Scheme does allow an accelerated delivery programme. Construction would start at Worle Station and the bus priority measures at Queen's Way and Elmham Way towards the end of 2011/12 and be completed by 2012/13.

0.3 The Strategic Case

Background

Some areas of Weston fall into the bottom 10% of the most deprived in England with two falling in the bottom 1% in the South West and four areas in the bottom 5% in the West of England sub-region. The age profile for Weston is similar to other seaside towns in the South West showing a much higher than average elderly population, with 21% of the population over 65, whereas the England and Wales average is 16%.

Weston has seen significant residential growth in recent decades, but without a corresponding increase in its employment base this has lead to high levels of out-commuting. North Somerset Council and its partners, including the South West of England Regional Development Agency [SWRDA], have been seeking to regenerate and rebalance the economy of Weston to reduce its reliance on tourism and redress the loss of employment opportunities. The SWRDA fully support the Weston Package and the approach taken by the MSBC.

Traffic conditions on a weekday are characterised by peak period congestion at Junction 21 and at the main junctions along the A370 between Junction 21 and the town centre. Weston is a popular destination for visitors, especially day-trippers, hence during holiday periods and at weekends, the peak periods of demand are during the day and early evening.

Scheme objectives

The aim of WP1 is:

"To enable the sustainable development of Weston-super-Mare"

The key to realising this goal is to readdress the aforementioned imbalance between jobs and residents, which results in high levels of out-commuting, mostly by car via the M5 motorway. One of the barriers to job creation in Weston is the poor perception of the town in the eyes of business, which includes its transport problems. Conversely the attractiveness of Weston as a place to live remains, as evidenced by the strong market for homes, up until the recent downturn.

Hence, WP1's objective is to encourage the employment-led development of the town by selective improvement of the town's transport network to:

- Improve the highway access between the M5 motorway and Weston to reduce congestion;
- Relieve congestion on the A370 corridor in Weston;
- Provide improvements to local access, safety, public transport, walking and cycling; and
- Improve access, particularly by public transport, between regeneration areas and other residential areas of the town.

History of scheme development

The genesis of WP1 can be traced back through a programme of studies and analysis that are collectively referred to as the 'Weston Vision', whereby the council and its partners, including the SWRDA, have been seeking to regenerate and rebalance the economy of Weston to reduce its reliance on tourism and redress the loss of employment opportunities. The Vision recognised that the town has real strengths, but also a number of problems and issues, one of which was transport.

The Vision was taken forward through the Weston Area Development Framework [ADF] of 2005, which set out a strategy for the "strategic re-positioning of the town as a high profile centre of growth in the region supported by a strong employment base and exemplary standards in design and sustainability". Consultation was a key and integral part of the ADF process.

The recommendations from the ADF were the starting point for the WP1, to which were added schemes that had arisen through other work, been

suggested in the past or were raised at workshops. The resultant 'long list' of potential schemes was input to an evaluation framework to identify a short list of schemes for more detailed analyses.

Strategic Fit

WP1 has been assessed against the objectives from a range of national, regional and local strategies. WP1 will contribute towards a number of national, regional and local objectives, both in terms of transport and wider economic and environmental factors.

0.4 The Value for Money and Appraisal Case

Transport Modelling

WP1 has been modelled using the 'G-NS Model' (Greater Bristol – North Somerset Model), one of a suite of multi-modal models that cover the West of England. G-NS is validated to a 2006 base in accordance with DfT guidance, having been developed from a previous traffic model (NSTM – North Somerset Traffic Model) to a 2002 base. G-NS has been developed to be compliant with variable demand and public transport requirements as set out in WebTAG and has been considered by DfT.

Demand data was collected in 2005-2007, to update the NSTM traffic data set and provide new information for the bus and rail models. The model networks were similarly updated and/or built to a 2006 base. G-NS modelled time periods covered an average weekday AM, PM and Inter-Peak periods.

Forecasts were prepared for 2016 (which is one year later than the opening year for both the Preferred Scheme and Low Cost Option opening years) and 2031 (design year). Demand for these years was based on the draft RSS proposals and controlled to TEMPRO forecasts. The forecast networks included only committed improvements in the 'Do Minimum' or 'Reference' Case; the 'Do Something' networks also included the WP1 Preferred Scheme or Low Cost Option.

