

Local Transport Plan 3 (LTP3) Appendices

Final Draft

February 2011



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Appendix 1

Glossary of Terms

Acronym/ Common Term	Full Title	Explanation
AQMA	Air Quality Management Area	An identified area where various air pollutant levels breach national limits, requiring action to deal with poor air quality.
ANPR	Automated Number plate Recognition	System consisting of linked traffic cameras capable of identifying average speed of vehicle between two points and used to enforce speed limits, particularly through roadworks or over longer sections of route.
Active Travel		Modes of travel which require physical activity, ie walking and cycling.
BRT	Bus Rapid Transit	Provision of dedicated, segregated bus lanes, junction priority, high quality "stations" and other infrastructure to provide a bus-based version of light rail rapid transit, capable of supporting high frequency services moving large volumes of passengers.
Car Club		Organisations providing cars based in key locations for hire to members via an online or telephone booking system. Car clubs allow infrequent car users to access a car when they need it, without the high cost or parking difficulties associated with car ownership.
CCTV	Closed Circuit Television	The use of video cameras to transmit a signal to a specific place, on a limited set of monitors. Typically used to transmit images from roadside cameras to traffic control rooms for network management purposes.
CPGS	Car Park Guidance System	System which combines monitoring of car park capacity and occupancy with Variable Message Signs (see "VMS") to route car drivers to car parks with available parking spaces, reducing the number of vehicles circulating searching for spaces at busy times and reducing traffic congestion.
CPZ	Controlled Parking Zone	An area where parking restrictions (typically a requirement to display a valid ticket or permit) are in force.
CRP	Community Rail Partnership	Community Rail Partnerships encourage greater use of rail services on rail routes away from main-line corridors by raising their profile in the community. This can be achieved by publicity, developing links with local communities served by the rail route and recruiting volunteers to help 'adopt' stations.
DaSTS	Delivering a Sustainable Transport System	Government report and policy guidance outlining goals and planned development for transport, aiming to balance the delivery of economic growth with reductions in the environmental impact of transport.
DDA	Disability Discrimination Act	An Act of Parliament making it unlawful to discriminate against disabled persons in connection with employment, the provision of goods, facilities and services and regarding the design of public buildings and infrastructure. All sections of the DDA Have been replaced by the Equalities Act (2010) which covers the same topic.
DfT	Department for Transport	Government Department with responsibility for funding, development, and regulation of all aspects of Transport in England.
Eddington Report	Eddington Transport Study	A report authored by Sir Rod Eddington in 2006. This report examined the relationship between transport and the economy and the environment, and made recommendations on the direction future transport direction should take.
Equalities Act (2010)		An Act of Parliament that replaces the DDA (above) with similar content and also some extended provisions.

Acronym/ Common Term	Full Title	Explanation
Green Grid		The Green Grid concept aims to create a multi-functional network of interlinked, multi-functional and high quality open spaces that connect with town centres, public transport nodes, the countryside in the urban fringe, and major employment and residential areas. The PUSH Green Infrastructure Strategy is a step towards the creation of a Green Grid in South Hampshire.
HA	Highways Agency	Government agency responsible for managing the trunk road and motorway network.
Hampshire County Council		The County Council covering the county of Hampshire but excluding the cities of Portsmouth and Southampton, which are unitary authorities. Major urban areas in Hampshire include Havant, Gosport, Fareham, Eastleigh, Winchester, Basingstoke, Andover, Farnborough, and Aldershot.
HOV Lanes	High Occupancy Vehicle Lanes	Lanes dedicated for use by buses and cars carrying multiple occupants. Intended to encourage car-sharing by rewarding car-sharers with faster, less congested journeys.
ITS	Intelligent Transport Systems	The use of IT systems to transport operations in order to reduce operating costs, improve safety, reduce environmental impacts and maximise the capacity of existing infrastructure.
Journey time reliability		It is important for people making a regular journey that the length of time taken between their origin and destination is reasonably predictable, and does not fluctuate excessively from day to day. Unpredictability adds to costs of business and results in wasted time.
KSI	Killed or Seriously Injured	Highway Personal Injury Accidents resulting in death or injuries defined as serious to those involved.
LDF	Local Development Framework	A series of local development documents prepared by district councils and unitary authorities that outline the spatial planning strategy for their area.
Legible Cities/ Legible South Hampshire		The Legible Cities concept involves the development of direction signage and maps to enable pedestrians and cyclists to navigate around the city with greater ease and confidence. A Legible South Hampshire project would involve deployment of a common brand of Legible Cities signage in urban locations across South Hampshire.
LEP	Local Enterprise Partnership	<p>The current Government has proposed to set up a number of regional / sub-regional organisations known as LEPs to replace Regional Development Agencies (RDAs).</p> <p>LEPs will provide the strategic leadership in their areas to set out local economic priorities and will feature more private sector representation than RDAs. LEPs will address such areas as planning, housing, local transport and infrastructure, employment, and inward investment. LEPs will be able to submit bids to the Regional Growth Fund.</p> <p>In October 2010, a Solent LEP, covering the TfSH area and the Isle of Wight was one of twenty four LEP proposals across England that met the requirements of the Government, and was given the go-ahead to be formally established.</p>
Local Transport Act		The Local Transport Act (2008) is an act of Parliament that enables local authorities to better manage bus services, consider introduction of road charging schemes, and also outlines the requirements for delivery of Local Transport Plans.

Acronym/ Common Term	Full Title	Explanation
LTA	Local Transport Authority	A Local Authority responsible for the operation, management and development of the highway network (excluding trunk roads and motorways, which are the responsibility of the Highways Agency) within its area. LTAs are also generally responsible for subsidy of certain bus routes and maintenance and improvement of transport infrastructure (excluding infrastructure under control of the Highways Agency, Network Rail, and private operators).
LTP	Local Transport Plan	A Local Transport Plan outlines the transport policies, strategy and implementation plans for Local Transport Authorities.
LSTF	Local Sustainable Transport Fund	Funding made available for local authorities outside London to bid for, to support packages of transport interventions that support local economic growth and reduce carbon emissions in their communities as well as delivering cleaner environments and improved air quality, enhanced safety and reduced congestion.
Modal Share		The proportion of journeys made by a mode (i.e. type) of transport, e.g. a modal share of 70% for cars means 70% of journeys are made by car.
Naked Streets		Streets with none (or very little) of the usual street furniture such as traffic lights, signs, kerbs, railings, white lines and other road markings. In certain locations, studies have found that “naked streets” reduce traffic speeds and improve safety for users compared to more traditional street layouts, markings and furniture.
PTW	Powered Two-Wheeler	A powered two wheel vehicle, ie a motorbike, motor scooter, or electric scooter.
PCC	Portsmouth City Council	Unitary Authority covering Portsea Island, and the mainland consisting of Paulsgrove to the west and Farlington to the east.
PCN	Penalty Charge Notice	Fine to punish civil parking and traffic offences. Originally used by police and traffic wardens, their use has extended to other public officials and authorities, and can be used to punish contraventions of bus lanes, prohibitions of driving, etc by those without permission to use such infrastructure.
PUSH	Partnership for Urban South Hampshire	A partnership between Local Authorities in South Hampshire which aims to deliver sustainable, economic growth and regeneration to create a more prosperous, attractive and sustainable South Hampshire.
QBP	Quality Bus Partnership	An agreement between Bus Operators and Local Highway Authorities which requires each party to commit to deliver specific improvements aimed at securing better quality bus services in an area or along a bus corridor. Typically this involves both the introduction of better infrastructure, usually by the local authority, and better vehicles or service improvements, usually by bus operators.
RGF	Regional Growth Fund	Government funding initiative to encourage private sector enterprise, create sustainable private sector jobs and help places currently reliant upon the public sector make the transition to sustainable private sector growth. Transport initiatives are eligible to receive funding.
ROMANSE	Road Management Centre for Europe	Southampton’s traffic control centre.
ROWIP	Rights of Way Improvement Plan	A plan which considers how best to manage and develop the Public Rights of Way network (including bridleways and public footpaths).
RTI	Real Time Information	A system providing live updates on expected arrival times of buses at each stop, and often also accessible online or via text message.

Acronym/ Common Term	Full Title	Explanation
RUS	Route Utilisation Strategy	Network Rail documents outlining plans for future development and operation of different parts of the rail network.
SCC	Southampton City Council	Unitary Authority covering the city of Southampton and much of its urban and suburban area.
SHA	Southampton Hackney Association	Organisation representing Southampton's hackney ("hail and ride") taxi operators and drivers.
SPD	Supplementary Planning Document	A partner planning document to major plans such as the Local Development Framework (LDF) setting out specialist or additional planning requirements, rules and regulations.
SUDS	Sustainable Urban Drainage System	Urban drainage system designed to reduce the impact of water runoff from urban developments. SUDS generally use systems of collection, storage, cleaning, and controlled release to more slowly release cleaner drainage water back into the environment. These systems are less prone to flooding than conventional drainage.
Stern Review	Stern Review on the Economics of Climate Change	A report produced in 2005 for the British Government by economist Nicholas Stern. It examines the economic impacts of climate change, as well as considering the policy challenges involved in developing a low-carbon economy and in adapting to the consequences of climate change.
TAMP	Transport Asset Management Plan	A Transport Asset Management Plan aims to bring together the management processes associated with the maintenance of the transport network with information on the transport assets maintained by a local authority in one document.
TAP	Town Access Plan	A plan identifying schemes which can help improve movement in and around towns, and to make the best use of roads and public spaces. TAPs are Hampshire County Council's primary vehicle for identifying how to improve parts of the transport network in towns in Hampshire.
TfSH	Transport for South Hampshire	Transport for South Hampshire is a delivery agency formed in 2007 for the South Hampshire sub-region, bringing together local transport authorities, transport operators, business interests and government agencies to deliver change. The organisation is a partnership made up of the Local Highway Authorities of Hampshire, Southampton and Portsmouth, together with transport providers and other agencies.
TIF	Tax Increment Financing	The coalition government in autumn 2010 announced new powers for Local Authorities to be able to borrow against future estimated local tax receipts. This could mechanism be used to help deliver local transport improvements.
UTMC	Urban Traffic Management & Control	The Urban Traffic Management Control or UTMC programme is the main initiative of the UK Department for Transport (DfT) for the development of a more open approach to Intelligent Transport Systems or ITS in urban areas. Refers to combination of systems based on ITS used to control traffic in urban areas.

Appendix 2

Summary of Consultation Activities

South Hampshire Joint Strategy Consultation

From 8 July to 29 September 2010, the three Local Transport Authorities of Hampshire County Council, Portsmouth City Council and Southampton City Council ran a consultation on a draft Local Transport Plan 3 (LTP3) Joint South Hampshire Strategy.

The consultation was accompanied by a response survey and an online survey which posed a number of questions on the proposed vision, challenges, outcomes, policies and options for delivery. Respondents either used this survey, or provided their views on the main components of the draft strategy in a less structured format.

160 responses were received to the consultation, of which 68 were submitted by members of the public or sole traders, 68 were submitted by businesses and organisation representatives and 24 were submitted by elected members of parish, district or city councils. In addition, the three LTAs jointly held three workshops for stakeholders, which were attended by 144 representatives from 75 different organisations.

This document summarises and presents analysis of the feedback that has been received on the draft Joint South Hampshire Strategy. This has taken into account all the responses to the consultation and stakeholder comments made at the three stakeholder workshops. These themes are summarised below:

- There was widespread support for a vision statement, but the current vision was criticised for not being inspiring enough, and for containing excessive jargon.
- Respondents were generally in agreement with the six challenges, with Challenge 1 (securing funding to deliver transport improvements) and Challenge 5 (widening travel choice to offer reasonable alternatives to the private car) regularly being identified as being of high importance.
- Numerous respondents highlighted the need to ensure that the transport network plays a vital role in helping to support economic competitiveness and growth, through the provision of a well-maintained, resilient highway network, and that ensuring journey time reliability was important, especially for businesses.
- Some respondents felt that the challenges section did not adequately address the issues of poverty, deprivation and accessibility for those with mobility difficulties. A few respondents suggested that a new challenge was needed addressing the need to protect the environment and maintain/ improve quality of life.
- Most respondents were supportive of the seven proposed transport outcomes.
- Respondents identified that Increased modal share for public transport and active travel” (Outcome 1) and “Reduced need to travel and reduced dependence on the private car” (Outcome 2) were their top priorities.
- Commenting on the proposed thirteen policies, respondents generally indicated that all the policies were important. Support for Policy G (active travel) and smarter choices initiatives and measures to improve public transport services (Policy H) was strongest. There was also considerable support for improved rail services (Policy J).
- Policy L (Public realm) was seen as important, but some respondents questioned whether this should be a priority in the short term, in light of funding pressures.
- Policy I (water transport) was generally perceived by respondents as the policy with the lowest priority.

- It was felt that more reference needed to be made to freight, powered two wheelers, Town Access Plans, the connections between health and travel habits, and the important role of South Hampshire as a gateway to the Isle of Wight.
- Given the high value and importance placed on the local environment, it comes as no surprise that environmental stakeholders made numerous detailed comments and points highlighting the need to protect and enhance biodiversity through appropriate mitigation.

Southampton LTP3 Implementation Plan

Consultation on a draft copy of the implementation plan and on elements of the implementation plan was conducted in January and February 2011. Consultees included various key stakeholder organisations in the city of Southampton, together with relevant internal stakeholders and also Councillors, Cabinet and the full Council within Southampton City Council.

General changes made to the final implementation plan based on feedback received from this consultation has included:

- Alteration of the general approach of the implementation plan to make it more outcome-focused
- Provision of a summary section at the start of the document, primarily intended to explain the changes for transport we plan for the years to 2015, and to focus on outcomes of this implementation plan
- Better explanation of how many of our proposed schemes work together to provide various benefits
- Structural changes to the document to make it easier to read and improve consistency, as well as to make some information more accessible;

Specific changes to content included:

- Inclusion of more information on some recently developing schemes, eg Platform Road and elements of our bus strategy/ Bus Punctuality Partnership;
- Close consultation with bus operators on their priority for highway bus priority schemes in order to identify the schemes that would provide the greatest benefits;
- Updated and corrected information on various topics including health and obesity statistics, AQMAs, Taxi regulation, Benefit-Cost Ratios for the StreetTread project, and references to legislation covering accessibility for the less mobile; and various other topics, in order to ensure the best possible accuracy.

The final LTP3 Document was approved by Full Council on the **xxxxxxx** and was published and adopted on the **xxxxxx**.

Appendix 3

Detailed Scheme Assessment Methodology

Step 1: Scoring against policy goals

How well does the scheme address these local and policy goals?

Sub-regional goals (based on South Hampshire Joint Strategy Outcomes)

- SO1-Will it reduce dependence on the private car through increased numbers of people choosing public transport, walking, and cycling?
- SO2-Will it improve awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how?
- SO3-Will it improve journey time reliability for all modes?
- SO4-Will it improve road safety within the sub-region?
- SO5-Will it improve accessibility within and beyond the sub-region?
- SO6-Will it improve air quality and environment, and reduce greenhouse gas emissions?
- SO7-Will it promote a higher quality of life?

Local Goals (objectives designed to prioritise the key strategy elements outlined in Chapter 3 – “Introduction to the Implementation Plan”)

- LG1: Will it contribute towards a 50% increase in bus patronage?
- LG2: Will it contribute toward the bus replacing the car as the mode of choice for many types of short to medium distance journeys between the city and the suburbs?
- LG3: Will it help develop a traffic control system that is configured to support people movement capacity (ie bus priority) rather than net numbers of vehicle movements?
- LG4: Will it lead to an increased awareness of travel options?
- LG5: Will it help modes other than the car become the mode of choice for most short journeys, particularly in the city centre and inner suburbs?
- LG6: Will it help reduce the numbers of vehicle trips that park in the city centre?

Scoring Ranges

For each question above, the following scores are assigned based on how well we estimate the scheme performs:

Score	Contribution to policy goal
+2	Definite significant positive
+1	Probable significant positive; definite minor positive
0	Neutral/ indeterminate
-1	Probable significant positive; definite minor positive
-2	Definite significant negative

Step 2: Scoring by Value for Money and Funding

Scoring Ranges- Benefit Cost Ratio

What is the estimated Benefit Cost Ratio range for this scheme based on the identified BCR ranges for scheme types? (see Appendix 2 for BCR ranges by scheme type)

Score	BCR Range
+2	>5
+1	3-5
0	2-3
-1	1-2
-2	<1

Any schemes which would have a road safety benefit receive an additional 1 point at this stage.

Scoring Ranges- External Funding

What is the probability of obtaining external funding for the scheme?

Score	Probability of External Funding (including direct funding from DfT/ treasury)
+2	EF already available for 100% of scheme costs
+1	Good chance of full EF funding OR EF already available for 50-100% of scheme costs
0	Average potential for full EF OR EF already available for <50% of scheme costs
-1	Minimal probability of full EF or better chance of fraction of project funded from EF.
-2	No possibility of EF

Step 3: Scoring by Cost and Feasibility

Scoring Ranges

A. Capital Cost: **+2** (lower cost) to **-2** (higher cost) based on officer judgement, with particular consideration given to the effect on available funding for other projects that pursuing one more expensive project would have.

Cost scoring bands (for ITS/ Network management only)- these differ in different strategy areas dependent on typical scheme cost

Cost range	Capital Cost Scoring Band
Under £15,000	2
£15-£30,000	1
£30,000-£100,000	0
£100,000-£500,000	-1
>£500,000	-2

B. Revenue Cost: **+2** (lower cost) to **-2** (higher cost) based on officer judgement, including consideration of project lifetime (some projects could commit us to a multi-decade maintenance burden) and cost profiles across project lifetime.

C. Deliverability: **+2** (more deliverable) to **-2** (less deliverable) based on officer judgement considering the following criteria:

- Member priorities
- Public requests
- Officer priorities
- Public acceptability
- Issues such as land ownership, legal issues, cross-boundary issues
- Anticipated drain on Transport Policy resources delivering project (ie seeking to avoid projects which require excessive resources for the likely outcome)

Step 4: Ranking to give final score

In each step, all schemes are ranked by their score in the step. The final step of this process adds the rank positions of all steps for each scheme together to give a "final rank". The lower the value (ie the higher-ranked the scheme in various stages) the higher the position of the scheme in the final rank and the higher priority it is.

Appendix 4

Benefit Cost Ratio Research

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
Smarter Choices	Comprehensive Smarter Choices Scheme	4.5		DfT Sustainable Travel Demonstration Towns- estimate ¹	Total
Smarter Choices	Comprehensive Smarter Choices Scheme	9		DfT Sustainable Travel Demonstration Towns- all three towns, congestion reduction benefit only ²	Congestion relief only
Smarter Choices	Comprehensive Smarter Choices Scheme	10	>5	From Cairns et al study, 2004- congestion only benefits of Smarter Choices ³	Congestion relief only
Smarter Choices	Comprehensive Smarter Choices Scheme	30		TRICS Presentation - BCR for congested city streets ⁴	Total
Smarter Choices	Comprehensive Smarter Choices Scheme	16		Southampton Street Tread Project- project review ⁵ .	Total
Smarter Choices	Individualised Travel Marketing	7.6	>5	Sustrans/ SocialData- TravelSmart Project Review ⁶	Total
Smarter Choices	Individualised Travel Marketing	17.4		Evaluation of Indimark personalised travel marketing in Perth, Australia- benefits over 30 years. ⁷	Total
Smarter Choices	School Travel Plans	3.8	>5	Over 3 years including externalities such as air pollution, climate change, noise, congestion. ⁸	Environmental and Congestion
Smarter Choices	School Travel Plans	6.5		Over 5 years including externalities such as air pollution, climate change, noise, congestion. ⁹	Environmental and Congestion
Smarter Choices	Workplace Travel Plans	13		Highways agency travel plan for Cambridge science park, 71 employers, 5000 staff, no further details available. ¹⁰	No details
Smarter Choices	Workplace Travel Plans	21		Over 3 years including externalities such as air pollution, climate change, noise, congestion. ¹¹	Environmental and Congestion
Smarter Choices	Workplace Travel Plans	35	>5	Over 5 years including externalities such as air pollution, climate change, noise, congestion. ¹²	Environmental and Congestion
Smarter Choices	Workplace Travel Plans	5.5		Travel plan at Northampton General Hospital. ¹³	No details
Smarter Choices	Workplace Travel Plans	3.7		Travel plans for a number of workplaces in Whiteley. ¹⁴	No details
Smarter Choices	Car clubs	High as low cost to SCC	Est 3-5	SCC estimate only	N/A
Smarter Choices	Home Shopping	Unknown	Est 3-5	SCC estimate only	N/A

¹ <http://www.dft.gov.uk/pgr/sustainable/smarterchoices/smarterchoiceprogrammes/pdf/summaryreport.pdf> Page 8

² <http://www.dft.gov.uk/pgr/sustainable/smarterchoices/smarterchoiceprogrammes/pdf/summaryreport.pdf> Page 8

³ Cairns et al. 2004, p359 http://pdfserve.informaworld.com/534052_901801919.pdf

⁴ http://www.trics.org/lynn_sloman.pdf

⁵ http://www.travelactively.org.uk/pages/reviews-and-reports/?dm_i=419,C68X,VCHLA,YGRY,1

⁶ http://www.sustrans.org.uk/assets/files/travelmart/sus649_TravelSmart%20review_print.pdf

⁷ http://210.247.132.180/pdfs/research/research_pdf/RS_TP02_6_initial_results_from_travel_behaviour_change.pdf

⁸ Potter et al (2004). *DfT*. Evaluation of school and workplace SSA program. (http://eprints.ucl.ac.uk/1215/1/2004_5a.pdf)

⁹ Potter et al (2004). *DfT*. Evaluation of school and workplace SSA program. (http://eprints.ucl.ac.uk/1215/1/2004_5a.pdf)

¹⁰ <http://www.dft.gov.uk/pgr/sustainable/ltp3planning/travelguide/bestpractice/travelplanning/cambridge/>

¹¹ Potter et al (2004). *DfT*. Evaluation of school and workplace SSA program. (http://eprints.ucl.ac.uk/1215/1/2004_5a.pdf)

¹² Potter et al (2004). *DfT*. Evaluation of school and workplace SSA program. (http://eprints.ucl.ac.uk/1215/1/2004_5a.pdf)

¹³ <https://www.liftshare.com/business/pdfs/IHT-Making%20Smarter%20Choices%202009.pdf>

¹⁴ <https://www.liftshare.com/business/pdfs/IHT-Making%20Smarter%20Choices%202009.pdf>

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
Smarter Choices	Organized car sharing	High as low cost to SCC	Est 3-5	SCC estimate only	N/A
Smarter Choices	Public transport information and marketing schemes	Unknown	Est 3-5	Estimated based on cycle training and marketing BCRs etc	
Smarter Choices	Teleconferencing	Unknown	Est 3-5	SCC estimate only	N/A
Smarter Choices	Teleworking	Unknown	Est 3-5	SCC estimate only	N/A
Smarter Choices	Travel awareness campaigns	Unknown	Est 3-5	No published evidence but would enhance various other active travel/ smarter choices activity outcomes	N/A
Active Travel	Cycle Training & Marketing	7.4		Cycle Training UK study/ review by TfL. ¹⁵	Total
Active Travel	Cycle Training & Marketing	1.4	3 to 5	"Bike It" scheme- Cycling Officers who work closely with selected schools to encourage cycling. ¹⁶	Without health or safety benefits
Active Travel	Cycle Training & Marketing	3.0		"Bike It" scheme- Cycling Officers who work closely with selected schools to encourage cycling. ¹⁷	With health benefit
Active Travel	GP Exercise prescription/ referral	7.2	>5	Economic evaluation of the Walking to Health Initiative. ¹⁸	Not specified
Active Travel	Infrastructure improvements for walkers and cyclists	19	>5	Average from 6 studies on infrastructure improvement schemes. Inc health benefits, value of loss of life, NHS savings, economic productivity gains, pollution, congestion, ambience. One scheme included mortality benefits only in CBR evaluation. ¹⁹	Total
Active Travel	Individual new Cycle Routes/Cycle Route Upgrades	29.3		Upgrades to cycle route running near several schools in Bootle, Merseyside. ²⁰	Total
Active Travel	Individual new Cycle Routes/Cycle Route Upgrades	14.9	>5	Construction of new cycle route near two schools in Newhaven. ²¹	Total
Active Travel	Individual new Cycle Routes/Cycle Route Upgrades	5.56		Development of a cycle route between two campuses at Guildford University. ²²	Total
Active Travel	Individual new Cycle Routes/Cycle Route Upgrades	42		Reallocating road space to cycle lanes on seven busy roads within the city through the introduction of cycle lanes. ²³	Total
Active Travel	Pedestrian Crossings	32.5	>5	Construction of Toucan crossing near a school in Hartlepool ²⁴	Total
Active Travel	Routes to school	14.9-32.5	>5	Range of CBRs from 3 Sustrans routes to school initiatives (also included in above). ²⁵	Total

¹⁵ <http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2008/08/valuing-the-benefits-of-cycling-full.pdf> Page 75

¹⁶ <http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2008/08/valuing-the-benefits-of-cycling-full.pdf> Page 66

¹⁷ <http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2008/08/valuing-the-benefits-of-cycling-full.pdf> Page 66

¹⁸ <http://www.wfh.naturalengland.org.uk/uploads/documents/2335/NE%20WfH%20Cost%20of%20running.pdf>

¹⁹ Davis (2010) Value for Money - An economic evaluation of investments in walking and cycling (www.walkengland.org.uk/.../Microsoft-Word- 2D00_-Economic-Assessment-of-Walking-and-Cycling-March2010.pdf)

²⁰ "Economic Appraisal of local walking and cycling routes" <http://www.sustrans.org.uk/assets/files/general/Economic%20appraisal%20of%20local%20walking%20and%20cycling%20routes%20-%20summary.pdf>

²¹ "Economic Appraisal of local walking and cycling routes" <http://www.sustrans.org.uk/assets/files/general/Economic%20appraisal%20of%20local%20walking%20and%20cycling%20routes%20-%20summary.pdf>

²² <http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2009/03/planning-for-cycling-report-10-3-09.pdf> Page 30

²³ <http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2009/03/planning-for-cycling-report-10-3-09.pdf> Page 30

²⁴ "Economic Appraisal of local walking and cycling routes" <http://www.sustrans.org.uk/assets/files/general/Economic%20appraisal%20of%20local%20walking%20and%20cycling%20routes%20-%20summary.pdf>

²⁵ Davis (2010) Value for Money - An economic evaluation of investments in walking and cycling (www.walkengland.org.uk/.../Microsoft-Word- 2D00_-Economic-Assessment-of-Walking-and-Cycling-March2010.pdf)

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
Active Travel	Whole Cycle Network Upgrades	3.9	2-3	LCN+ Actual BCR based on study. ²⁶	Partial - excludes safety and children's health benefits
Active Travel	Whole Cycle Network Upgrades	1.8		LCN+ - TFL Business Case BCR. ²⁷	Without Health Benefit
Active Travel	Whole Cycle Network Upgrades	2.5		LCN+ - TFL Business Case BCR. ²⁸	Total
Public Transport	Area Bus Improvements	2.4	3-5	Tyne and Wear bus corridors. ²⁹	Not specified but probably comprehensive (business case)
Public Transport	Area Bus Improvements	2		Greater Bristol Bus Network- Bus priority infrastructure, stops and RTI. ³⁰	Not specified but probably comprehensive (business case)
Public Transport	Area Bus Improvements	2.7		Leeds Urban Area Public Transport improvements. ³¹	Not specified but probably comprehensive (business case)
Public Transport	Area Bus Improvements	2.52		Ipswich Interchange imps, free shuttle buses, UTMC, RTI, walk/cycle improvements. ³²	Not specified but probably comprehensive (business case)
Public Transport	Area Bus Improvements	7.8		Belfast CITI BRT- Conventional bus improvements. ³³	Not specified but probably comprehensive (business case)
Public Transport	Bus Lanes Only	3.5		Outbound bus lane on A90 (SESTRAN). ³⁴	Not specified but probably comprehensive (business case)
Public Transport	Bus rapid transit	2.01		BRT with dedicated busway and bus lanes. ³⁵	Not specified but probably comprehensive (business case)
Public Transport	Bus rapid transit	1.5		Fareham-Gosport BRT Phase 1. ³⁶	Not specified but probably comprehensive (business case)
Public Transport	Bus rapid transit	4.4		Non guided BRT bus. ³⁷	Not specified but probably comprehensive (business case)
Public Transport	Bus rapid transit	3		Belfast CITI BRT- Partially guided BRT bus. ³⁸	Not specified but probably comprehensive (business case)
Public Transport	Bus rapid transit	1.4	Plymouth Eastern Corridor (BRT). ³⁹	Not specified but probably comprehensive (business case)	
Public Transport	Bus rapid transit	1.77	Luton Translink - unguided busway. ⁴⁰	Not specified but probably comprehensive (business case)	

²⁶ <http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2008/08/valuing-the-benefits-of-cycling-full.pdf> Page 71

²⁷ <http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2008/08/valuing-the-benefits-of-cycling-full.pdf> Page 71

²⁸ <http://www.dft.gov.uk/cyclingengland/site/wp-content/uploads/2008/08/valuing-the-benefits-of-cycling-full.pdf> Page 71

²⁹ <http://www.twpta.gov.uk/wps/wcm/resources/file/eb5f4d0a5ab5b91/8%20%20PTA%20report%20on%20MSBC%20%20as%20at%2015%20sept%2008.pdf>

³⁰ <http://www.westofengland.org/media/153946/5048504%20250%2005%2001%20rev2%20chapter%205%20financial.pdf>

³¹ http://www.londonfirst.co.uk/documents/TRANSPORT_DOC_FINAL_SPREADS.pdf

³² <http://www.suffolk.gov.uk/NR/rdonlyres/6724B2EC-046B-42BB-8336-AF535BA846FA/0/out.html>

³³ http://www.drdni.gov.uk/8_citi_quantitative_assessment.pdf

³⁴ <http://www.sestran.gov.uk/news/article.php?ID=42>

³⁵ <http://www.sheffield.gov.uk/?pgid=118653&fs=n>

³⁶ <http://www.hants.gov.uk/decisions/decisions-docs/090727-cabine-R0720112140.html>

³⁷ http://www.drdni.gov.uk/8_citi_quantitative_assessment.pdf

³⁸ http://www.drdni.gov.uk/8_citi_quantitative_assessment.pdf

³⁹ http://www.plymouth.gov.uk/ecs-chapter_7.pdf

⁴⁰ <http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/twa/ir/lutondunstabletranslinkinspe1032?page=9>

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
Public Transport	Bus rapid transit	1.9		Leigh-Salford-Manchester kerb guided busway. ⁴¹	Not specified but probably comprehensive (business case)
Public Transport	Bus Vehicle Improvements	5.28	3-5	AOSS Case Studies- Low Floor Buses. ⁴²	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	1.2		Four Lanes Ends. ⁴³	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	1.8		Barnsley Interchange. ⁴⁴	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	1.8		Sheffield station—Improved pedestrian access. ⁴⁵	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	1.7		Wolverhampton interchange improvements. ⁴⁶	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	0.4	1-2	Ryde Interchange upgrade. ⁴⁷	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	1.6		Coleshill Interchange. ⁴⁸	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	1.4		Norwich City Centre Interchange. ⁴⁹	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	1.1		North Manchester Business Park. ⁵⁰	Not specified but probably comprehensive (business case)
Public Transport	Interchange improvements	1.8		Liverpool South Parkway. ⁵¹	Not specified but probably comprehensive (business case)
Public Transport	P+R	2.7		Bath Package- Showcase routes and BRT, P&R, travel info. ⁵²	Not specified but probably comprehensive (business case)
Public Transport	P+R	1.77	2-3	Tay Bridge-Leuchars P&R scheme 1. ⁵³	Not specified but probably comprehensive (business case)
Public Transport	P+R	1.49		Tay Bridge-Leuchars P&R scheme 2. ⁵⁴	Not specified but probably comprehensive (business case)
Public Transport	P+R	3.23		Tipner Interchange, bus lanes, roundabout, P&R. ⁵⁵	Not specified but probably comprehensive (business case)

⁴¹ http://www.brtuk.org/downloads/BRTSymposiumUniversityofWarwick6-7thDecemberPresentations_09.pdf

⁴² <http://www.its.leeds.ac.uk/aoss/index.html>

⁴³ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁴⁴ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁴⁵ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁴⁶ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁴⁷ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁴⁸ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁴⁹ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁵⁰ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁵¹ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁵² document saved to P drive

⁵³ <http://www.sestran.gov.uk/files/Landfall%20Site%20Report%20Final%20%20260309.pdf>

⁵⁴ <http://www.sestran.gov.uk/files/Landfall%20Site%20Report%20Final%20%20260309.pdf>

⁵⁵ http://www.portsmouth.gov.uk/media/TSM_tipnermsbc.pdf

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
Public Transport	Rail service improvements	1.7	1-2	Thameslink Upgrade. ⁵⁶	Not specified but probably comprehensive (business case)
Public Transport	Rail station improvements	1.55		Leuchars station car park. ⁵⁷	Not specified but probably comprehensive (business case)
Public Transport	Rail station improvements	2.2	2-3	NUCKLE - service improvements and station enhancements. ⁵⁸	Not specified but probably comprehensive (business case)
Public Transport	Rail station improvements	3.9		Birmingham New Street Gateway Plus. ⁵⁹	Not specified but probably comprehensive (business case)
Public Transport	Signal Bus Priority	1.28		Coventry UTMC signal bus priority- Aim to increase bus usage on key corridors by 25%. ⁶⁰	Not specified but probably comprehensive (business case)
Public Transport	Signal Bus Priority	11.91		Case Study- Signalisation 1. ⁶¹	Not specified but probably comprehensive (business case)
Public Transport	Signal Bus Priority	0.3	3-5	Case Study- Signalisation 2. ⁶²	Not specified but probably comprehensive (business case)
Public Transport	Signal Bus Priority	5		Case Study- Signalisation 3. ⁶³	Not specified but probably comprehensive (business case)
Public Transport	Signal Bus Priority	13.93		Case Study- Signalisation 4. ⁶⁴	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	5.7		A638 Great North Road Quality Bus. ⁶⁵	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	1.5		Leeds A65 (Kirkstall Road). ⁶⁶	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	7.7	2-3	South East Manchester (SEMMMS). ⁶⁷	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	2.6		Manchester Northern Orbital Scheme. ⁶⁸	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	1.8		Hampshire A3 Bus Priority Corridor. ⁶⁹	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	1.5		Luton Dunstable Translink. ⁷⁰	Not specified but probably comprehensive (business case)

⁵⁶ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁵⁷ <http://www.sestran.gov.uk/files/Landfall%20Site%20Report%20Final%20%20260309.pdf>

⁵⁸ [http://www.warwickshire.gov.uk/corporate/committe.nsf/f97183b3a13d475d80256f7000397ba1/89117f6f2d94a309802576dc003d3464/\\$FILE/08%20Nuneaton-Coventry-Kenilworth-Leamington%20%28NUCKLE%29%20Rail%20Line%20Upgrade.pdf](http://www.warwickshire.gov.uk/corporate/committe.nsf/f97183b3a13d475d80256f7000397ba1/89117f6f2d94a309802576dc003d3464/$FILE/08%20Nuneaton-Coventry-Kenilworth-Leamington%20%28NUCKLE%29%20Rail%20Line%20Upgrade.pdf)

⁵⁹ <http://www.skyscrapercity.com/showthread.php?t=465286&page=73>

⁶⁰ <http://www.dft.gov.uk/itstoolkit/CaseStudies/coventry-utmc.htm>

⁶¹ <http://www.its.leeds.ac.uk/aoss/index.html>

⁶² <http://www.its.leeds.ac.uk/aoss/index.html>

⁶³ <http://www.its.leeds.ac.uk/aoss/index.html>

⁶⁴ <http://www.its.leeds.ac.uk/aoss/index.html>

⁶⁵ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁶⁶ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁶⁷ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁶⁸ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁶⁹ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁷⁰ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
Public Transport	Single Bus Corridor Improvements Schemes	2.4		Cambridge to Huntingdon Rapid Transit. ⁷¹	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	2.6		JETTS Quality Bus Corridor. ⁷²	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	1.7		Getting Northampton to Work. ⁷³	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	1		Coventry Quality Bus Network. ⁷⁴	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	1.5		Milton Keynes Quality Bus Network. ⁷⁵	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	3		West Yorks Yellow School Bus. ⁷⁶	Not specified but probably comprehensive (business case)
Public Transport	Single Bus Corridor Improvements Schemes	3.4		Walsall Town Centre Package (based on real costs and benefits). ⁷⁷	Not specified but probably comprehensive (business case)
Public Transport	Smartcards	1.1	1-2	YORCARD. ⁷⁸	Not specified but probably comprehensive (business case)
Public Transport	Smartcards	1.13		South Hampshire Smartcard - MVA business case. ⁷⁹	Not specified but probably comprehensive (business case)
ITS & Network Mgmt	Corridor signal optimisation	4 to 13	3-5	ICM (Integrated Corridor Management) ITS study, San Francisco, 2009. ⁸⁰	Not specified
ITS & Network Mgmt	Corridor signal optimisation	1.28		Coventry UTMC signal bus priority- Aim to increase bus usage on key corridors by 25%. ⁸¹	Not specified but probably comprehensive (business case)
ITS & Network Mgmt	Real Time PT Information	16	>5	ICM (Integrated Corridor Management) ITS study, San Francisco, 2009. ⁸²	Not specified
ITS & Network Mgmt	Signal Bus Priority	11.91	3-5	Case Study- Signalisation 1. ⁸³	Not specified but probably comprehensive (business case)
ITS & Network Mgmt	Signal Bus Priority	0.3		Case Study- Signalisation 2. ⁸⁴	Not specified but probably comprehensive (business case)