Cost Benefit Analysis

The headline scheme outturn costs are £58.92m for the Preferred Scheme and £15.99m for the Low Cost Option.

The modelled scheme benefits (Net Present Value of Benefits [PVB]) are £127.79m and £36.68m respectively. The resultant Benefit Cost Ratios [BCRs] are +2.74 for the Preferred Scheme and +2.55 for the Low Cost Option.

NATA Assessment

The Appraisal Summary Tables [ASTs] 1 and 2 at the end of this summary show the main impacts of the two WP1 options. The main issues are:

- Environmental – there is an improvement in air quality with both the Preferred Scheme and the Low Cost Option, and both options also show small reductions in noise. There are slight adverse impacts of both schemes on biodiversity and water quality, and slight beneficial effects on physical fitness. There are moderate beneficial effects with both schemes on journey ambiance;
- Safety – the Preferred Scheme would give a benefit in terms of casualties saved, with a PVB of £4.99m. The Low Cost Option has a PVB of £2.12m. Additionally, both options have a slight beneficial effect in terms of improvements to security;
- Economic – the WP1 would underpin the regeneration of Weston identified in the Vision for Weston and facilitate the proposals in the draft RSS;
- Accessibility – would be improved with both options in terms of option values, severance and access to the transport system, given the improved transport interchange opportunities at Worle; more so for the Preferred Scheme than the Low Cost Option due to the new access across the main railway line which would reduce severance; and
- Integration – WP1 would contribute to a wide range of local, regional and national objectives.

Supporting Information

An analysis of distribution and equity issues has been undertaken, the main impacts of WP1 are:

- WP1 would improve access to the transport system by non-car modes, provide links between regeneration areas and areas of deprivation;
- WP1 would promote social inclusion by improving access to key services and new employment opportunities for all social groups.

An affordability and financial review of the two options shows that the Low Cost Option could be delivered using a combination of council capital funding, secured developer contributions and RFA funding. Highway maintenance costs would be funded by the council and commercial bus services funded by operators with initial support from developer contributions.

The funding for the Preferred Scheme is more problematic with a requirement for higher levels of both developer and RFA capital funding, both of which are unsecured. The decoupling arrangement will enable further work to be carried out on the funding arrangements for the Preferred Scheme before it is progressed through later approval stages. Maintenance and bus operating costs would be funded as for the Low Cost Option.

Assuming the decoupling of Low Cost from remaining Preferred Scheme elements, WP1 is practical, fundable and deliverable. WP1 is a relatively straightforward scheme in technical terms. The potential problems such as the ground conditions for the ABL have been identified through a robust risk assessment and mitigation measures included in the cost estimates. The Preferred Scheme has the support of North Somerset Council and key stakeholders, whilst decoupling the Low Cost Option is recognised as a pragmatic response to the current wider economic problems enabling early delivery of some of the WP1 benefits.

The WP1 benefits would make a positive contribution to targets in Transport 2010: The ten year plan (DETR, 2000), by reducing congestion, increasing use of public transport, improving air quality, reducing emissions, reducing road traffic incidents and providing better facilities for cyclists.

0.5 The Delivery Case

Governance

WP1 lies wholly within North Somerset so the council will be the lead authority but the programme would be nested within the joint governance structure of the four JLTP unitary authorities. A WP1 Programme Board is already established with a Senior Responsible Owner, to which would report the Programme Director. A bespoke Programme Delivery Team consisting of technical officers and the retained transport planning and design consultant, Halcrow, would support the Programme Director.

Risk Management

Risk workshops have been conducted to help establish a Risk Register for the WP1 programme. The Risk Register will be used throughout the preparation and delivery of WP1 to manage and mitigate risks.

Stakeholders

A Communication Plan was prepared at the outset of the project and has been maintained as preparation work has progressed. A wide range of stakeholders have participated in the development of WP1 to-date, including residents, council Members, officers, town and parish councils, Local businesses, transport operators, statutory consultees, interest groups,

developers and land owners. Letters of support are included in section 4 of the bid document.

A full public consultation on WP1 was undertaken in Autumn 2008, launched through the council's magazine, which is delivered to most households and businesses in North Somerset. The reaction of consultees was generally positive.