⁷¹ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁷² <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁷³ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁷⁴ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁷⁵ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁷⁶ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁷⁷ <http://www2.walsall.gov.uk/CMISWebPublic/Binary.ashx?Document=7644>

⁷⁸ <http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo041013/text/41013w02.htm>

⁷⁹ document saved to P drive

⁸⁰ <http://viewer.zmags.com/publication/1b70916d#/1b70916d/48>

⁸¹ <http://www.dft.gov.uk/itstoolkit/CaseStudies/coventry-utmc.htm>

⁸² [Integrated Approach: Analysis, Modeling and Simulation Results for the ICM Test Corridor Article in Traffic Technology International Traffic Annual Showcase](#)

⁸³ <http://www.its.leeds.ac.uk/aoss/index.html>

⁸⁴ <http://www.its.leeds.ac.uk/aoss/index.html>

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
ITS & Network Mgmt	Signal Bus Priority	5		Case Study- Signalisation 3. ⁸⁵	Not specified but probably comprehensive (business case)
ITS & Network Mgmt	Signal Bus Priority	13.93		Case Study- Signalisation 4. ⁸⁶	Not specified but probably comprehensive (business case)
ITS & Network Mgmt	Traffic signal network optimisation	58		Part of Fuel Efficient Traffic Signal Management (FETSIM) Program in California, 1988. ⁸⁷	Not specified
ITS & Network Mgmt	Traffic signal network optimisation	62		Traffic Light Synchronization Program in Texas, 1992. ⁸⁸	Not specified
ITS & Network Mgmt	Traffic signal network optimisation	55	>5	Network-wide synchronisation of 640 signals in Oakland, Michigan. ⁸⁹	Not specified
ITS & Network Mgmt	Traffic signal network optimisation	17		Large floating vehicle before & after study for whole FETSIM project, 2003. ⁹⁰	Not specified
ITS & Network Mgmt	Variable Message Signing	16 to 25	>5	ICM (Integrated Corridor Management) ITS study, San Francisco, 2009. ⁹¹	Not specified
Public Realm	Benches	10.3	>5	Case study of TfL "Strategic Walks" eg Jubilee Walkway. ⁹²	Not specified but BCR is fairly theoretical
Public Realm	Footway evenness & material quality improvement	0.3	<1	Case study of TfL "Strategic Walks" eg Jubilee Walkway. ⁹³	Not specified but BCR is fairly theoretical
Public Realm	General Public Realm improvements	5		Crime target hardening & removal. ⁹⁴	Not exhaustive
Public Realm	General Public Realm improvements	circa 2-5	2-3	Major town centre public space enhancement schemes. ⁹⁵	Not specified
Public Realm	General Public Realm improvements	0.9 to 1.4		Major town centre public space enhancement schemes. ⁹⁶	Not specified

⁸⁵ <http://www.its.leeds.ac.uk/aoss/index.html>

⁸⁶ <http://www.its.leeds.ac.uk/aoss/index.html>

⁸⁷ Sunkari, Srinivasa, P.E., *The Benefits of Retiming Traffic Signals*, ITE Journal, April, 2004.

⁸⁸ Sunkari, Srinivasa, P.E., *The Benefits of Retiming Traffic Signals*, ITE Journal, April, 2004.

⁸⁹ [Syracuse Signal Interconnect Project: Before and After Analysis Final Report. 2003](#)

⁹⁰ ITS Benefits: The Case of Traffic Signal Control Systems. Skabardonis, Alexander- Paper presented at the 80th Annual Transportation Research Board Meeting. Washington, District of Columbia

⁹¹ [Integrated Approach: Analysis, Modeling and Simulation Results for the ICM Test Corridor Article in Traffic Technology International Traffic Annual Showcase](#)

⁹² "Valuing Walking- Evaluating Improvements to the Public Realm". Paper for European Transport Conference 2005. Daniel Heuman, Paul Buchanan, Martin Wedderburn and Rob Sheldon, August 2005 www.etcproceedings.org/paper/download/204

⁹³ "Valuing Walking- Evaluating Improvements to the Public Realm". Paper for European Transport Conference 2005. Daniel Heuman, Paul Buchanan, Martin Wedderburn and Rob Sheldon, August 2005 www.etcproceedings.org/paper/download/203

⁹⁴ Found via CABE: "A bibliography of design value" <http://www.cabe.org.uk/files/a-bibliography-of-design-value.pdf>

⁹⁵ Based on content of "Literature Review of Public Space and Local Environments for the Cross Cutting Review"- DCLG, Sep 2006- <http://www.communities.gov.uk/publications/communities/literaturereview>

⁹⁶ "Valuing the Benefits of Regeneration Economics paper 7: Summary" – DCLG, Dec 2010 <http://www.communities.gov.uk/documents/regeneration/pdf/1795657.pdf>

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
Public Realm	Increased pedestrian space (reduced crowding)	0.7	<1	Case study of TfL "Strategic Walks" eg Jubilee Walkway. ⁹⁷	Not specified but BCR is fairly theoretical
Public Realm	Information panels	13.3	>5	Case study of TfL "Strategic Walks" eg Jubilee Walkway. ⁹⁸	Not specified but BCR is fairly theoretical
Public Realm	Kerb upgrades	2.1	2-3	Case study of TfL "Strategic Walks" eg Jubilee Walkway. ⁹⁹	Not specified but BCR is fairly theoretical
Public Realm	Large scale wayfinding signage scheme	1.5 to 5.3	3-5	Legible London business case- BCRs for entire scheme. ¹⁰⁰	Not exhaustive
Public Realm	Lighting improvements	3.3	3-5	Case study of TfL "Strategic Walks" eg Jubilee Walkway. ¹⁰¹	Not specified but BCR is fairly theoretical
Public Realm	Provision of/ improvement to Public open space	1.8 to 2.7	2-3	Public open space in urban areas. ¹⁰²	Not specified
Public Realm	Public realm junction improvements	13	>5	Oxford Circus "scramble" ("x") crossing. ¹⁰³	Not specified
Public Realm	Residential area renewal-public realm	3	2-3	Public realm enhancements as part of neighbourhood renewal/regeneration works. ¹⁰⁴	Not specified
Public Realm	Wayfinding Signage	1.6	1-2	Case study of TfL "Strategic Walks" eg Jubilee Walkway. ¹⁰⁵	Not specified but BCR is fairly theoretical
Road Safety	Enforcement- average speed cameras	1.6	1-2	Data from Norwegian research. ¹⁰⁶	Not specified
Road Safety	Enforcement- speed enforcement (police)	1.49	1-2	Data from Norwegian research. ¹⁰⁷	Not specified
Road Safety	Enforcement- Speed reactive signs	2.4	2-3	Data from Norwegian research. ¹⁰⁸	Not specified
Road Safety	Enforcement-Speed cameras	2.7	2-3	DfT investigation into speed camera effectiveness. ¹⁰⁹	Not specified
Road Safety	Enforcement-Speed cameras	2.1		Data from Norwegian research. ¹¹⁰	Not specified
Road	Infrastructure- Pedestrian	1.4	1-2	Data from Norwegian research. ¹¹¹	Not specified

⁹⁷ "Valuing Walking- Evaluating Improvements to the Public Realm". Paper for European Transport Conference 2005. Daniel Heuman, Paul Buchanan, Martin Wedderburn and Rob Sheldon, August 2005 www.etcproceedings.org/paper/download/205

⁹⁸ "Valuing Walking- Evaluating Improvements to the Public Realm". Paper for European Transport Conference 2005. Daniel Heuman, Paul Buchanan, Martin Wedderburn and Rob Sheldon, August 2005 www.etcproceedings.org/paper/download/202

⁹⁹ "Valuing Walking- Evaluating Improvements to the Public Realm". Paper for European Transport Conference 2005. Daniel Heuman, Paul Buchanan, Martin Wedderburn and Rob Sheldon, August 2005 www.etcproceedings.org/paper/download/206

¹⁰⁰ London: Building a Business Case for Walking. Presentation to Walk 21 Conference, Toronto. Adrian Bell, Transport for London, 2007 http://www.walk21.com/conferences/conference_papers_detail.asp?Paper=358&Conference=Toronto

¹⁰¹ "Valuing Walking- Evaluating Improvements to the Public Realm". Paper for European Transport Conference 2005. Daniel Heuman, Paul Buchanan, Martin Wedderburn and Rob Sheldon, August 2005 www.etcproceedings.org/paper/download/207

¹⁰² "Valuing the Benefits of Regeneration Economics paper 7: Summary" – DCLG, Dec 2010 <http://www.communities.gov.uk/documents/regeneration/pdf/1795657.pdf>

¹⁰³ "Oxford Circus gets the X factor"- Paper, Excellence in Walking and Public Realm Category- London Transport Awards 2011 <http://www.transporttimesevents.co.uk/uploads/Oxford%20Circus%20Gets%20the%20X%20Factor.pdf>

¹⁰⁴ "Valuing the Benefits of Regeneration Economics paper 7: Summary" – DCLG, Dec 2010 <http://www.communities.gov.uk/documents/regeneration/pdf/1795657.pdf>

¹⁰⁵ "Valuing Walking- Evaluating Improvements to the Public Realm". Paper for European Transport Conference 2005. Daniel Heuman, Paul Buchanan, Martin Wedderburn and Rob Sheldon, August 2005 www.etcproceedings.org/paper/download/201

¹⁰⁶ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹⁰⁷ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹⁰⁸ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹⁰⁹ www.etcproceedings.org/paper/download/201

¹¹⁰ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹¹¹ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

Strategy Area	Intervention Type	BCR Value	Estimated BCR Banding	Details	Type of benefits
Safety	bridge/underpass				
Road Safety	Infrastructure-Convert crossroads to roundabout	2.62	2-3	Data from Norwegian research. ¹¹²	Not specified
Road Safety	Infrastructure-Convert T junction to roundabout	1.9	1-2	Data from Norwegian research. ¹¹³	Not specified
Road Safety	Infrastructure-Guardrails	2.53	2-3	Data from Norwegian research. ¹¹⁴	Not specified
Road Safety	Infrastructure-Local safety schemes- <£10,000	c. 2 to c.9.5; average c. 5	3-5	A2.1.3- estimated from Final Year Return of schemes costing under £10,000. ¹¹⁵	In line with DfT standards
Road Safety	Infrastructure-Local safety schemes >£100,000	Average c. 0.7	<1	Average estimated on data in A2.12 and A2. ¹¹⁶	In line with DfT standards
Road Safety	Infrastructure-Local safety schemes £10,00-£50,000	c.0.5 to c.9.5, average c.4.5	3-5	A2.1.10- estimated from Final Year Return of schemes costing £10,000-£50,000. ¹¹⁷	In line with DfT standards
Road Safety	Infrastructure-Local safety schemes £50,000-£100,000	c.0 to c.7.8, average c.2.5	2-3	A2.1.11- estimated from Final Year Return of schemes costing £50,000-£100,000. ¹¹⁸	In line with DfT standards
Road Safety	Infrastructure-Pedestrian crossing upgrades	2.4	2-3	Data from Norwegian research. ¹¹⁹	Not specified
Road Safety	Infrastructure-Road reconstruction and repair	1.57	1-2	Data from Norwegian research. ¹²⁰	Not specified
Road Safety	Infrastructure-Safety treatments (local safety schemes)	2.8	2-3	Data from Norwegian research. ¹²¹	Not specified
Road Safety	Infrastructure-Signals at Crossroads	3.95	3-5	Data from Norwegian research. ¹²²	Not specified
Road Safety	Infrastructure-Signals at T Junctions	5.2	3-5	Data from Norwegian research. ¹²³	Not specified
Road Safety	Infrastructure-Speed limit reductions in hazardous areas	14.29	>5	Data from Norwegian research. ¹²⁴	Not specified
Road Safety	Infrastructure-Upgrade substandard road lighting	2.8	3-5	Data from Norwegian research. ¹²⁵	Not specified

¹¹² SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹¹³ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹¹⁴ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹¹⁵ Road Safety Research Report 108- Contribution of Local Safety Schemes to Casualty Reduction Based on data in appendix 2

¹¹⁶ Road Safety Research Report 108- Contribution of Local Safety Schemes to Casualty Reduction Based on data in appendix 5

¹¹⁷ Road Safety Research Report 108- Contribution of Local Safety Schemes to Casualty Reduction Based on data in appendix 3

¹¹⁸ Road Safety Research Report 108- Contribution of Local Safety Schemes to Casualty Reduction Based on data in appendix 4

¹¹⁹ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹²⁰ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹²¹ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹²² SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹²³ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹²⁴ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

¹²⁵ SafetyNet (2009)- "Cost-benefit analysis". Table 4 - cost effectiveness of road safety measures in Norway

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Appendix 5

List of All Schemes considered for LTP3

Scheme ID	Strategy Area	Scheme Name
AT-1	AT	Cycle Stopline Intercept survey
AT-10	AT	Laundry Road cycle route signage
AT-12	AT	Strategic Cycle Network- delivery of network
AT-13	AT	DIY Streets- St Denys
AT-14	AT	Cycle Missing Links (various locations)
AT-15	AT	Footway improvements at district centres
AT-16	AT	Cycle Parking improvements
AT-17	AT	Cycle advance stop lines
AT-18	AT	Redbridge Road-Regents Park Road north side shared use path
AT-19	AT	Church Road cycle and pedestrian improvements
AT-2	AT	Develop new Southampton Cycling Strategy
AT-20	AT	Pound Street cycle and pedestrian improvements
AT-22	AT	Cycle crossing of Winchester Road near Seagarth Lane
AT-23	AT	Millbrook Road East cycle route and signage improvements
AT-24	AT	Millbrook estate cycleway improvements
AT-25	AT	Millbrook estate cycleway improvements
AT-26	AT	Bitterne Precinct Cycle parking
AT-27	AT	Canute Road cycle parking
AT-28	AT	Cycle racing track
AT-29	AT	Skyride + Skyride local
AT-3	AT	Cobden Bridge Toucan Crossing
AT-30	AT	Big Bike Celebration
AT-31	AT	Cyclo-cross racing
AT-32	AT	Other events
AT-33	AT	Street Tread
AT-34	AT	Southampton Cycle Challenge
AT-35	AT	Promotional literature and maps
AT-36	AT	Transport Direct Cycle Journey Planner
AT-4	AT	Cobden Bridge Cycle Lanes
AT-5	AT	Bursledon Road shared use path- Botley Road to Upper Deacon Road
AT-6	AT	Dale Road/ Dale Valley Road Junction Improvements for cyclists
AT-7	AT	Romsey Road – Former OS site to new Oasis Academy shared use path and junctions
AT-8	AT	University Road cycle lane improvements
AT-9	AT	University Crescent & Lovers Walk cycle & pedestrian improvements
BP3-N3c	ITS & NMS	Bitterne Rd W HOV Lanes
BP-A1	ITS & NMS	Avenue/ Lodge Road Junction

BP-A2	ITS & NMS	Avenue/ Lodge Road Junction
BP-A3	ITS & NMS	Avenue junction with Westwood Road
BP-A4	ITS & NMS	Avenue junction with Winn Road
BP-A5	ITS & NMS	Avenue junctions with Highfield Avenue and Burgess Road
BP-CC1	ITS & NMS	Platform Road-Queens Terrace/Dock Gate 4
BP-CC2	ITS & NMS	Canute Road
BP-CC3	ITS & NMS	Wyndham Place/ Commercial Road
BP-CC4	ITS & NMS	Civic Centre Place
BP-CC5	ITS & NMS	Vincent's Walk
BP-N1	ITS & NMS	New Road to Northam Road / Six Dials
BP-N2	ITS & NMS	Six Dials
BP-N3a	ITS & NMS	Lances Hill Signal Bus Priority
BP-N3b	ITS & NMS	Northam Corridor Signal Priority (Northam-Bitterne)
BP-N4	ITS & NMS	Bursledon Road/ Kathleen Road/ Hinkler Road
BP-N5	ITS & NMS	Portsmouth Road/ Coopers Lane (Woolston Centre)
BP-P1	ITS & NMS	Portswold Road between Lodge Road and St Denys Road junctions
BP-P2	ITS & NMS	Portswold Road/ St Denys Road/ Highfield Lane
BP-P3	ITS & NMS	St Denys Road between Belmont Road and Bitterne Park Triangle
BP-P4	ITS & NMS	Portswold Road/ High Road junction with Woodmill Lane/ Langhorn Road
BP-P5	ITS & NMS	Woodmill Lane/ Wessex Lane
BP-P6	ITS & NMS	Burgess Road/ High Road/ Stoneham Lane/ Stoneham Way junctions
BP-S1	ITS & NMS	Four Post Hill area (Shirley Rd/ Commercial Rd/ Central Stn Bridge/ Hill Ln)
BP-S2	ITS & NMS	Waterloo Rd/ Roberts Rd
BP-S3	ITS & NMS	Paynes Road/ Howard Road
BP-S4	ITS & NMS	Shirley Corridor/ Shirley Centre
BP-S5	ITS & NMS	Park Street
BP-S6	ITS & NMS	Anglesea Rd
BP-S7	ITS & NMS	Dale Road/ Wilton Road/Winchester Road

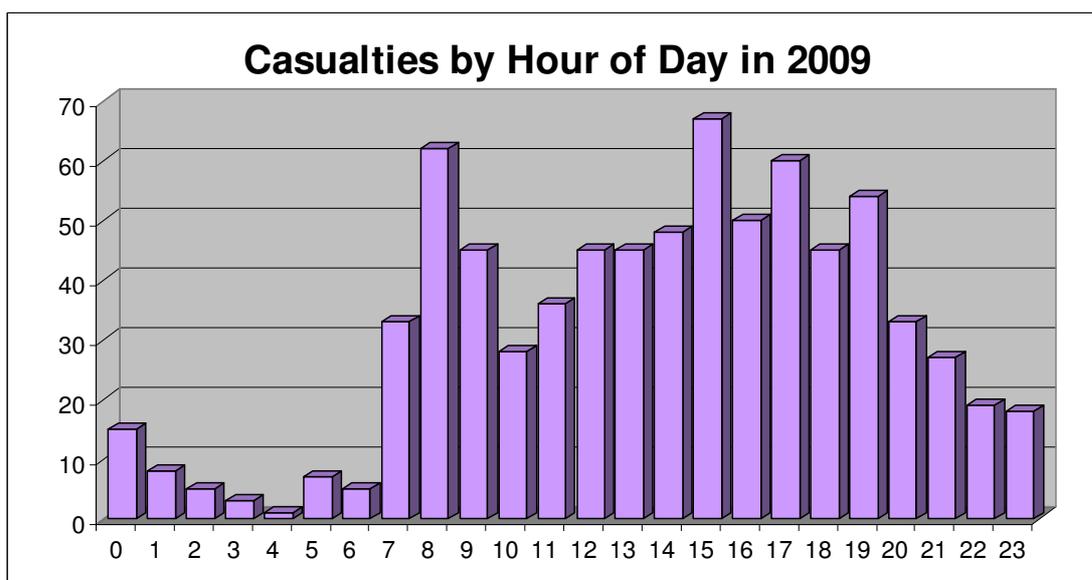
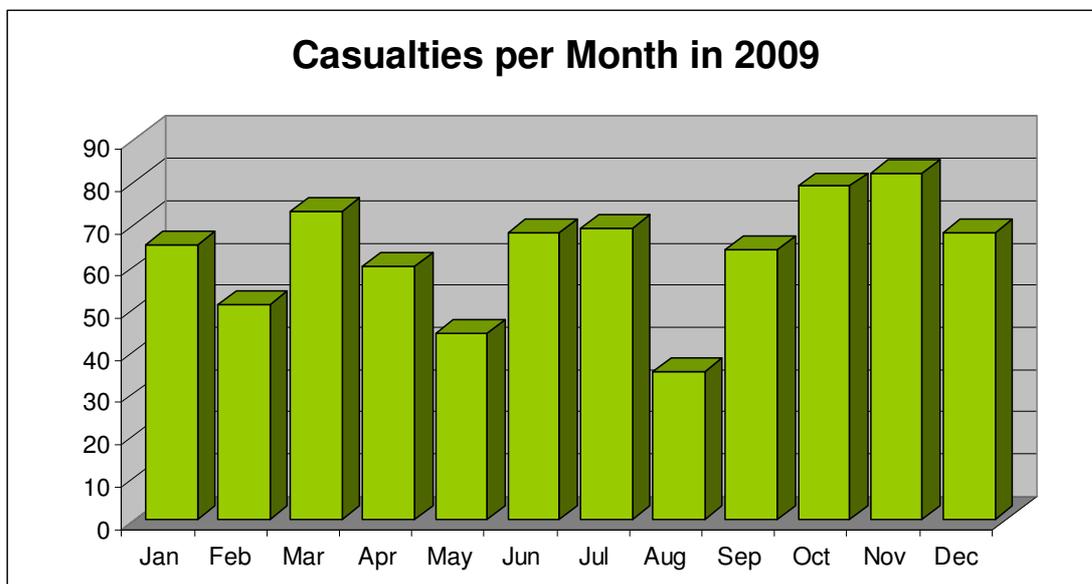
BP-S8	ITS & NMS	Maybush Corner (Romsey Rd/ Wimpson Lane/Rownhams Lane)
ITS-1	ITS & NMS	Congestion/capacity improvements- Charlotte Place Rbt
ITS-10	ITS & NMS	City Centre Northern Ring Road UTMC Upgrade
ITS-11	ITS & NMS	UTMC Comms upgrade to GPRS
ITS-12	ITS & NMS	Web information applications
ITS-13	ITS & NMS	Bus Lane Enforcement
ITS-14	ITS & NMS	Upgrade CCTV system to digital
ITS-2	ITS & NMS	Congestion/capacity improvements- Thomas Lewis Way
ITS-3	ITS & NMS	Congestion/capacity improvements- West Quay Rd
ITS-4	ITS & NMS	Congestion/capacity improvements- The Avenue
ITS-5	ITS & NMS	Congestion/capacity improvements- Cobden Avenue
ITS-6	ITS & NMS	Congestion/capacity improvements- Canute Rd
ITS-7	ITS & NMS	Bus RTI System refresh
ITS-8	ITS & NMS	UTMC Upgrades- Winchester Rd/ Romsey Rd/ Tebourba Way
ITS-9	ITS & NMS	UTMC Upgrades- The Avenue
PR-1	PR	Oxford Street
PR-2	PR	Bitterne District Centre
PR-3	PR	Woolston District Centre
PR-4	PR	Clutter Reduction
PR-5	PR	Bargate
PT-1	PT	Static Information
PT-10	PT	Secure cycle parking at ferry terminals
PT-11	PT	Taxi- CCTV Coverage of entire fleet
PT-12	PT	Taxi- Euro5 diesel full fleet coverage
PT-13	PT	Taxi- review of CBD rank provision
PT-15	PT	Revisions to Supported Services
PT-2	PT	Raised Kerbs
PT-3	PT	Improvements to infrastructure/ walk routes
PT-4	PT	ITSO compliant Smart Card System
PT-5	PT	Communications & Marketing Strategy
PT-6	PT	Marketing- user & non user tracking
PT-7	PT	Southampton Central Station Remodelling
PT-9	PT	Rail Station Enhancements- St Denys
PT-P3	PT	Interchange Improvements-Portswood
PT-S3	PT	Interchange Improvements-Shirley

PT-X	PT	North of Southampton Central Station PT & Public Realm Improvements
RS-1	RS	Camera Enforcement
RS-10	RS	Vehicle Activated Signs
RS-11	RS	School crossing patrols
RS-12	RS	School education activities
RS-13	RS	Child & adult cycle training
RS-14	RS	Local education campaigns
RS-15	RS	Regional education campaigns
RS-2	RS	Driver Awareness Training
RS-3	RS	Low cost site specific engineering
RS-4	RS	Med cost site specific engineering
RS-5	RS	High cost site specific engineering
RS-6	RS	Area-wide/ route specific treatments
RS-7	RS	20MPH Limits outside schools, no traffic calming
RS-8	RS	20MPH Limits outside schools, with traffic calming
RS-9	RS	Other area speed schemes (residential/district centre zones)
SC-1	SC	Smarter Travel Southampton
SC-12	SC	Car Share Database
SC-13	SC	Car Club
SC-2	SC	Site Travel Planning (various)
SC-3	SC	School Travel Plans
SC-4	SC	Southampton Central Station Travel Plan
SC-5	SC	Southampton General Hospital Travel Plan
SC-6	SC	Area based Travel Plans
SC-7	SC	Residential Travel Plans

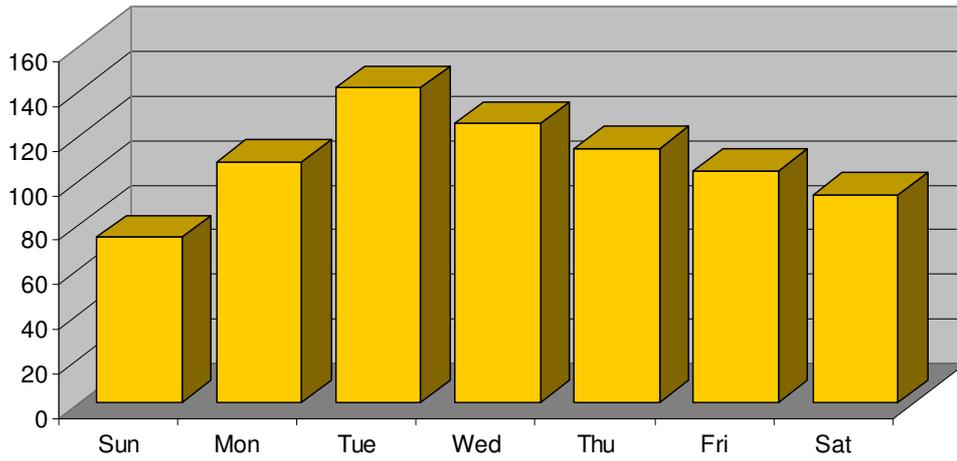
Appendix 6

Summary of Road Safety Data for Southampton

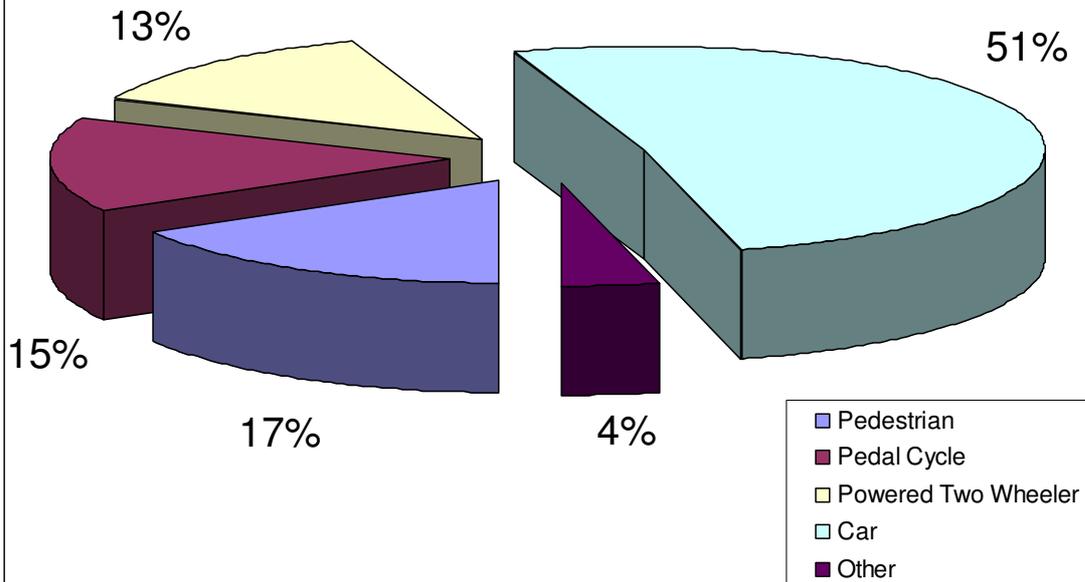
The following appendix summarises useful data on casualties in Southampton.

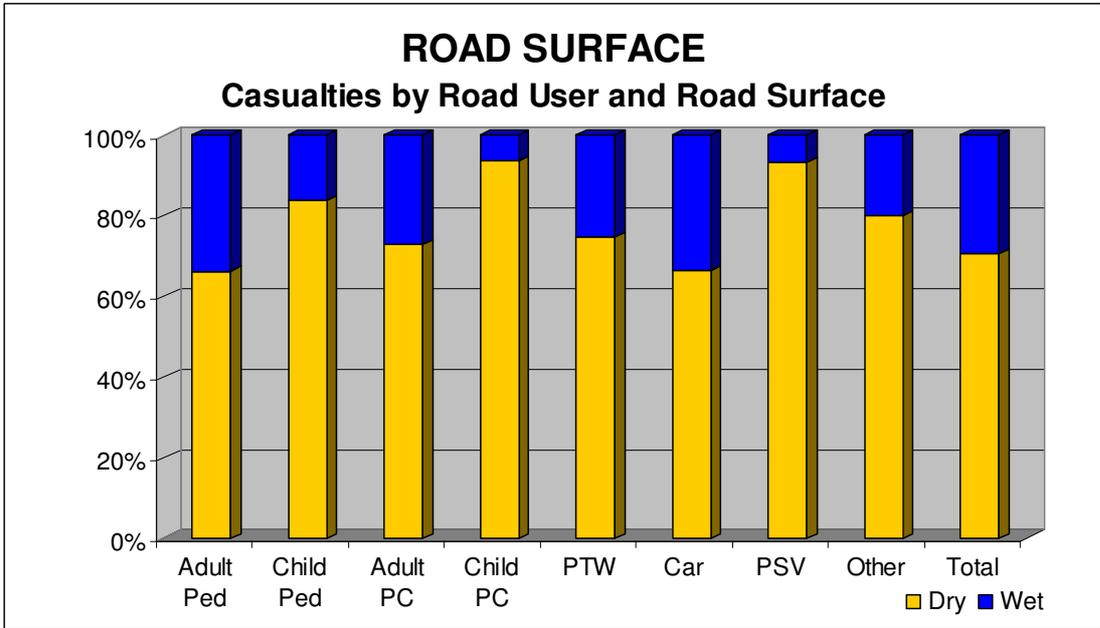
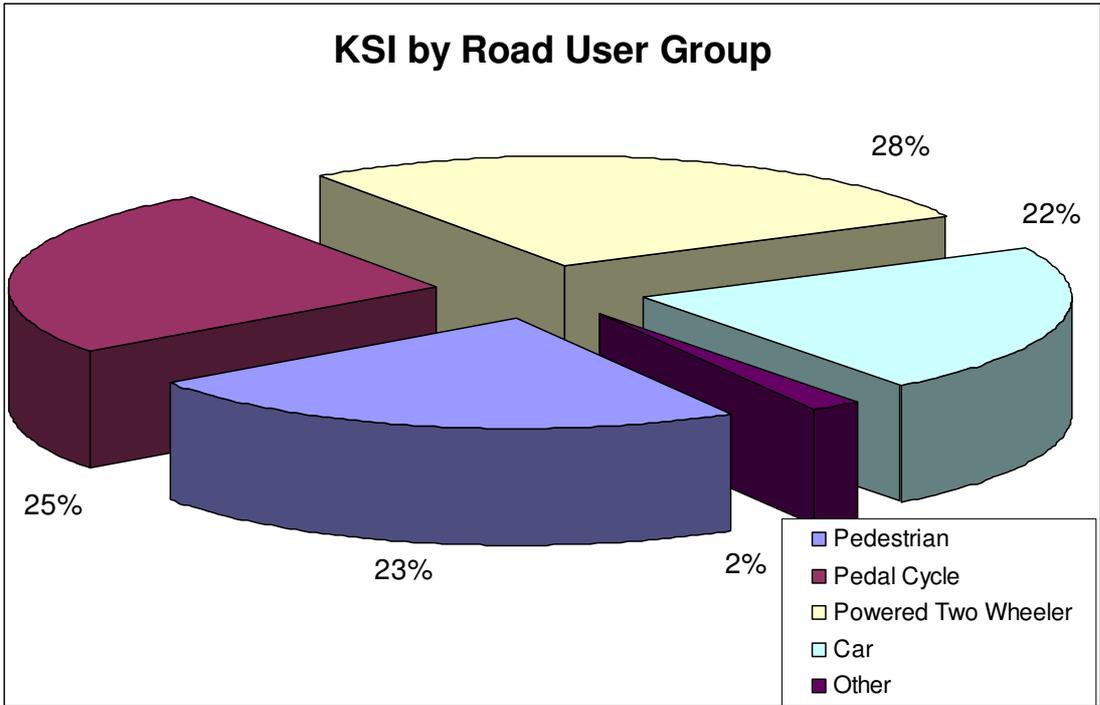


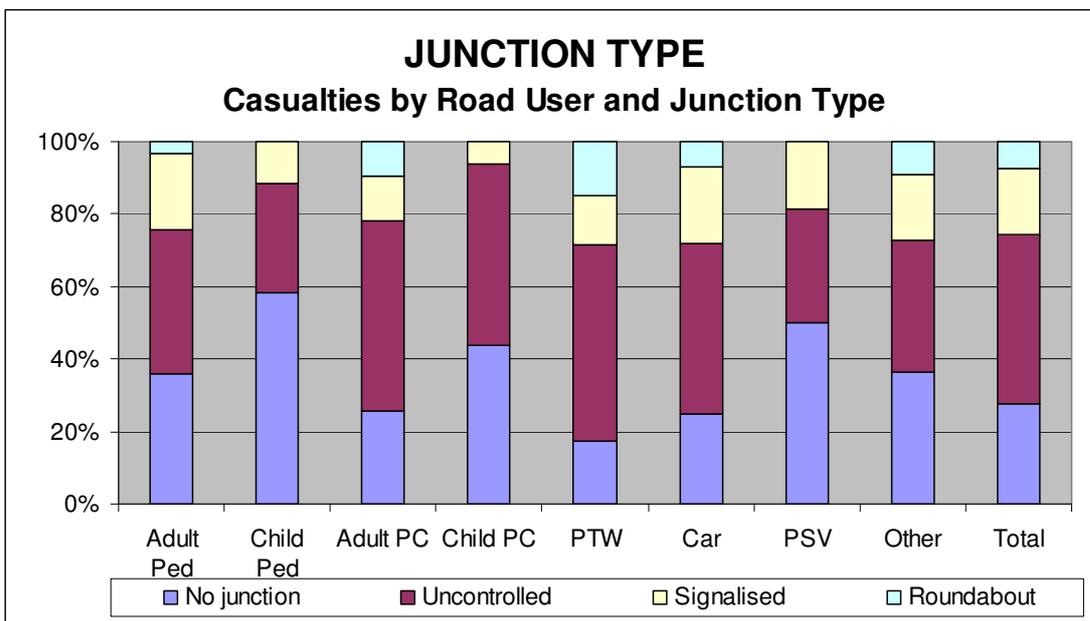
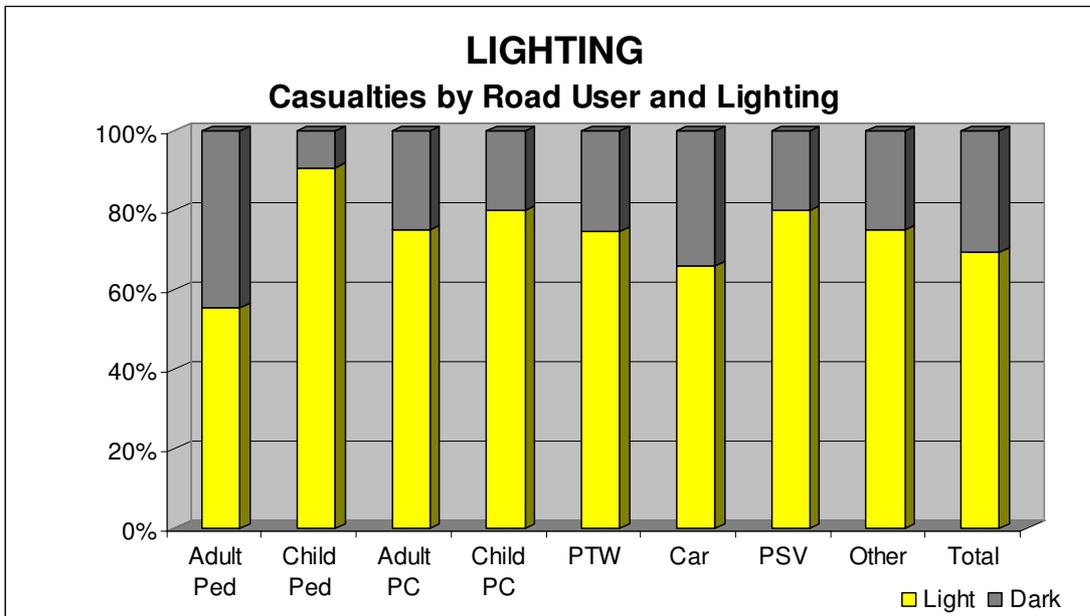
Casualties by Day of Week in 2009



Casualties by Road User Group







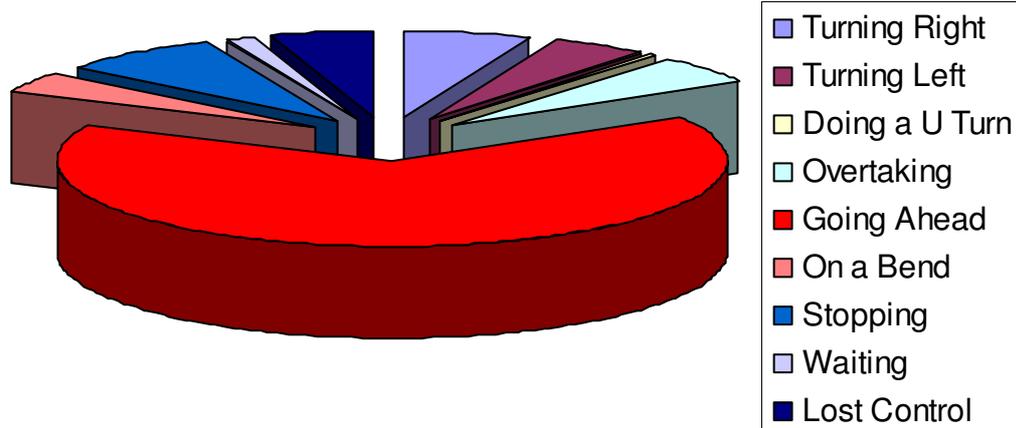
Pedestrians in urban areas

Perhaps unsurprisingly, pedestrians are most at risk on urban roads, where 65 per cent of fatalities and 82 per cent of KSIs occur. Ages at greatest risk are 11–15 and older people aged 80 and over. Similarly, 73 per cent of cyclist KSIs occur on urban roads.