Further consultation would be an integral part of WP1 preparation as scheme designs are worked up and the requisite permissions sought. The council adheres to a 'life of the scheme' process for scheme development which specifies ongoing consultation with stakeholders, a process that would also be used for WP1 scheme components.

Scheme Monitoring and Evaluation

An impact evaluation will be carried out to measure both the positive and negative impacts of the scheme. The aim of the evaluation would be to assess the performance of the scheme in achieving the original objectives as set out in 0.3 above. The monitoring methods would be determined based on these objectives and would be a mix of existing proxy indicators and new indicators using bespoke surveys.

Assurance

DfT guidance recommends that a Gateway Review be undertaken for schemes with a total cost of £50m or more, however, the supplementary advice on decoupling does not address this issue. Given the uncertainties regarding the programme for the Preferred Scheme and the council's bid to decouple the Low Cost Option and adopt a phased delivery approach, a Project Assessment Spreadsheet [PAS] has been completed for both the Low Cost and Preferred Schemes, but a Gateway Review has not yet been undertaken for the Preferred Scheme. The value of the Low Cost Option falls below the £50m threshold but the council plan to approach 4ps in respect of gateway reviews relating to the decoupled Low Cost Option following submission of the programme entry bid. This value of the Gateway Review process is recognised as a good project management process.

0.6 The Commercial Case

Outline Procurement Strategy

The council has already procured transport planning and design consultants (Halcrow) for construction of WP1 components. The council would explore joint procurement with the Highways Agency in respect of Junction 21 works.

The council has considered both Early Contractor Involvement [ECI] and more traditional procurement approaches, but considers that the latter would be better suited to deliver WP1 in the current environment. The council's term transport planning and design consultant, Halcrow, which has supported the council in preparing this bid, would undertake detailed design and site supervision. Contracts for construction would be tendered following granting of Conditional Approval.

Securing Value for Money

The WP1 works are straightforward in terms of civil engineering and construction. A Delivery Team comprising in-house and term consultancy support would ensure that local knowledge is retained and that delivery timescales are to be met. Tendering for the WP1 contracts would be undertaken through the full Official Journal of the European Union [OJEU] process, ensuring that it is open to the widest competition. A robust evaluation process would secure the most appropriate contractor balancing cost and quality.

Risk Management

With the exception of the ABL, the WP1 scheme construction would be straightforward and presents low risks. For the ABL, bespoke tendering would secure construction prices that take account of the site-specific risks, giving robust contracts that protect the council from cost overruns.

Contract Management Arrangements

All contracts relating to the bid will be the responsibility of the Programme Director, with assistance from Project Managers responsible for individual elements within the bid. Halcrow will be used in preparation of tendering documents and contract management to ensure effective controls and incentives are in place to ensure that contractors adhere to deliver plans, costs and timescales. Penalty clauses for contract failures and bonus payments to give incentives for early delivery will be included in the contract documentation.

Commercial Risks

The main risk at the time of writing is the state of the economy, which has had a significant adverse impact on the pace of development in Weston. The CAL and the ABL are dependent on the progress of the Airfield development with the CAL being funded by the Airfield developer and the ABL requiring the CAL in situ.

0.7 The Financial Case

Detailed Cost Breakdown

Preparation costs have been estimated for the preparation of business case submissions for Conditional and Full Approval. Some of these are eligible for 50% grant funding and these include: project management; preparation of the business case for submission of Conditional and Full Approval; detailed design work and; contract administration and management.

The DfT guidance also indicates that some preparation costs will not be considered to be eligible for DfT contribution. These non-eligible costs include: costs of publication and publicity for applications and orders; planning application fees; costs associated with public inquiries and; costs of land required for the scheme.

The total preparation costs (excluding land) at 2008 prices are estimated to be £6.09m for the Preferred Scheme and £1.79m for the Low Cost Option.

In addition to the above, the costs of land at 2008 prices are estimated to be a total of £4.02m for the Preferred Scheme and £1.78m for the Low Cost Option. The majority of both of these costs are gifted land, rather than land requiring direct payment, and for the Low Cost Option a significant amount is already in council ownership.

The majority of the prices of engineering construction work have been taken from industry standard sources, such as Spon's Civil Engineering and Highway Works Price Book 2009, where the rates are based on 2008 prices. Some costs such as specialised material for the geotechnical improvements and structural elements of the ABL are based on 2008 prices following discussions with leading specialist contractors in the field of ground improvement.