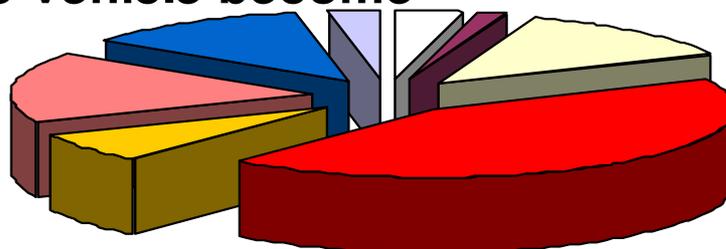
Engineering measures (e.g. crossings, traffic calming etc.) can reduce pedestrian and cyclist casualties, but too many are hit by vehicles in residential streets at speeds which cause serious injury or death. In order to improve safety on the streets where people live, DfT is proposing to amend speed limit guidance, recommending that Highway Authorities, over time, introduce 20 mph zones or limits into streets that are primarily residential in nature, or other areas where pedestrian and cyclist movements are high (for example around schools or markets) and which are not part of any major through route.

Pedestrians constitute the largest single group of vulnerable road users; almost everyone is a pedestrian at some time or other, so investigation into what the vehicle was doing when it impacted with a pedestrian is appropriate:

What was the Vehicle doing to cause a Pedestrian casualty?



Why did the Vehicle become involved?



- Road Environment Contributed
- Vehicle Defects
- Injudicious Action
- Driver / Rider Error or Action
- Impairment or Distraction
- Behaviour or Experience
- Vision Affected by
- Special Codes

The largest portion, the red area, represents 'driver error'. The 3 other sizeable portions are 'behaviour', 'vision' and 'injudicious action'.

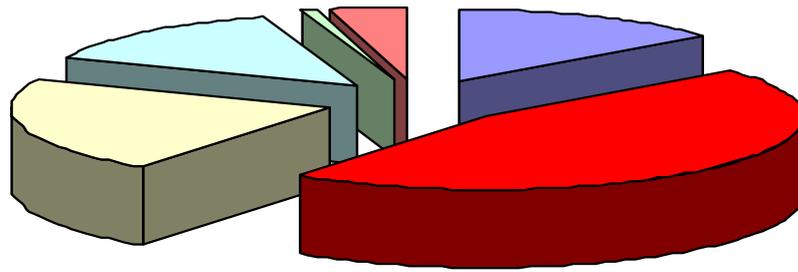
'Behaviour' relates to inadvertent behaviour, nervousness, lack of experience, aggressive driving, and careless driving. Some of this is deliberate action on the part of the driver and some is not.

'Vision affected' often translates to parked vehicles, but may refer to other obstacles such as vegetation, sun, rain, spray, etc.

'Injudicious Action' refers to disobeying traffic signals, give way signs, pedestrian crossings, the speed limit, using the pavement, etc.

'Driver error' comprises 42% of cases resulting in pedestrian casualties - so what was the most common driver error?

What were the driver errors?



- Poor turn or manoeuvre
- Failed to look properly
- Failed to judge others path or speed
- Passing too close to pedestrian
- Sudden braking
- Loss of control

Appendix 7

Bus Priority Compendium

Identification and Prioritisation of Bus Priority Schemes for Local Transport Plan 3 (LTP3)

Compendium of potential schemes and scoring

Revision 2

February 2011

1 Introduction

This document has been produced for bus operators and other stakeholders within Southampton to provide information on the process by which Southampton City Council are identifying locations at which bus priority schemes could be implemented, together with the emerging outcomes of this work and the reasoning behind this.

This document is intended for discussion and feedback from bus operators and stakeholders regarding its content has been encouraged. This version incorporates changes to our prioritisation based on stakeholder feedback.

Please note that because detailed studies and design work has not been carried out at many of the potential locations identified, many of the costs and benefits are estimated, based on outline scheme concepts. In many locations these scheme concepts would be subject to considerably more detailed study and development which in some cases may affect the costs and outcomes of the schemes. Additionally, at some locations there is uncertainty regarding availability of developer or other non-SCC funding sources. Should external funding not be obtained for these schemes, this would reduce their attractiveness and our ability to deliver them. However we are confident that the majority of the information in this document is representative and realistic.

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2 Our scheme selection methodology

The schemes outlined in this document are potential solutions to locations where bus delays are known to occur due to congestion, signal timings, and other network management issues. These are issues which have been reported to us by bus operators, members of the public, and issues which we are aware of through our own staff.

This document does not seek to address issues such as route networks, frequency, fares, information, passenger facilities, vehicle fleet, etc- it solely addresses instances where network management issues affect bus operations through punctuality, journey times and road layout. Some schemes (eg reconfiguration of Platform Road; city centre bus terminus arrangement changes, etc) which primarily address network management issues will also provide benefits for non-bus users and in other areas. This has been taken into account in our scoring process.

2.1 How we have scored the proposed schemes

We are using the same methodology to score all types of scheme proposals in LTP3 and identify which schemes should be delivered as a priority. This methodology has three basic stages:

1. Assessment of *how well* each scheme complies with sub-regional (Transport for South Hampshire) and local (Southampton City Council) policies- please note that this refers to compliance with new sub-regional and local policies also set out in LTP3, rather than any existing policies
2. Assessment of *how easily* we can fund a scheme (ie can we fund it using developer funding or other sources rather than SCC capital?) and the “impact per pound spent” of the scheme. For this latter element we have attempted to estimate the likely Benefit Cost Ratio (BCR) range of the scheme based on a review of calculated BCR values for similar schemes elsewhere.
3. Assessment of *how much* the scheme would actually cost (both capital and revenue) and how deliverable the scheme is from a political, technical and resource point of view.

Each scheme is scored against these criteria and a total score identified for each proposal.

Proposals are then ranked by total score to identify which schemes score highest. Those schemes failing to meet a certain score in some areas (eg scoring very well in stages 2 and 3 but poorly in stage 1) may be rejected if their score in one area is below a certain threshold.

A detailed guide to our scheme assessment methodology is included in **Appendix 1**. Information on Benefit Cost Ratios established for various scheme types and used to guide our assessment of BCRs for schemes in Southampton are available in **Appendix 2**.

3 List of corridors & scheme proposals

This is a list of individual schemes by corridor and acts as an index for the detailed scheme assessments in **Section 4**. Some individual schemes are linked to other schemes, whilst some schemes are packages of improvements at various locations along a corridor which it is likely that we would deliver as a single scheme.

3.1 Avenue Corridor

Scheme ID	Scheme Location	Brief Description
BP-A1	Avenue/ Lodge Road Junction	Lane 3 Bus Lane for right turn priority Avenue> Lodge Road
BP-A2	Avenue/ Lodge Road Junction	Lodge Road bus left turn priority onto the Avenue
BP-A3	Avenue junction with Westwood Road	Right turn lane and box markings on Southbound Carriageway to aid bus right turn into Westwood Road
BP-A4	Avenue junction with Winn Road	Right turn lane and box markings on Southbound Carriageway to aid bus right turn into Winn Road
BP-A5	Avenue junctions with Highfield Ave and Burgess Rd	Tidal bus priority and possible Bus Lane(s)

3.2 Portswood Corridor

Scheme ID	Scheme Location	Brief Description
BP-P1	Portswood Road between Lodge Road and St Denys Road junctions	Bus priority at Lodge Road, Brookvale Road and St Denys Road/Highfield Lane junctions and also at pedestrian crossings near Gordon Avenue and at 2x crossings in Portswood Centre
BP-P2	Portswood Road/ St Denys Road/ Highfield Lane	Junction reconfiguration in connection with Sainsburys development on former bus garage site
BP-P3	St Denys Road between Belmont Road and Bitterne Park Triangle	Bus priority at St Denys Road junctions with Belmont Road, Thomas Lewis Way, Priory Road and Bitterne Park Triangle
BP-P4	Portswood Road/ High Road junction with Woodmill Lane/ Langhorn Road	Widening of Langhorn Road arm to enable left turn and straight ahead lanes or bus lanes on eastbound approach (A); B, general bus priority on all arms.
BP-P5	Woodmill Lane/ Wessex Lane	Alterations to give priority to buses
BP-P6	Burgess Road/ High Road/ Stoneham Lane/ Stoneham Way junctions	Bus lane for traffic turning right on High Road at Burgess Road.

3.3 Northam & Itchen Corridor

Scheme ID	Scheme Location	Brief Description
BP-N1	New Road to Northam Road / Six Dials	Bus priority at signals
BP-N2	Six Dials	Bus priority and extend bus lanes to Brintons Road
BP-N3a	Lances Hill priority improvements (signals)	Improve signal priority for buses on Lances Hill to/from Bitterne Precinct
BP-N3b	Northam Bridge- Lances Hill priority improvements (signals)	Coordinated signal bus priority on Northam Road between Northam Bridge and Lances Hill
BP-N3c	Bitterne Rd West HOV Lanes	High Occupancy Vehicle lanes on Bitterne Rd West between Northam and Bitterne.
BP-N4	Bursledon Road/ Kathleen Road/ Hinkler Road	Bus priority at junctions
BP-N5	Portsmouth Road/ Coopers Lane (Woolston Centre)	Extend priority from Portsmouth Road/ Manor Road/ Itchen Bridge roundabout; signal bus priority

3.4 Shirley Corridor

Scheme ID	Scheme Location	Brief Description
BP-S1	Four Post Hill area (Shirley Rd/ Commercial Rd/ Central Stn Bridge/ Hill Ln)	Bus priority at roundabout (poss including signals and/or bus lanes and/or layout and kerbing changes) to improve journey time reliability; signal bus priority and/or phase changes.
BP-S2	Waterloo Rd/ Roberts Rd	Adjustments to signal timings/ bus priority
BP-S3	Paynes Road/ Howard Road	Signal timing alterations/ bus priority
BP-S4	Shirley Corridor/ Shirley Centre	<p>Optimisation of signals to enable better bus movement along Shirley High Street using revised SCOOT programme, installation of bus priority systems, and altered SCOOT hours of operation at the following locations:</p> <ul style="list-style-type: none"> -Park St/Crown St -Newman St/ Anglesea Rd <p>Also adjustments to timings and/or bus priority installation at following pedestrian crossings:</p> <ul style="list-style-type: none"> -S of Grove Rd/ Newlands Ave -N of Beatrice Rd/ Janson Rd -Opp McDonalds -S of Mayflower Rd -N of Emsworth Rd
BP-S5	Park Street	Signal priority for buses and outbound bus lane
BP-S6	Anglesea Rd	Reallocation of space/ re-laning/ possible bus lane and alterations to bus stop arrangements to facilitate better operation and reduce conflicts
BP-S7	Dale Road/ Wilton Road/Winchester Road	Measures including signal optimisation and bus priority and possible marking changes/ box junctions to improve throughput and reduce blocking-back.
BP-S8	Maybush Corner (Romsey Rd/ Wimpson Lane/Rownhams Lane)	Signal bus priority and possible layout changes to facilitate bus movement primarily out of Rownhams Road

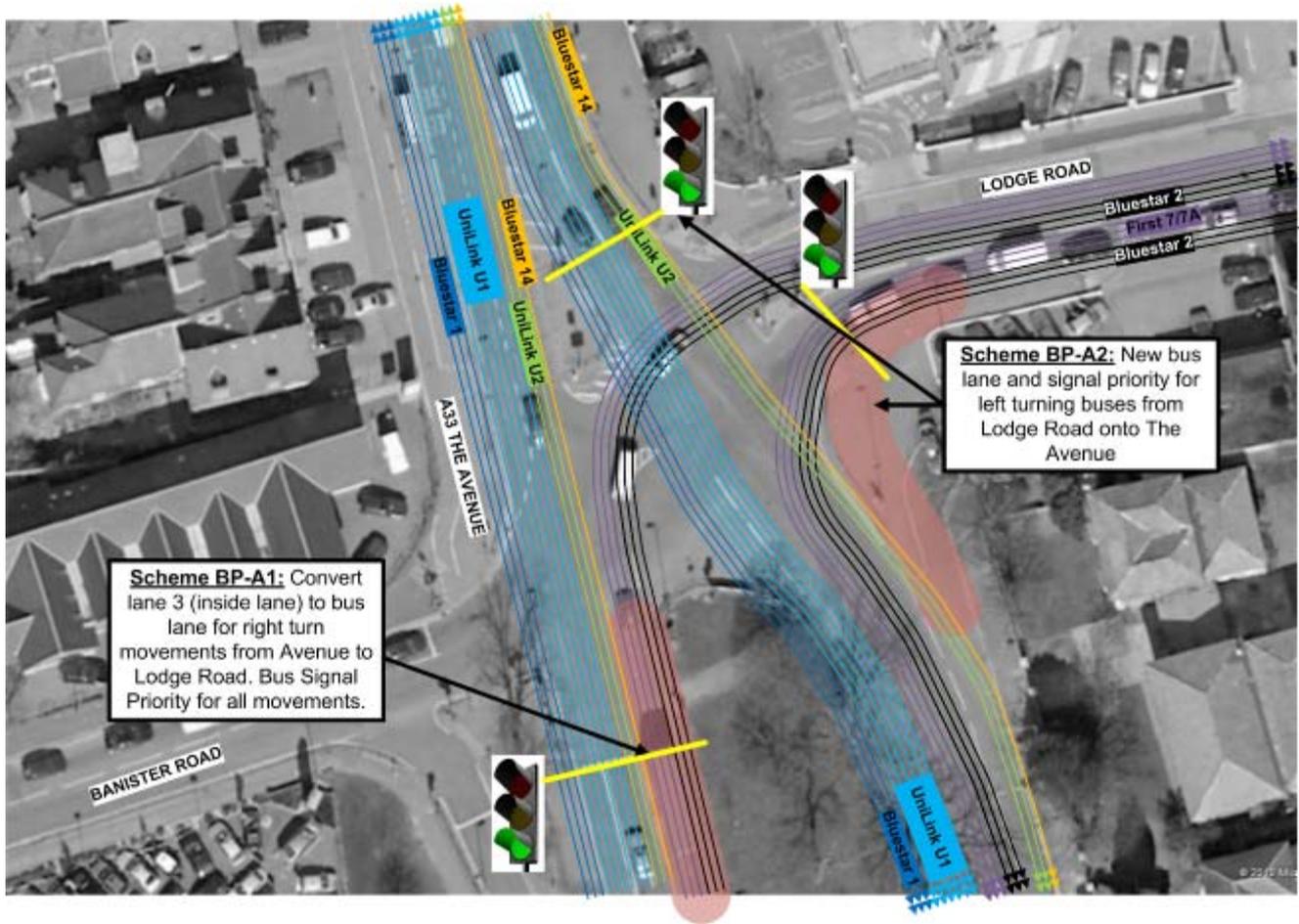
3.5 City Centre Area

Scheme ID	Scheme Location	Brief Description
BP-CC1	Dock Gate 4 / Queens Terrace-Platform Road-Orchard Place	Removal of gyratory system; extension of West Quay Rd dual carriageway to Dock Gate 4
BP-CC2	Canute Road	Bus lane (s)
BP-CC3	Wyndham Place/ Commercial Road	Wyndham Road northbound signal priority and filter lane to Commercial Road; Hill Lane/ Commercial Road signals priority
BP-CC4	Civic Centre Place	Completely remodelled junction
BP-CC5	Vincent's Walk	Improvements to city centre bus terminus arrangements
BP-U3	City Centre Northern Ring Road	UTMC upgrade to Northern Ring Road

4 Individual Scheme Scoring Sheets

4.1 Avenue Corridor

Plan 1



Official Junction Name: Avenue/Westwood Road

Official Junction ID: BP-A1/A2

Notes on possible scheme- scheme shown in Plan 1

Avenue/Lodge Road junction- lane 3 northbound bus lane for right turn priority from Avenue into Lodge Road . This part of the scheme has been discounted due to safety concerns.

Avenue southbound/Lodge Road- bus left turn priority lane onto Avenue (new lane on site of existing wide footway outside car dealership).

Buses per Hour	24BPH
Study cost (est)	£ N/A
Implementation cost (est)	£30,000-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Bus lanes will increase public visibility of bus services and priority.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Would provide minor journey time reliability improvements for bus passengers
	SO4-Improved road safety within the sub-region	0	Indeterminate effect
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect
	SO7-Promoting a higher quality of life	0	No effect
	Total Score (Sub-regional outcomes)		2
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	May slightly increase people movement capacity.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	1	May help mode shift to bus for journeys to CBD as improves bus reliability/ journey time to CBD.
	Total score (Local goals)		4

Assessment Step 2- Value for money & funding

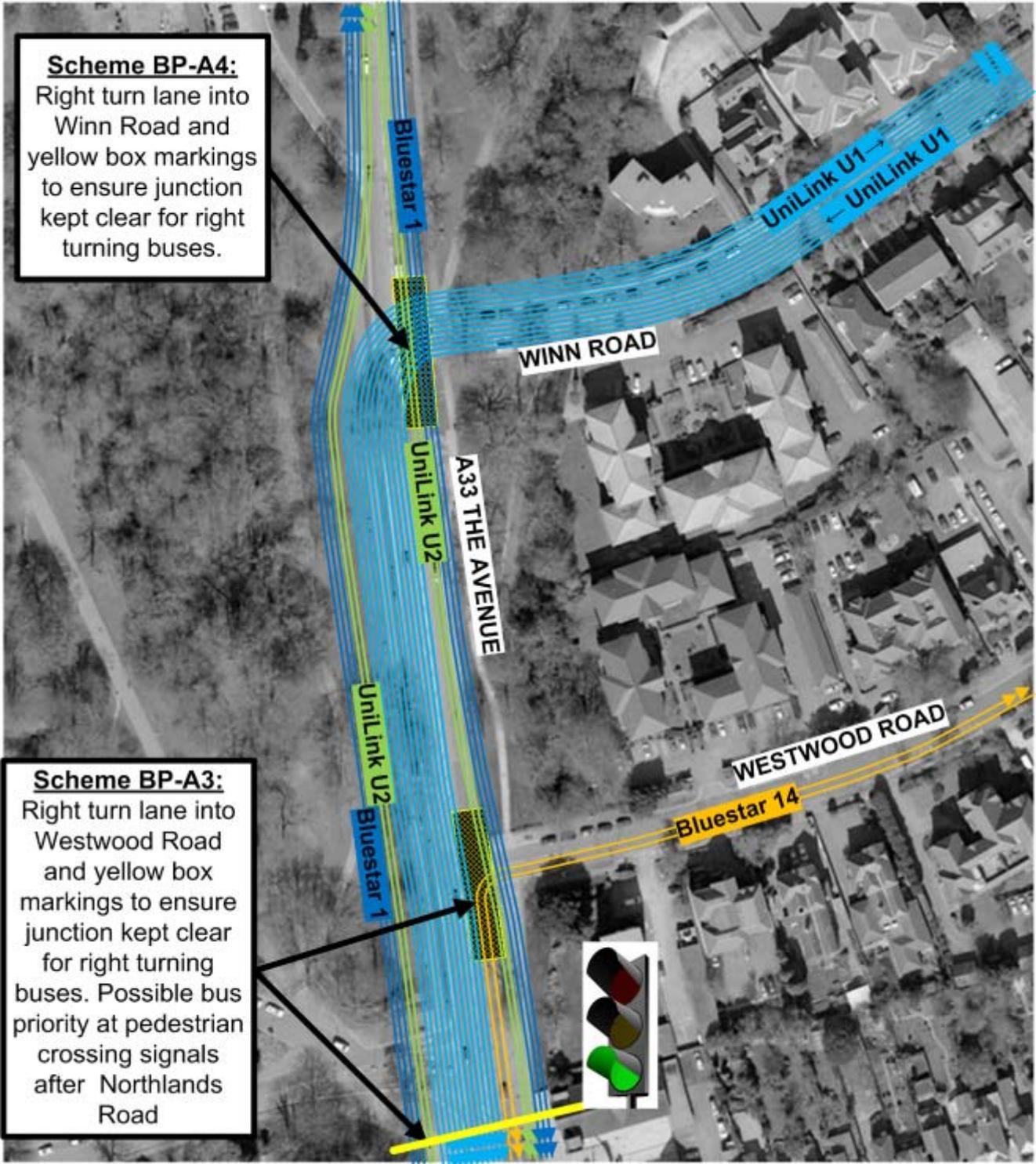
A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Area Bus Improvements BCR = 3-5)	-2 Scheme would be wholly internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	-1
Total Score	0

Assessment Step 4- Final Score

5



Official Junction Name: Avenue/Westwood Road
Official Junction ID: BP-A3

Notes on possible scheme- *scheme shown in Plan 2*

Avenue junction with Westwood Road- creation of box markings or “keep clear” markings on southbound carriageway to reduce traffic queues blocking buses turning into Westwood Road.

Buses per Hour	24BPH
Study cost (est)	£ N/A
Implementation cost (est)	£500 per year

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Would provide minor journey time reliability improvements for bus passengers
	SO4-Improved road safety within the sub-region	1	May provide some minor safety benefits.
	SO5-Improved accessibility within and beyond the sub-region	0	Very small improvement- indeterminate effect.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate or very minimal effect.
	SO7-Promoting a higher quality of life	0	No effect
	Total Score (Sub-regional outcomes)	2	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	May slightly increase people movement capacity.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	0	No effect anticipated.
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Area Bus Improvements BCR=3-5)	-2 Scheme would be wholly internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	2
B. Estimated revenue cost (lower cost scores better)	0
C. Score for anticipated deliverability	1
Total Score	3

Assessment Step 4- Final Score

7

Official Junction Name: Avenue/ Winn Road
Official Junction ID: BP-A4

Notes on possible scheme- *scheme shown in Plan 2*

Avenue junction with Winn Road- creation of box markings or “keep clear” markings on southbound carriageway to reduce traffic queues blocking buses turning into Winn Road.

Buses per Hour	22BPH
Study cost (est)	£N/A
Implementation cost (est)	C. £ 500 per year

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Would provide minor journey time reliability improvements for bus passengers
	SO4-Improved road safety within the sub-region	1	May provide some minor safety benefits.
	SO5-Improved accessibility within and beyond the sub-region	0	Very small improvement- indeterminate effect.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate or very minimal effect.
	SO7-Promoting a higher quality of life	0	No effect
	Total Score (Sub-regional outcomes)	2	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	May slightly increase people movement capacity.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	0	No effect anticipated.
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

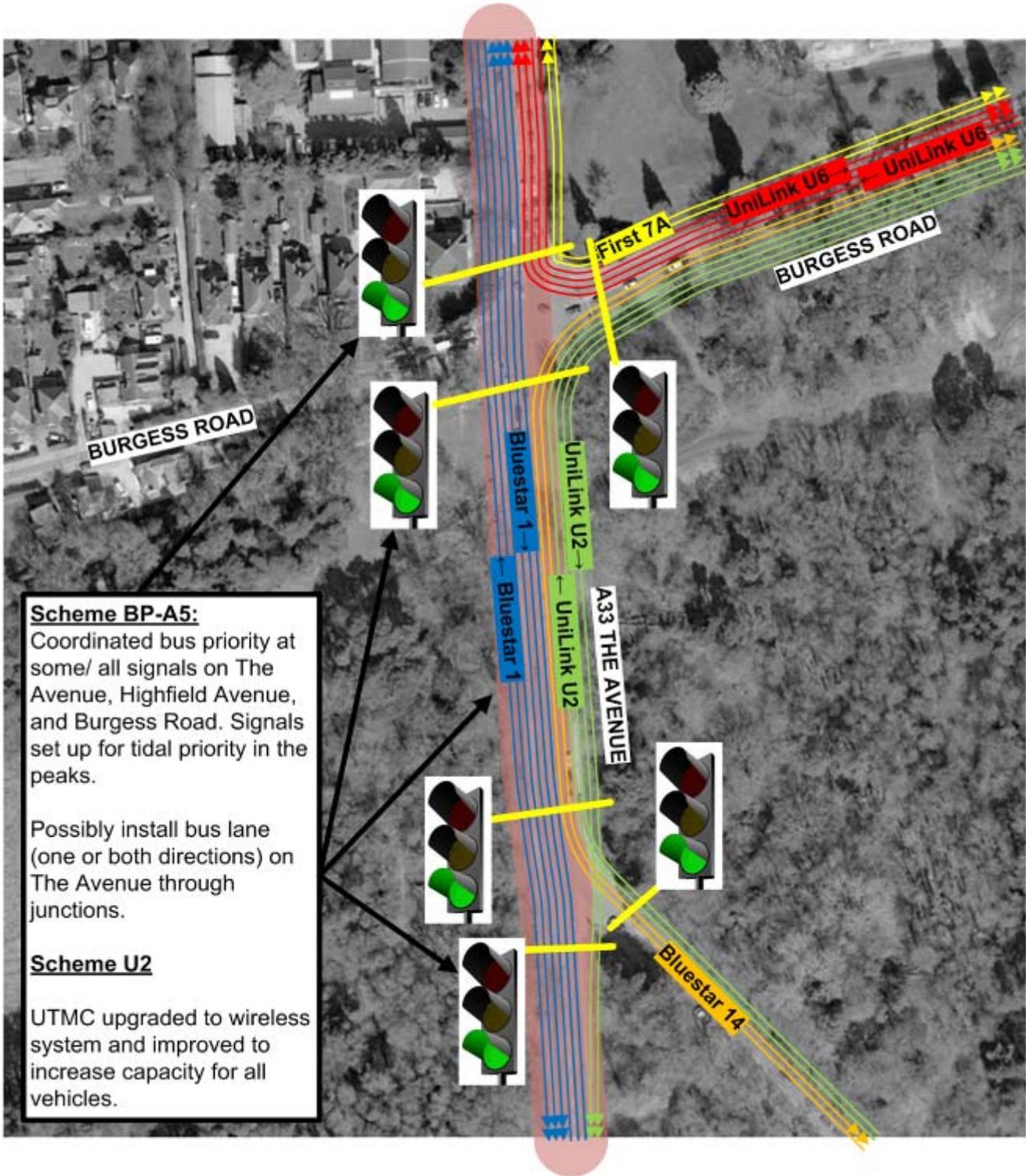
A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Area Bus Improvements BCR=3-5)	-2 Would be internally funded only.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	2
B. Estimated revenue cost (lower cost scores better)	0
C. Score for anticipated deliverability	1
Total Score	3

Assessment Step 4- Final Score

8



Official Junction Name: Avenue/Burgess Road signals and tidal bus priority
Official Junction ID: BP-A5

Notes on possible scheme- *scheme shown in Plan 3*

Avenue junctions with Highfield Avenue and Burgess Road- tidal bus priority and possible bus lanes. Bus lanes unlikely as would significantly reduce capacity, hence this assumes that works here would be signal priority and UTMC improvements only.

Buses per Hour	18 Bus movements/ hour through area.
Study cost (est)	£15,000
Implementation cost (est)	£100,000-£500,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Bus lanes increase visibility of bus infrastructure and priority to potential users.
	SO3-Improved journey time reliability for all modes	0	Possible minor journey time reliability improvements but priority on Avenue may disbenefit Burgess Road
	SO4-Improved road safety within the sub-region	0	Indeterminate effect
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced levels of queuing may bring reduced emissions in this environmentally sensitive (SSSI) area.
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)	2	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	People movement capacity of junction should be improved.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	0	No effect anticipated.
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority/Bus Lanes BCR= 3-5)	-2 Would be internally funded only.	-1

Assessment Step 3- Cost & feasibility

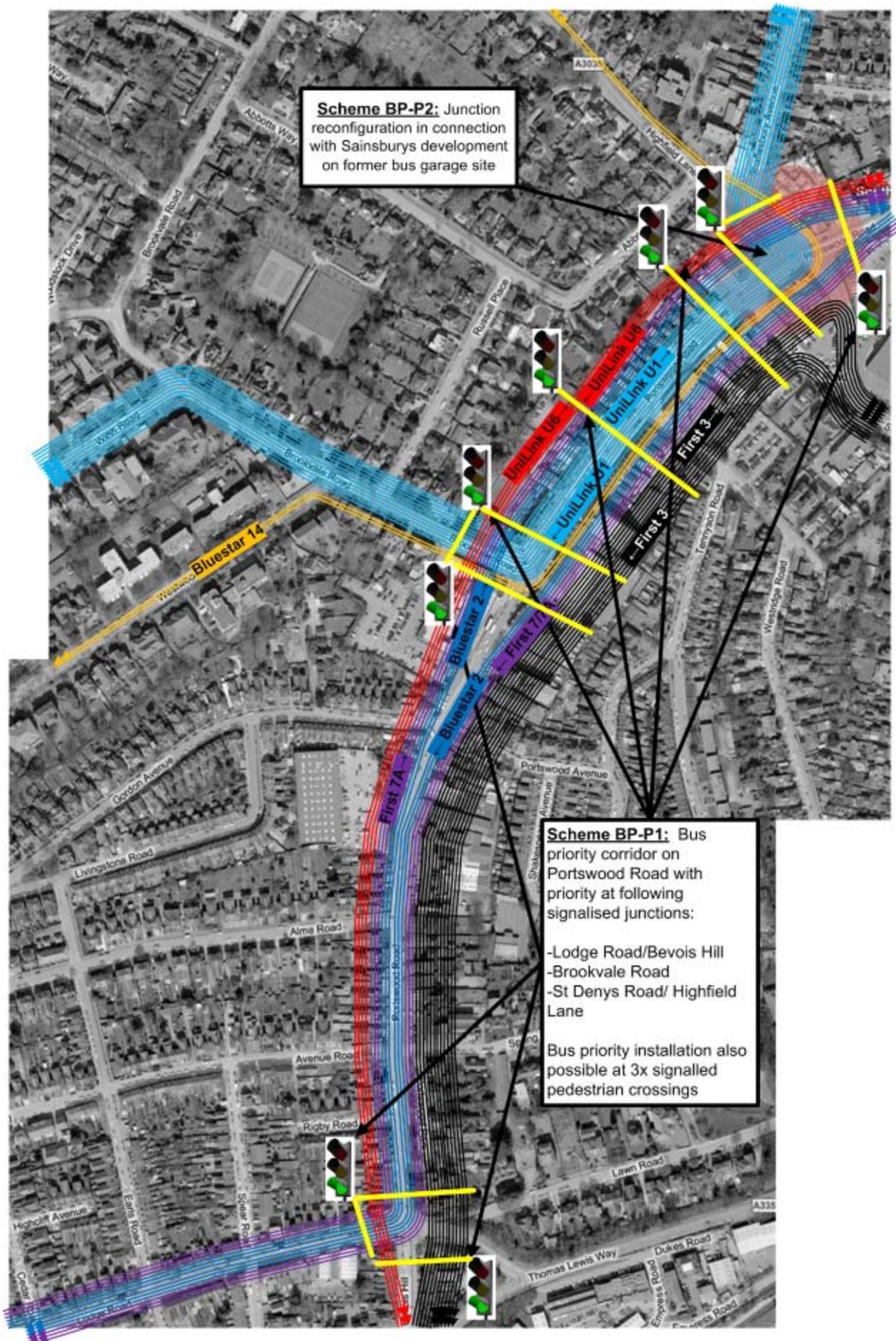
A. Estimated Capital Cost (lower cost scores better)	-1
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	-1
Total Score	0

Assessment Step 4- Final Score

4

4.2 Portwood Corridor

Plan 4



Official Junction Name: Portswood Corridor Signals Priority

Official Junction ID: BP-P1

Notes on possible scheme- *scheme shown in Plan 4*

Full corridor scheme of installation of bus priority on signals between Lodge Road junction and Portswood Crossroads. Due to numerous crossing movements provision of effective priority for all services may be difficult- some services may not receive priority.

Buses per Hour	36 BPH north of Brookvale Rd; 28 BPH south of Brookvale Rd
Study cost (est)	???
Implementation cost (est)	£30,000-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Improvement of bus timings through corridor may help improve attractiveness of bus services and encourage modal shift.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	No effect anticipated.
	SO3-Improved journey time reliability for all modes	1	Improvements to journey time reliability likely for bus and other highway users.
	SO4-Improved road safety within the sub-region	0	Indeterminate effect
	SO5-Improved accessibility within and beyond the sub-region	1	Improved bus service offer may lead to improved accessibility.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced queuing and smoother traffic flow should reduce emissions.
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)		4
Local Goals	LG1: Bus patronage	1	Corridor-wide journey time improvements should aid bus patronage growth.
	LG2: Bus as urban mode of choice	1	Corridor-wide journey time improvements should improve offer from bus operators
	LG3: People movement capacity	1	Corridor-wide improvements should enhance people movement capacity along corridor.
	LG4: Awareness of travel options	0	No effect anticipated.
	LG5:Active travel as urban mode of choice	0	No effect anticipated.
	LG6: Fewer vehicle trips to CBD	1	Improvements to bus service reliability may lead to modal shift on journeys towards CBD.
	Total score (Local goals)		4

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Corridor Signal Optimisation BCR= 3-5; Signal Bus Priority BCR= 3-5)	-2 Scheme would be 100% internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	0
Total Score	0

Assessment Step 4- Final Score

7

Official Junction Name: Portswood- St Denys Road/ Highfield Lane crossroads
Official Junction ID: BP-P2

Notes on possible scheme- scheme shown in Plan 4

Due to new Sainsburys development, there will be a need to alter signal arrangements and possibly junction configuration to handle increased flows of traffic accessing superstore site. There is space on certain arms of the junction to allow expansion and some reconfiguration may be possible.