The quantities of measured work items have been determined by measurements extracted from the scheme drawings and items valued by applying appropriate unit cost rates to produce a scheme construction cost. The construction cost of each individual scheme element has been calculated.

The total construction costs at 2008 prices, excluding the QRA are estimated to be £29.63m for the Preferred Scheme and £8.27m for the Low Cost Option.

Independent Surveyors Report

An independent surveyor (Cyril Sweett) has been commissioned to verify the construction cost estimates. Cyril Sweett initially reviewed the construction cost estimates for each scheme element and provided a number of

recommendations and observations regarding the quantities, rates and level of construction preliminaries assumed. These recommendations have been reviewed and, where appropriate, accommodated within the final construction costs. Cyril Sweett have verified the final construction cost estimates referenced in this document.

Quantified Risk Assessment

A Quantified Risk Assessment [QRA] has been completed to support this bid for Programme Entry. This covers the programme until completion, and is based on capital cost elements of the project and the construction programme from the present day to the opening years.

Each risk was assessed in terms of the potential delay cost, cost of additional project management, and cost of mitigating measures costs, and in terms of a number of potential risk cost outcomes should the risk materialise. These options are 'least cost', 'most likely cost' and 'maximum cost', combined with a value for the probability of the risk occurring.

Two risk workshops were held with council officers, consultants Halcrow and other stakeholders to discuss the identified risks and come to a consensus on the values of each risk cost outcome and the probability. The software package '@Risk' was used and the assessment has resulted in quantified estimates of the potential risks associated with both the Preferred Scheme and the Low Cost Option.

The QRA has resulted in a total risk allowance of £6.17m for the Preferred Scheme, and £1.12m for the Low Cost Option (both at 2008 prices), both at the 50% confidence level. The risk exposure has been included in the economic analysis to determine an appropriate BCR. These allowances for risk have been added to the base costs as part of the Quantified Cost Estimate [QCE] for each option.

The largest risk for the Preferred Scheme is that the cost inflation is either lower or higher than anticipated, and the next largest risks are: more severely contaminated land on the CAL and ABL sites than expected; the ABL over the railway line may need changes to the current design and; unidentified utilities encountered during construction.

The risk that cost inflation is either lower or higher than anticipated is also the highest risk for the Low Cost Option, and the next largest risks are: less construction work is able to take place at M5 Junction 21 in the daytime than anticipated; extended/modified embankments on either south west corner and/or north east of J21 requires special construction; and unidentified utilities encountered during construction.

Inflation Costs

It has been assumed that construction cost inflation rates would be 6.0% throughout the duration of the project compared with 3.0% for other costs such as preparation costs. Due to the current economic situation regarding land values, land is assumed to have 0% inflation. The QRA is also increased at the 6% construction inflation, given the majority of the risks and associated costs are based on construction issues.

Quantified Cost Estimate

The QCE for both the Preferred Scheme and Low Cost Option has been prepared and includes preparation costs, construction costs, lands costs, risk allowance and inflation. These are summarised in Tables 0.2 and 0.3 below.

Table 0.2: Summary of Preferred Scheme Quantified Cost Estimate

	Cost Estimate (£m)
2008 Preparation Cost	6.09
2008 Construction Cost	29.63
2008 Land Cost	4.02
2008 Quantified Risk Assessment	6.17
2008 After Monitoring	0.03
Inflation	12.99
Total	58.92

Table 0.3: Summary of Low Cost Option Quantified Cost Estimate

	Cost Estimate (£m)
2008 Preparation Cost	1.79
2008 Construction Cost	8.27
2008 Land Cost	1.78
2008 Quantified Risk Assessment	1.12
2008 After Monitoring	0.02
Inflation	3.02
Total	15.99

Funding Package

The council has identified £1.91m for WP1 preparation costs. This should be sufficient to fund the preparation of the Low Cost Option and is gross of any reimbursements from DfT for eligible costs, claims for which would be made with the bids for Conditional and Final Approval. Additional local capital contribution will come from secured developer contributions (i.e. those with a Section 106 agreement), amounting to £1.08m at current prices.

The council has not allocated any additional capital funding to meet the costs of the Preferred Scheme. The Preferred Scheme would be reliant on currently unsecured developer contributions, from the Airfield development in particular, which have been adversely affected by the recession.