Buses per Hour	36BPH on corridor, converging at this location-roughly equal split on all arms.
Study cost (est)	Developer funded
Implementation cost (est)	Developer funded- est £30-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	-1	Increased traffic flows induced by development and changes to signal phasing to accommodate these flows may lead to reduced journey time reliability for existing flows (bus and other vehicles)
	SO4-Improved road safety within the sub-region	1	Possible improvement to road safety through pedestrian crossing improvements to aid access to Sainsburys from Portswood High St.
	SO5-Improved accessibility within and beyond the sub-region	0	No effect; bus services may be hindered by increased traffic and signal changes.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	No effect anticipated
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)	0	
Local Goals	LG1: Bus patronage	0	Improvements may be offset by increased traffic- indeterminate effect.
	LG2: Bus as urban mode of choice	0	Indeterminate effect
	LG3: People movement capacity	1	Junction improvements will increase all modes movement capacity
	LG4: Awareness of travel options	0	No effect anticipated
	LG5:Active travel as urban mode of choice	0	No effect anticipated
	LG6: Fewer vehicle trips to CBD	1	May abstract some trips from CBD to Portswood.
	Total score (Local goals)	2	

Assessment Step 2- Value for money & funding

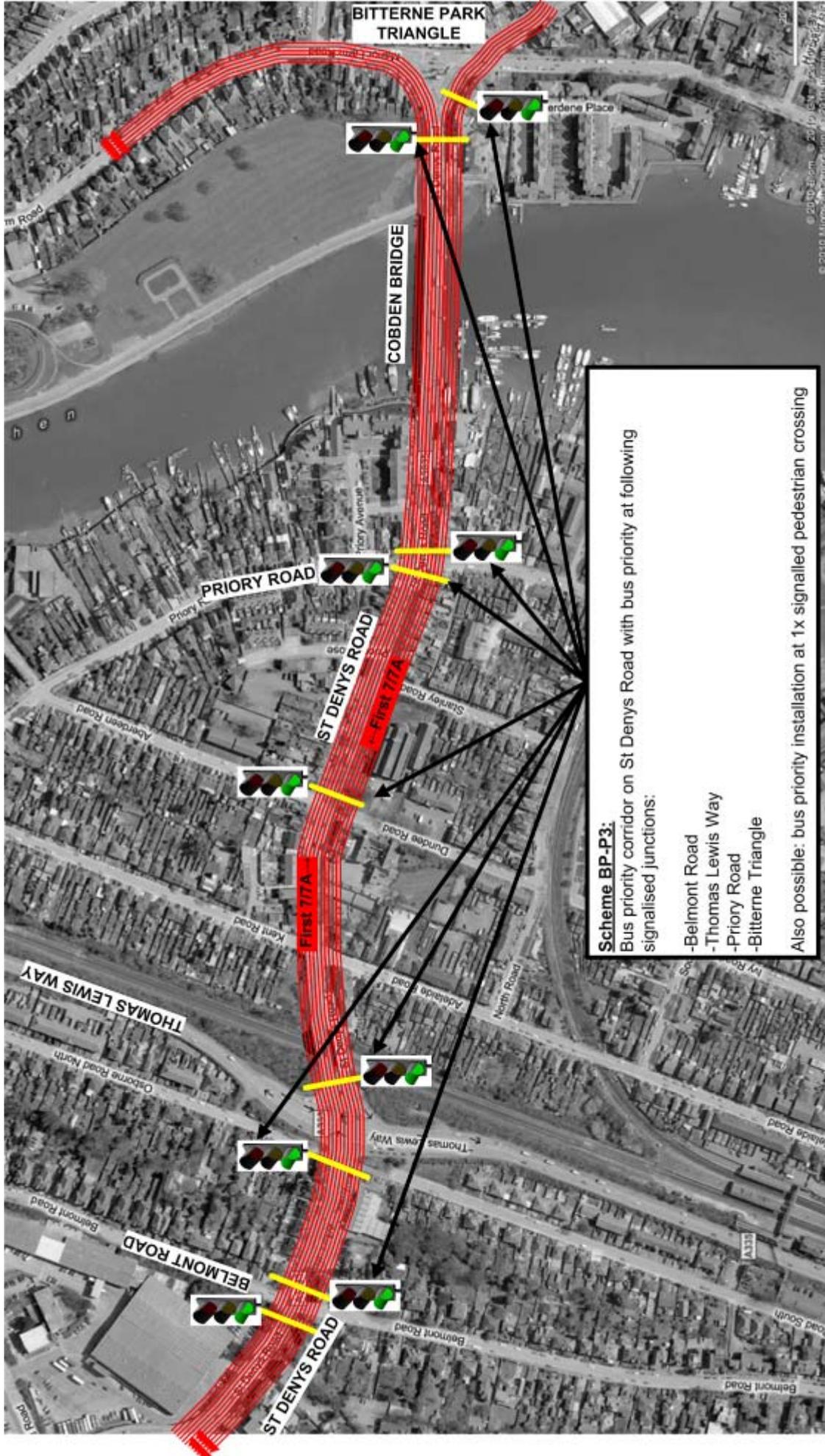
A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Bus signals priority BCR= 3-5)	2 - Scheme entirely developer funded.	3

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	2
Total Score	3

Assessment Step 4- Final Score

8



Official Junction Name: St Denys Road (Portswood- Bitterne Triangle)
Official Junction ID: BP-P3

Notes on possible scheme- *scheme shown in Plan 5*

St Denys Road between Belmont Road and Bitterne Park Triangle- Bus priority at St Denys Road junctions with Belmont Road, Thomas Lewis Way, Priory Road and Bitterne Park Triangle. This route suffers from severe delays to bus services in the peak, particularly due to the interaction with Thomas Lewis Way.

Buses per Hour	12BPH on corridor
Study cost (est)	£15000
Implementation cost (est)	£100,000-£500,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Corridor enhancements may act to boost patronage of buses and reduce car dependence.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Would provide journey time improvements for bus and other vehicles.
	SO4-Improved road safety within the sub-region	0	Indeterminate effect.
	SO5-Improved accessibility within and beyond the sub-region	1	Improved bus service reliability
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced queuing for all modes leading to reduced emissions.
	SO7-Promoting a higher quality of life	0	No effect.
	Total Score (Sub-regional outcomes)		4
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	Corridor-length improvements should increase people-movement capacity of this section of road.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	0	No effect anticipated.
	Total score (Local goals)		3

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Corridor Signal Optimisation BCR= 3-5; Signal Bus Priority BCR= 3-5)	-2 Scheme would be internally funded	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	-1
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	1

Assessment Step 4- Final Score

7

Official Junction Name: High Road/ Langhorn Road/ Woodmill Lane
Official Junction ID: BP-P4

Notes on possible scheme- *scheme shown in Plan 6*

Portswood Road/ High Road junction with Woodmill Lane/ Langhorn Road- widening of Langhorn Road arm to enable left turn and straight ahead lanes or bus lanes on eastbound approach; also signal bus priority on all arms. Due to large number of buses crossing junction N-S and E-W, providing effective priority may be challenging.

Buses per Hour	Total 32BPH though junction, roughly equal split on all arms.
Study cost (est)	£2500
Implementation cost (est)	£30,000-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Would provide minor journey time reliability improvements for bus passengers
	SO4-Improved road safety within the sub-region	0	Indeterminate effect
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced queuing should improve air quality.
	SO7-Promoting a higher quality of life	0	No effect
	Total Score (Sub-regional outcomes)	3	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	Junction people movement capacity would be improved.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	0	No effect anticipated.
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Bus signals priority BCR= 3-5)	-2 Scheme would be internally funded	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	2

Assessment Step 4- Final Score

7

Official Junction Name: Swaythling (Woodmill Lane/Wessex Lane)

Official Junction ID: BP-P5

Notes on possible scheme- *scheme shown in Plan 6*

Alterations at Woodmill Lane/Wessex Lane junction to provide priority to buses (which suffer delay waiting to turn right into Woodmill Lane from Wessex Lane). Suggestion is for either alteration to road to change main route from Woodmill Lane into Wessex Lane or to provide other infrastructure measures. Road geometry is likely to considerably restrict the options that are possible and make deliverability difficult.

Buses per Hour	18 BPH
Study cost (est)	£ 2500
Implementation cost (est)	£30,000-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Would provide minor journey time reliability improvements for bus passengers.
	SO4-Improved road safety within the sub-region	0	Indeterminate effect on safety.
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced levels of queuing may bring minor air quality improvements.
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)	3	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	As buses are a key user of junction and are heavily loaded, likely to improve people movement capacity.
	LG4: Awareness of travel options	0	No effect anticipated
	LG5:Active travel as urban mode of choice	0	No effect anticipated
	LG6: Fewer vehicle trips to CBD	0	No effect anticipated
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

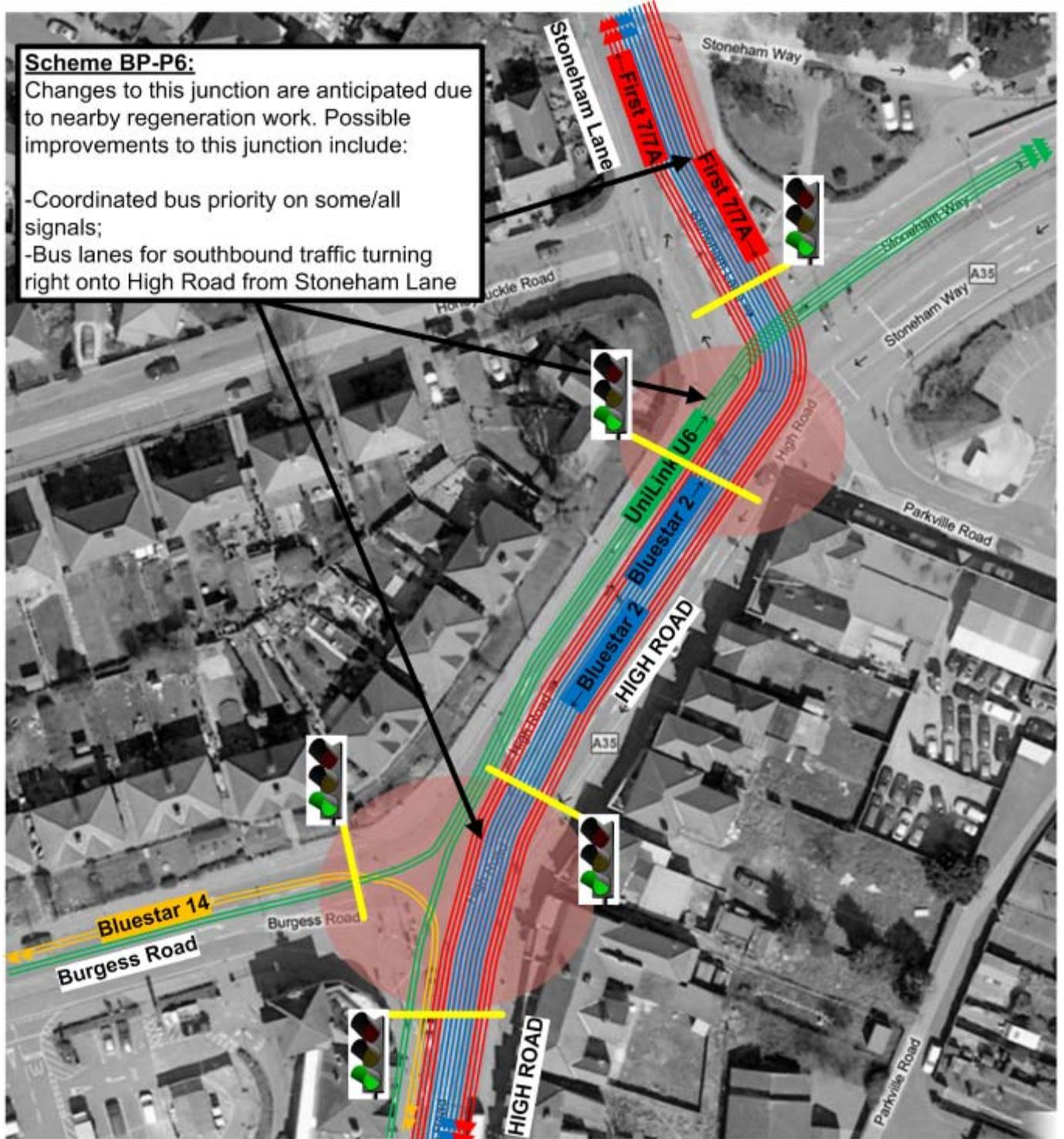
A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (General (area/corridor) bus improvements BCR= 3-5)	- 2 Scheme would be internally funded only.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	-2
Total Score	0

Assessment Step 4- Final Score

5



Official Junction Name: Swaythling (Burgess Road/ Stoneham Lane/ High Road)
Official Junction ID: BP-P6

Notes on possible scheme- *scheme shown in Plan 7*
 Burgess Road/ High Road/ Stoneham Lane/ Stoneham Way junctions- southbound bus lane for traffic turning right onto High Road from Stoneham Way Also signal optimisation at High Road/ Burgess Road and High Road/ Stoneham Lane junctions. Due to relatively low bus traffic and lower bus loadings (all routes are well away from their city centre origins/ destinations) benefits for buses in this scheme may be outweighed by disbenefits to other traffic.

Buses per Hour	18 BPH through area
Study cost (est)	£ ???
Implementation cost (est)	£15-£30,000 Potential for developer funding of some/all of scheme.

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Bus lanes increase visibility of bus priority to potential users.
	SO3-Improved journey time reliability for all modes	0	Would provide minor journey time reliability improvements for bus passengers but possibly at cost to other vehicle traffic. Indeterminate.
	SO4-Improved road safety within the sub-region	0	No anticipated effect on safety
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Reduced queuing for buses will be offset by possibly increased queuing for other vehicles- indeterminate effect
	SO7-Promoting a higher quality of life	0	No effect
	Total Score (Sub-regional outcomes)		1
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	0	Any benefits for bus passenger movement may be offset by reduced efficiency of movement of other vehicles.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	0	No effect anticipated.
	Total score (Local goals)		2

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Bus Lanes only BCR= 3-5; Bus Signal Priority BCR= 3-5)	1 - Chance of most/all of scheme being S106 funded	0

Assessment Step 3- Cost & feasibility

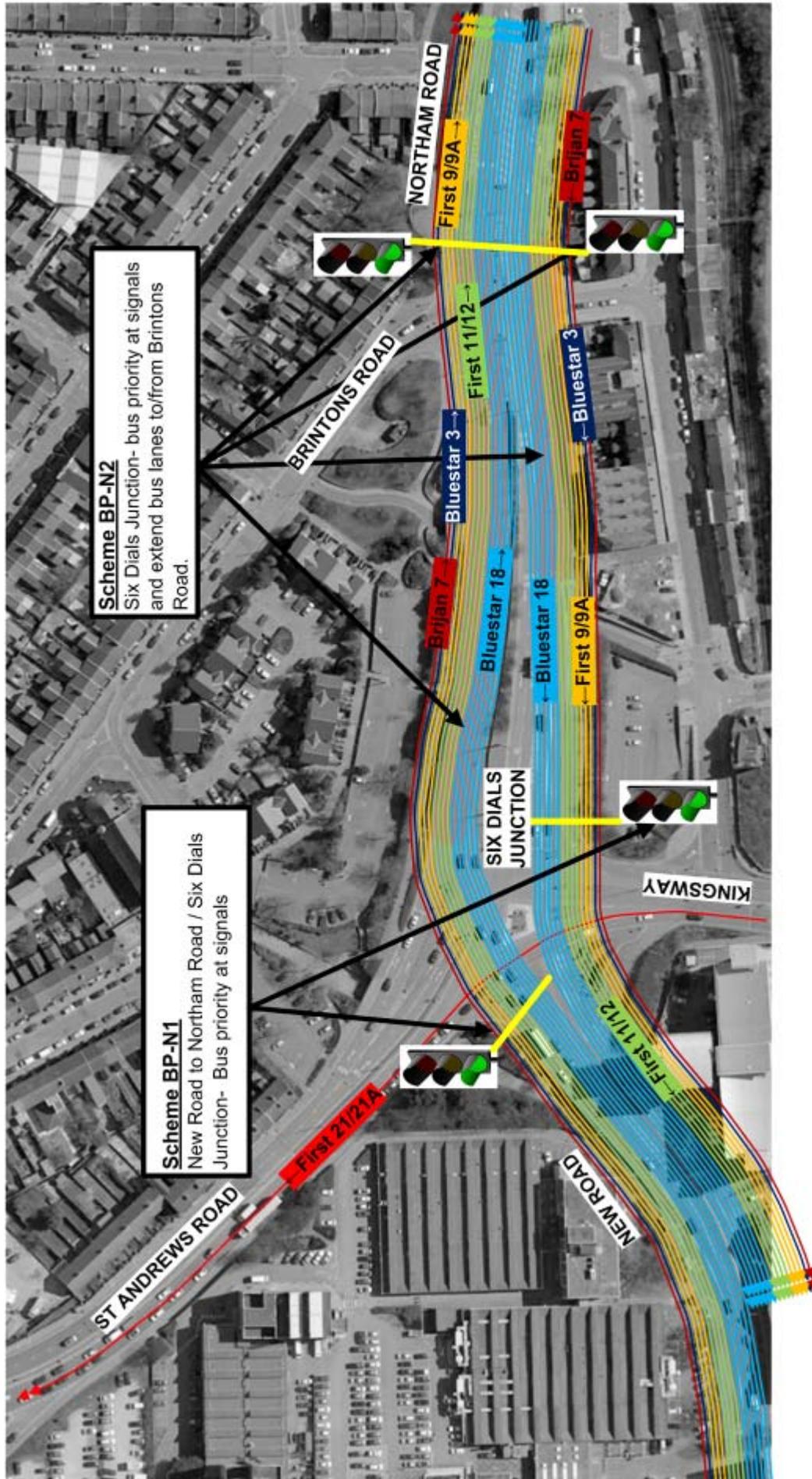
A. Estimated Capital Cost (lower cost scores better)	1
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	3

Assessment Step 4- Final Score

7

4.3 Northam & Itchen Corridor

Plan 8



Official Junction Name: BP-N1+BP-N2
Official Junction ID: Six Dials- Brintons Road

Notes on possible scheme- *scheme shown in Plan 8*
 Bus signal priority on Northam Road through six dials junction area to complement existing bus lanes and improve journey time reliability, and extension of existing bus lanes to/from Brintons Road to improve bus ability to bypass queues. Coordinated design to significantly aid movement through this area.

Buses per Hour	30BPH
Study cost (est)	£25,000
Implementation cost (est)	£30,000-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Improvements to service reliability through this critical junction may encourage modal shift; large no of pax would benefit
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Bus lanes increase visibility of bus priority to potential users
	SO3-Improved journey time reliability for all modes	1	Improvements will improve journey time reliability for buses; unlikely to affect other traffic.
	SO4-Improved road safety within the sub-region	0	No known safety problem here, unknown effect
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced bus queuing may result in slight improvements in air quality.
	SO7-Promoting a higher quality of life	0	No effect
	Total Score (Sub-regional outcomes)		4
Local Goals	LG1: Bus patronage	1	Improvements to service reliability through this critical junction may encourage modal shift; large no of pax may benefit
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	People movement capacity of junction should be improved. Spare capacity at junction so detriment to car users.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	1	Faster journeys through this key point may improve attractiveness of bus to travellers towards CBD.
	Total score (Local goals)		3

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR=3-5; Bus Lanes Only BCR= 3-5)	-2 Scheme would be wholly internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	2

Assessment Step 4- Final Score

9

Official Junction Name: Lances Hill priority improvements (signals)

Official Junction ID: BP-N3a

Notes on possible scheme -scheme shown in Plan 9

Provision of improved bus priority at signals into/ out of Lances Hill for buses heading to/from Bitterne Precinct. Link to RTI/ AVL system or changes to road loop positions possible.