The Package proposes continued development of the bus network through both enhancements to existing services and the introduction of new services. The Package has been designed with the principle that enhancements to existing bus services and the provision of new bus services will be provided on a commercial basis but with pump priming subsidy in the short term through developer contributions where appropriate. The assumption is that all new bus services will be commercially viable within 5 years of introduction. Routine maintenance of the WP1 highway assets would be funded by the council and as part of the annual LTP settlement from DfT.

Section 151 Sign-off

In accordance with the guidance for local authorities, the cost estimates for the scheme have been considered by the authority's Section 151 Officer. The cost estimates for the scheme and the capacity of the authority to meet its expected and potential financial liabilities for the scheme have been confirmed. The signed declaration to this effect is included with the bid.

0.8 Conclusion

The Weston Package Phase 1 is a well supported scheme that will deliver much needed transport improvements to the local area and compliment the wider strategy for the West of England sub-region. The measures are targeted at current issues whilst supporting the employment led regeneration of the town.

The decoupled approach makes the elements in the Low Cost Option eminently deliverable within a relatively short timescale. The fast track delivery of scheme benefits will be welcomed at a time that could coincide with an improvement in the national economy. An improvement in the economy would also enable the remaining elements of the Preferred Scheme

to be progressed through the approvals process to deliver the rest of the benefits made possible by WP1.

A lot of work has already been done to produce robust costs and a scheme that can be delivered despite the economic downturn. The cost benefit ratios are favourable for both the Preferred Scheme (+2.74) and the Low Cost Option (+2.55) and we are eager to implement these much needed transport improvements in Weston-super-Mare.

Appraisal Summary Table (Preferred Scheme)

Preferred Scheme		Weston Package Phase 1	To enable the sustainable development of Weston	Present Value of Costs to Public Accounts £m
OBJECTIVE	**SUB-OBJECTIVE**	**QUALITATIVE IMPACTS**	**QUANTITATIVE ASSESSMENT**	**ASSESSMENT**
ENVIRONMENT	**Noise**	The decrease in the number of people annoyed is mostly due to a redistribution of traffic over the network. An estimated 64 properties would be exposed to a level above 68 dBL_{Aeq}. Night-time noise levels likely to remain unchanged.	No. of people annoyed: Without scheme: 4,730 With scheme: 4,698	Net change in population annoyed with project: -32 NPV £548,500
	Local Air Quality	No designated AQMA in area. There will be an overall decrease in PM_{10} and NO_2 concentrations at properties in the area. Concentrations remain below the objective with or with out the Scheme. The improvement is due to reductions in congestion.	Air quality improves at 4040 properties for PM_{10} and 3964 for NO_2, and worsens at 4451 properties for PM_{10} and 4527 for NO_2	An overall improvement in air quality PM_{10}=-71 NO_2=-124 Beneficial
	Regional Air Quality	There will be in overall improvement in regional air quality.	26.2 tonne reduction in NOx emissions and 0.6 tonne reduction in PM_{10} emissions compared with the do-minimum in the opening year	3.3 % reduction in NO_X emissions and 3.1 % reduction in PM_{10} emissions in opening year Beneficial
	Greenhouse Gases	Reduction in carbon emissions with the scheme due to reduction in delays and congestion	Reduction in tonnes carbon over 60yr appraisal period = 135 Reduction in tonnes carbon in opening yr = 3	£4140 Beneficial
	Landscape	Scope to bring benefits to townscape through appropriate design and adequate mitigation. Some additional visual intrusion where close to properties.	n/a	Moderate adverse
	Townscape	Same as Landscape	n/a	Same as Landscape
	Heritage of Historic Resources	The proposed schemes within this option would not impact directly or indirectly on designated archaeological sites or built heritage. The only schemes likely to impact on non-designated archaeological monuments are the Airfield Bridge Link and the Cross Airfield Link. Also potentially, Worle Station. These impacts could be mitigated through the implementation of standard archaeological measures which will preserve any affected sites by record. The scope of these measures would be set by North Somerset Council	n/a	Neutral
	Biodiversity	Potential dust and pollution impacts to 3 Regional Wildlife Sites, neutralised through construction best practice. Neutral impacts are predicted on internationally and nationally designated sites. Habitat re-creation will be undertaken although there will be a net loss of habitats that is generally restricted to improved or amenity grassland, but includes some areas of rough grassland and potentially some species-rich grassland. Wildlife underpasses and fencing to improve safety for protected species, but minor impacts through loss of habitat.	n/a	Slight adverse
	Water Environment	Principal impacts will include an increase in highway runoff and associated contaminants which could increase flood risk and water quality deterioration in receiving surface and ground water. As such routine runoff should be attenuated and appropriate methods of treatment provided prior to discharge. Construction of the highway within the floodplain will also act as a physical barrier, impeding flood flows and occupying floodplain storage potentially increasing flood risk to the scheme and others. It is assumed that as part of the costed scheme flood risk will be mitigated by providing compensatory floodplain measures and flood relief structures. However the scheme will result in a permanent alteration in the hydrological regime of the local rhyne and floodplain system and associated ecology.	n/a	Slight adverse

Preferred Scheme		Weston Package Phase 1	To enable the sustainable development of Weston	Present Value of Costs to Public Accounts £m
OBJECTIVE	**SUB-OBJECTIVE**	**QUALITATIVE IMPACTS**	**QUANTITATIVE ASSESSMENT**	**ASSESSMENT**
ENVIRONMENT (cont.)	**Physical Fitness**	It is assumed that no travel is over 30 minutes at each of the proposals. Existing pedestrian access is relatively good and would be maintained or improved through the provision of signalised pedestrian crossings. The existing cycling provision is limited in places and would be improved through the provision of cycle lanes and cycle advance areas. Improved facilities would be used by children travelling to school and for commuting. The Cross Airfield Link would include provision for pedestrians and cyclists, and would reduce some walking and cycling journey times, especially from the new development sites to the town centre.	n/a	Slight beneficial
	Journey Ambience	Many of the schemes are based on a similar alignment to that which currently exists. Junction improvements, signal improvements and directional signage would improve traffic flow and reduce frustration. Fear of potential accidents would be reduced through improved junctions and sightlines and provision of cycle lanes would reduce vehicle/cyclist interaction and reduce risk of associated accidents.	n/a	Moderate beneficial
SAFETY	**Accidents**	There is a reduction in accidents at the M5 Junction 21 and elsewhere along the road network with the Preferred Scheme.	n/a	PVB £4.987m
	Security	Additional CCTV and passenger waiting facilities at Worle station to reduce the fear of crime, safer crossing facilities at multiple locations, more direct bus services to Worle station to save walking trips from existing terminus, and improved bus termini.	n/a	Slight Beneficial
ECONOMY	**Public Accounts**	Based on TUBA assessment, with the cost price base and discount for the economic appraisal to the year 2002, and an appraisal period of 60 years.	Central Govt PVC £37.488m, Local Govt PVC £9.183m	PVC £46.671m
	Transport Economic Efficiency: Business Users & Transport Providers	Based on TUBA assessment, with the benefit price base and discount for the economic appraisal to the year 2002, and an appraisal period of 60 years.	Users PVB £71.550m, Transport Providers PVB -£0.647m, Other PVB -£15,754m	PVB £55.149m
	Transport Economic Efficiency: Consumers	Based on TUBA assessment, with the benefit price base and discount for the economic appraisal to the year 2002, and an appraisal period of 60 years.	Users PVB £67.828m	PVB £67.828m
	Reliability	More reliable journey times from the M5 jct. 21 to Weston, and more reliable journey times into Weston compared to the A370 by using the CAL. Bus journey time will also be more reliable due to the bus priority measures and for the service using the CAL and the ABL.	n/a	Moderate Beneficial
	Wider Economic Impacts	The scheme does not affect a Regeneration Area, but the WP1 is designed to enable the sustainable development of Weston, and the importance of transport improvements to the regeneration of Weston has been identified in the Vision for Weston and subsequent Weston ADF. In particular, the Package will reduce the actual and perceived constraint on existing and potential businesses in the town by improving Junction 21; improving access for business and employees between existing/proposed employment sites off Winterstoke Road (south) and areas of multiple deprivation and the regeneration area; and by improving the Gateway. It will also improve access through the improvements at Worle Station and the enhanced bus services enabled by the CAL and ABL to link the town centre, development sites, and Worle station.	n/a	Neutral

Preferred Scheme		Weston Package Phase 1	To enable the sustainable development of Weston	Present Value of Costs to Public Accounts £m
OBJECTIVE	**SUB-OBJECTIVE**	**QUALITATIVE IMPACTS**	**QUANTITATIVE ASSESSMENT**	**ASSESSMENT**
ACCESSIBILITY	**Option values**	Bus priority, Worle station interchange and improved foot/cycleways would improve transport options	n/a	Slight Beneficial
	Severance	New pedestrian/cycle crossings and new Airfield Bride Link would reduce severance	n/a	Moderate Beneficial
	Access to the Transport System	Bus priority measures and interchange at Worle station would improve access to public transport. The Cross Airfield Link and Airfield Bridge Link would provide a direct route for buses.	n/a	Moderate Beneficial
INTEGRATION	**Transport Interchange**	Provision of a bus interchange and improvements to Worle station will enhance the passenger waiting environment and improve connectivity between transport modes.	n/a	Moderate Beneficial
	Land-Use Policy	Integration with land use policies is mainly beneficial with a slight adverse impact on environment policies relating to landscape and ecology	n/a	Beneficial
	Other Government Policies	Integration with other government policies is mainly beneficial with a slight adverse impact on environmental policies relating to landscape and ecology	n/a	Beneficial

Appraisal Summary Table (Low Cost Option)

Low Cost Option		Weston Package Phase 1	To enable the sustainable development of Weston	Present Value of Costs to Public Accounts £m
OBJECTIVE	**SUB-OBJECTIVE**	**QUALITATIVE IMPACTS**	**QUANTITATIVE ASSESSMENT**	**ASSESSMENT**
ENVIRONMENT	**Noise**	The decrease in the number of people annoyed is mostly due to a redistribution of traffic over the network. An estimated 78 properties would be exposed to a level above 68 dBL_{Aeq}. Night-time noise levels likely to remain unchanged	No. of people annoyed: Without scheme: 4,730 With scheme: 4,678	Net change in population annoyed with project: -52 NPV £855,591
	Local Air Quality	No designated AQMA in area. There will be an overall decrease in PM_{10} and NO_2 concentrations at properties in the area. Concentrations remain below the objective with or without the Scheme. The improvement is due to reductions in congestion.	Air quality improves at 2943 properties for PM_{10} and 2946 for NO_2, and worsens at 4069 properties for PM_{10} and 5346 for NO_2. There is no change at 1479 properties for PM_{10} and at 199 properties for NO_2.	A overall improvement in air quality PM_{10}=-85 /NO_2=-111 Beneficial
	Regional Air Quality	There will be in overall improvement in regional air quality.	19.7 tonne reduction in NOx emissions and 0.4 tonne reduction in PM_{10} emissions compared with do-minimum in the opening year	2.5 % reduction in NO_X emissions and 2.1 % reduction in PM_{10} emissions in opening year Beneficial
	Greenhouse Gases	Reduction in carbon emissions with the scheme due to reduction in delays and congestion.	Reduction in tonnes carbon over 60yr appraisal period = 73 Reduction in tonnes carbon in opening yr = 2	£2309 Beneficial
	Landscape	Scope to bring benefits to townscape through appropriate design and adequate mitigation. Some additional visual intrusion where close to properties.	n/a	Slight adverse
	Townscape	Same as Landscape	n/a	Same as Landscape
	Heritage of Historic Resources	No known archaeological or built heritage sites, either designated or non-designated, would be directly or indirectly affected by the proposed schemes for this option. There are a number of sites where there is a potential for buried archaeology and/or palaeoenvironmental remains, most notably at Worle Station. Archaeological investigation may well be required in order to determine the presence, extent and significance of such buried remains.	n/a	Neutral
	Biodiversity	Potential dust and pollution impacts to 3 Regional Wildlife Sites, neutralised through construction best practice. Neutral impacts are predicted on internationally and nationally designated sites. Habitat re-creation will be undertaken although there will be a minor net loss of habitats that is generally restricted to improved or amenity grassland, but includes some areas of rough grassland. Wildlife underpasses and fencing to improve safety for protected species, but minor impacts through net loss of habitat.	n/a	Slight adverse
	Water Environment	Principal impacts will include an increase in highway runoff and associated contaminants which could increase flood risk and water quality deterioration in receiving surface and ground water. As such routine runoff should be attenuated and appropriate methods of treatment provided prior to discharge. Construction of the highway within the floodplain will also act as a physical barrier, impeding flood flows and occupying floodplain storage potentially increasing flood risk to the scheme and others. It is assumed that as part of the costed scheme flood risk will be mitigated by providing compensatory floodplain measures and flood relief structures. However the scheme will result in a permanent alteration in the hydrological regime of the local rhine and floodplain system and associated ecology.	n/a	Slight adverse
	Physical Fitness	It is assumed that no travel is over 30 minutes at each of the proposals. Existing pedestrian access is relatively good and would be maintained or improved through the provision of signalised pedestrian crossings. The existing cycling provision is limited in places and would be improved through the provision of cycle lanes and cycle advance areas. Improved facilities would be used by children travelling to school and for commuting.	n/a	Slight beneficial

Low Cost Option		Weston Package Phase 1	To enable the sustainable development of Weston	Present Value of Costs to Public Accounts £m
OBJECTIVE	**SUB-OBJECTIVE**	**QUALITATIVE IMPACTS**	**QUANTITATIVE ASSESSMENT**	**ASSESSMENT**
ENVIRONMENT (Cont.)	**Journey Ambience**	Most of the schemes are based on a similar alignment to that which currently exists. Junction improvements, signal improvements and directional signage would improve traffic flow and reduce frustration. Fear of potential accidents would be reduced through improved junctions and sightlines and provision of cycle lanes would reduce vehicle/cyclist interaction and reduce risk of associated accidents.	n/a	Moderate beneficial
SAFETY	**Accidents**	There is a reduction in accidents, primarily at the M5 Junction 21 with the Low Cost Option	n/a	PVB £2.175m
	Security	Additional CCTV and passenger waiting facilities at Worle station to reduce the fear of crime, safer crossing facilities at multiple locations, more direct bus services to Worle station to save walking trips from existing terminus, and improved bus termini.	n/a	Slight Beneficial
ECONOMY	**Public Accounts**	Based on TUBA assessment, with the cost price base and discount for the economic appraisal to the year 2002, and an appraisal period of 60 years.	Central Govt PVC £10.199m, Local Govt PVC £4.172m	PVC £14.371m
	Transport Economic Efficiency: Business Users & Transport Providers	Based on TUBA assessment, with the benefit price base and discount for the economic appraisal to the year 2002, and an appraisal period of 60 years.	Users PVB £23.188m, Transport Providers PVB -£3.050m, Other PVB -£1.371m	PVB £18.767m
	Transport Economic Efficiency: Consumers	Based on TUBA assessment, with the benefit price base and discount for the economic appraisal to the year 2002, and an appraisal period of 60 years.	Users PVB £16.211m	PVB £16.211m
	Reliability	More reliable journey times from the M5 junction 21 to Weston. Bus journey time will also be more slightly more reliable due to the bus priority measures at Elmham Way and Queen's Way	n/a	Slight Beneficial
	Wider Economic Impacts	The scheme does not affect a Regeneration Area, but the WP1 is designed to enable the sustainable development of Weston, and the importance of transport improvements to the regeneration of Weston has been identified in the Vision for Weston and subsequent Weston ADF. In particular, the Package will reduce the actual and perceived constraint on existing and potential businesses in the town by improving Junction 21, and by improving the Gateway. It will also improve access through the improvements at Worle Station and the enhanced interchange with bus services.	n/a	Neutral
ACCESSIBILITY	**Option values**	Bus priority, Worle station interchange and improved foot/cycleways would improve transport options	n/a	Slight Beneficial
	Severance	New pedestrian/cycle crossings would slightly reduce severance	n/a	Slight Beneficial
	Access to the Transport System	Bus priority measures and interchange at Worle station would improve access to public transport	n/a	Slight Beneficial
INTEGRATION	**Transport Interchange**	Provision of a bus interchange and improvements to Worle station will enhance the passenger waiting environment and improve connectivity between transport modes.	n/a	Moderate Beneficial
	Land-Use Policy	Integration with land use policies is mainly beneficial with a slight adverse impact on environment policies relating to landscape and ecology	n/a	Beneficial
	Other Government Policies	Integration with other government policies is mainly beneficial with a slight adverse impact on environmental policies relating to landscape and ecology	n/a	Beneficial