Buses per Hour	32BPH
Study cost (est)	£500
Implementation cost (est)	Under £15,000 (probably circa £1000)

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Slightly improved bus journey times and journey time reliability
	SO4-Improved road safety within the sub-region	0	No effect anticipated
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Located on a hill- reduction of buses stopping on hill may reduce emissions slightly
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)	3	
Local Goals	LG1: Bus patronage	0	Individual junction works unlikely to have significant effect on bus patronage
	LG2: Bus as urban mode of choice	0	As above
	LG3: People movement capacity	1	Minor improvement
	LG4: Awareness of travel options	0	No effect anticipated
	LG5:Active travel as urban mode of choice	0	No effect anticipated
	LG6: Fewer vehicle trips to CBD	1	May slightly help mode shift to bus for journeys to CBD as improves bus reliability/ journey time to CBD.
	Total score (Local goals)	2	

Assessment Step 2- Value for money & funding

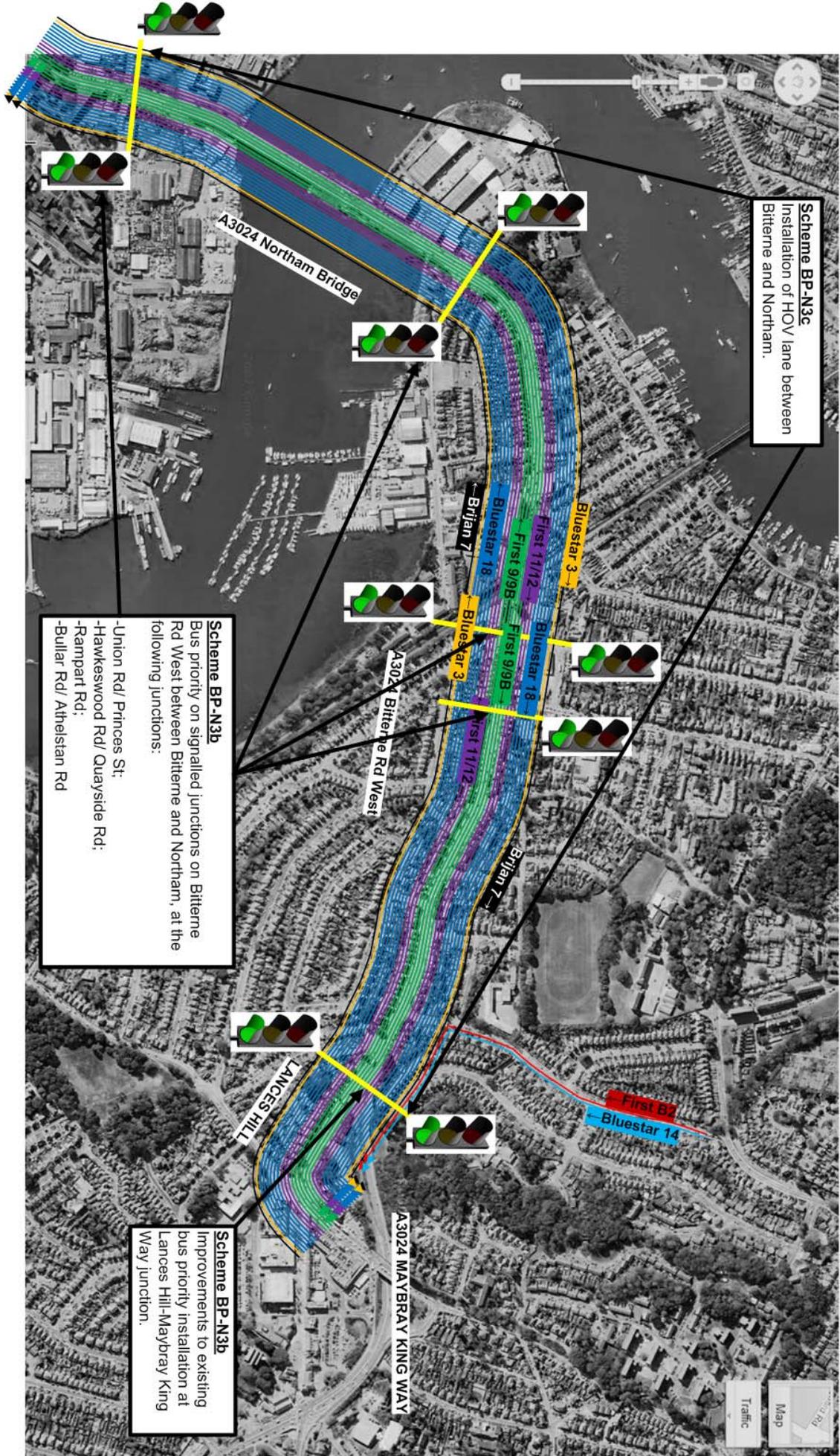
A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
BCR= 3-5= +1	Would be 100% internally funded- -2	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	2
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	2
Total Score	5

Assessment Step 4- Final Score

9



Official Junction Name: Northam Bridge- Lances Hill priority improvements (signals)
Official Junction ID: BP-N3b

Notes on possible scheme -scheme shown in Plan 10

Signal coordination for bus priority between Northam Bridge and Lances Hill. Bus priority at signals at junctions between Northam Rd and: Union Rd/ Princes St; Hawkeswood Rd/ Quayside Rd; Rampart Rd; and Bullar Rd/ Athelstan Rd.

Buses per Hour	30BPH
Study cost (est)	£5000
Implementation cost (est)	£15,000-£30,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Improved bus service reliability and possibly journey times should help encourage modal shift.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	improved bus journey times and journey time reliability
	SO4-Improved road safety within the sub-region	0	No effect anticipated
	SO5-Improved accessibility within and beyond the sub-region	1	Improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Probably positive overall.
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)	4	
Local Goals	LG1: Bus patronage	1	Improved reliability may boost patronage
	LG2: Bus as urban mode of choice	1	May improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	Should increase overall people movement capacity.
	LG4: Awareness of travel options	0	No effect anticipated
	LG5:Active travel as urban mode of choice	0	No effect anticipated
	LG6: Fewer vehicle trips to CBD	1	Improved bus service offer on routes to CBD may encourage modal shift.
	Total score (Local goals)	4	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
BCR= 3-5 Score= +1	Would be entirely internally funded, score= -2	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	1
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	3

Assessment Step 4- Final Score

10

Official Junction Name: Bitterne Rd West HOV Lanes
Official Junction ID: BP-N3c

Notes on possible scheme -scheme shown in Plan 10

Installation of HOV lanes for part or all of the length of Bitterne Road West between Bitterne Centre and Northam area. Would entail conversion of one lane to HOV lane. HOV lanes may be installed in one or both directions at various locations- nature of the scheme would be subject to further study. No changes suggested at Bitterne Rail Bridge- these would add significant additional expense.

Buses per Hour	30BPH
Study cost (est)	£30,000
Implementation cost (est)	£100,000-£500,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Improved bus service reliability and possibly journey times should help encourage modal shift.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	2	Provision, advertising and enforcement of HOV lanes will raise public awareness of car sharing and bus services considerably.
	SO3-Improved journey time reliability for all modes	0	Benefits to buses and car sharers but journey times for non-car sharers likely to increase.
	SO4-Improved road safety within the sub-region	0	No effect anticipated
	SO5-Improved accessibility within and beyond the sub-region	1	Improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect- positive and negative elements.
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)		4
Local Goals	LG1: Bus patronage	1	Improved reliability should boost patronage
	LG2: Bus as urban mode of choice	1	Should improve bus service offering, improving attractiveness.
	LG3: People movement capacity	0	Capacity for single occupancy cars significantly reduced, uncertain whether net people movement capacity increased.
	LG4: Awareness of travel options	2	Provision, advertising and enforcement of HOV lanes will raise public awareness of car sharing and bus services considerably.
	LG5:Active travel as urban mode of choice	0	No effect anticipated
	LG6: Fewer vehicle trips to CBD	1	Improved bus service offer on routes to CBD may encourage modal shift. More car sharing to CBD reduces vehicle trips.
	Total score (Local goals)		5

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
Estimated BCR= 3-5; Score = +1	Would be 100% internally funded. Score -2	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	-1
B. Estimated revenue cost (lower cost scores better)	-2
C. Score for anticipated deliverability	-2
Total Score	-5

Assessment Step 4- Final Score

3

Official Junction Name: Bursledon Road/ Kathleen Road/ Hinkler Road Bus priority
Official Junction ID: BP-N4

Notes on possible scheme- scheme shown in Plan 11

Bus priority at junction via Automatic Vehicle Location server link to signal controllers. Due to multiple conflicting movements, difficult to assign priority to one single flow, so likely to provide priority for late running services only via call forward on signal cycles.

Buses per Hour	33BPH
Study cost (est)	£5,000
Implementation cost (est)	Under £15,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	No effect anticipated.
	SO3-Improved journey time reliability for all modes	1	Improvements to journey time reliability likely for bus users. Minimal effect on reliability for other users.
	SO4-Improved road safety within the sub-region	0	No anticipated effect.
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Unlikely to have significant effect- benefits for late buses only.
	SO7-Promoting a higher quality of life	0	No effect.
	Total Score (Sub-regional outcomes)		2
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	Marginal improvements in people movement capacity for late running buses.
	LG4: Awareness of travel options	0	No anticipated effect.
	LG5:Active travel as urban mode of choice	0	No anticipated effect.
	LG6: Fewer vehicle trips to CBD	0	No anticipated effect.
	Total score (Local goals)		3

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR= 3-5)	-2 Scheme would be 100% internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	2
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	0
Total Score	3

Assessment Step 4- Final Score

6

Official Junction Name: Portsmouth Road/ Coopers Lane (Woolston Centre)

Official Junction ID: BP-N5

Notes on possible scheme- scheme shown in Plan 12

Installation of one way bus lane between Coopers Lane (Itchen Bridge bus link) and Portsmouth Road/Manor Road/ Itchen Bridge Roundabout. Also signal bus priority at Woolston Crossroads signals.

Buses per Hour	50BPH
Study cost (est)	£10,000
Implementation cost (est)	£30,000-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	2	Bus very competitive on Itchen Bridge Routes. Numerous bus routes use this route and journey time and reliability improvements will significantly assist bus mode share on this corridor
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Bus lanes should increase public visibility of bus priority.
	SO3-Improved journey time reliability for all modes	1	Improvements to journey time reliability for bus users. Minimal effect on reliability for other users.
	SO4-Improved road safety within the sub-region	0	No effect anticipated.
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)		5
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	Improvement to people movement capacity onto Itchen Bridge
	LG4: Awareness of travel options	0	No effect anticipated
	LG5:Active travel as urban mode of choice	0	No effect anticipated
	LG6: Fewer vehicle trips to CBD	1	May assist bus modal share on east of city-CBD routes CBD
	Total score (Local goals)		4

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR=3-5; Bus Lanes Only BCR= 3-5)	1- Would be funded via Developer Contributions from Woolston Riverside.	2

Assessment Step 3- Cost & feasibility

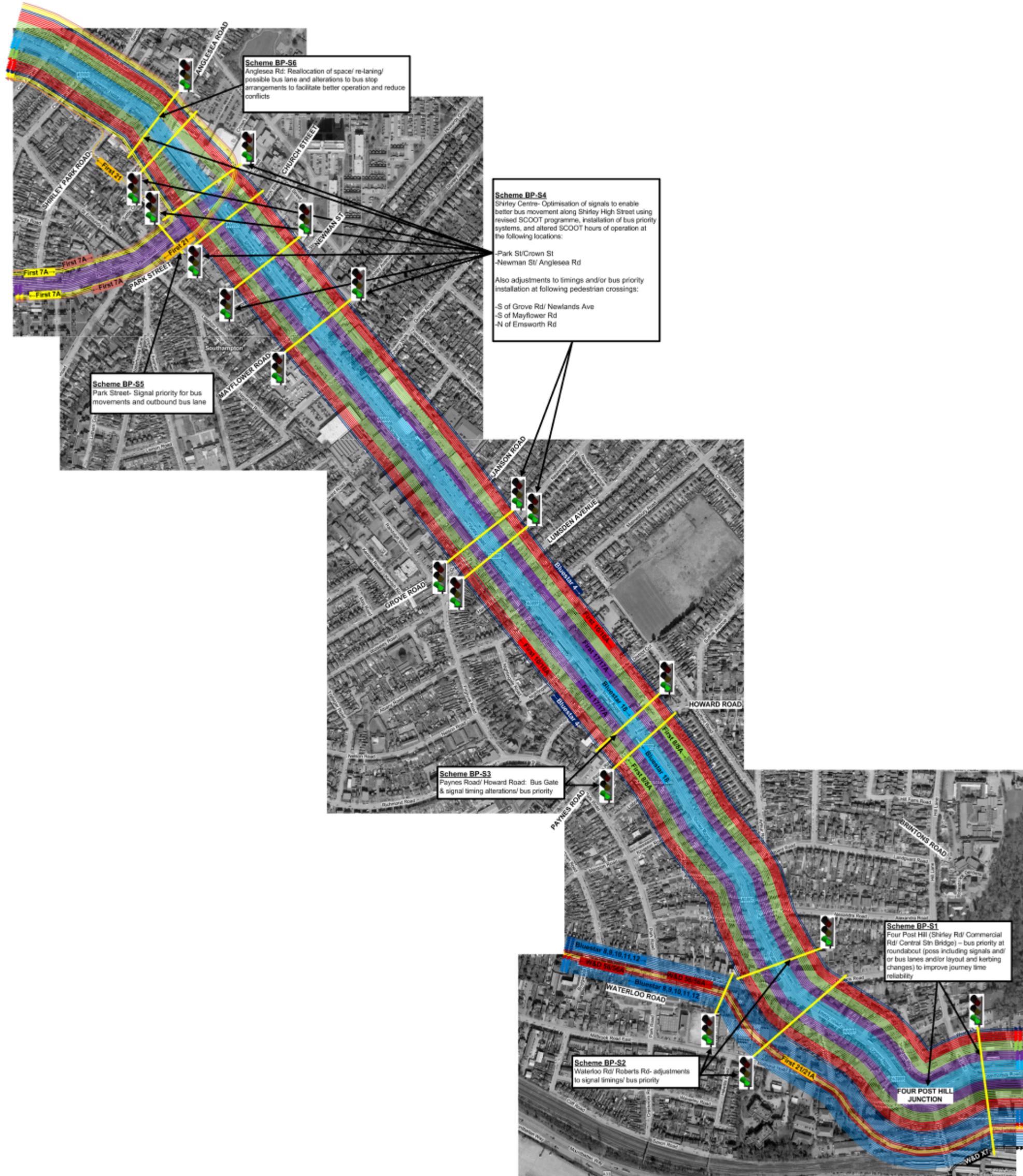
A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	2

Assessment Step 4- Final Score

13

4.4 Shirley Corridor

Plan 13



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Official Junction Name: Four Post Hill**Official Junction ID: BP-S1****Notes on possible scheme-** *scheme shown in Plan 13*

Scheme to improve bus journey times and reliability across Four Post Hill Roundabout. Suggestion is for signals northbound on Central Bridge to halt flow of traffic onto roundabout from this arm to enable buses to more easily access roundabout. Possibility of bus lanes, etc also but cost below is for signals only. Scheme would be linked to Hill Lane. Commercial Road/ Wyndham Place signals.

Buses per Hour	70BPH
Study cost (est)	£20,000
Implementation cost (est)	£100,000-£500,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Heavily used by buses- significant benefit to Shirley & Millbrook corridor PT users.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	No effect anticipated.
	SO3-Improved journey time reliability for all modes	0	Bus journey time improvements may be at detriment of car users.
	SO4-Improved road safety within the sub-region	1	Signals may improve safety.
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect- positive and negative effects.
	SO7-Promoting a higher quality of life	0	No effect anticipated.
	Total Score (Sub-regional outcomes)	3	
Local Goals	LG1: Bus patronage	1	Corridor-wide journey time improvements should improve offer from bus operators
	LG2: Bus as urban mode of choice	1	Corridor-wide improvements should enhance people movement capacity along corridor.
	LG3: People movement capacity	0	Any benefits for bus passenger movement may be offset by reduced efficiency of movement of other vehicles.
	LG4: Awareness of travel options	0	No effect anticipated
	LG5:Active travel as urban mode of choice	0	No effect anticipated
	LG6: Fewer vehicle trips to CBD	1	Improvements to bus service reliability may lead to modal shift on journeys towards CBD.
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR= 3-5)	-2 Scheme would be 100% internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	-1
B. Estimated revenue cost (lower cost scores better)	0
C. Score for anticipated deliverability	0
Total Score	-1

Assessment Step 4- Final Score

4

Official Junction Name: Waterloo Rd/ Shirley Rd
Official Junction ID: BP-S2

Notes on possible scheme- *scheme shown in Plan 13*

Bus priority for left filter (Waterloo Road outbound) via bus signal priority. Also an all-round green pedestrian crossing phase. Signal alterations only.

Buses per Hour	70BPH
Study cost (est)	£5,000
Implementation cost (est)	Under £15,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	No effect anticipated
	SO3-Improved journey time reliability for all modes	0	Benefits for Waterloo Road buses, disbenefits for Shirley Road traffic.
	SO4-Improved road safety within the sub-region	1	Pedestrian phase improvements should aid safety in a known problem area.
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility. Will benefit longer distance routes via Millbrook more.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect- positive and negative elements.
	SO7-Promoting a higher quality of life	0	No effect anticipated.
	Total Score (Sub-regional outcomes)	2	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	0	Positive for buses on Waterloo Road, negative for buses on Shirley Road.
	LG4: Awareness of travel options	0	No effect anticipated.
	LG5:Active travel as urban mode of choice	1	Benefits for pedestrians crossing a busy road.
	LG6: Fewer vehicle trips to CBD	1	May help mode shift to bus for journeys to CBD as improves bus reliability/ journey time to CBD on some routes.
	Total score (Local goals)	4	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR= 3-5)	-2 Would be 100% internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	2
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	4

Assessment Step 4- Final Score

9

Official Junction Name: Paynes Road/ Howard Road signals
Official Junction ID: BP-S3

Notes on possible scheme- *scheme shown in Plan 13*
 Bus priority, probably for late running buses only. Possibility of bus gate at this location, but this evaluation is for signal work only.

Buses per Hour	52BPH
Study cost (est)	£5,000
Implementation cost (est)	Under £15,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Improved bus journey times.
	SO4-Improved road safety within the sub-region	0	No effect anticipated.
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect
	SO7-Promoting a higher quality of life	0	No effect
	Total Score (Sub-regional outcomes)	2	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	May slightly increase people movement capacity.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	1	May help mode shift to bus for journeys to CBD as improves bus reliability/ journey time to CBD.
	Total score (Local goals)	4	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR= 3-5)	-2 Would require 100% internal funding.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	2
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	4

Assessment Step 4- Final Score

9

Official Junction Name: Shirley Corridor signal optimisation
Official Junction ID: BP-S4

Notes on possible scheme- *scheme shown in Plan 13*
 Optimisation of signals to enable better bus movement along Shirley High Street using revised SCOOT programme & installation of bus priority systems at the following locations: Park St/Crown St; Newman St/ Anglesea Rd. Also adjustments to timings and/or bus priority installation at following pedestrian crossings: S of Grove Rd/ Newlands Ave; N of Beatrice Rd/ Janson Rd; Opp McDonalds; S of Mayflower Rd; N of Emsworth Rd.

Buses per Hour	52BPH
Study cost (est)	£30,000
Implementation cost (est)	£30,000-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Improvement of bus timings through corridor may help improve attractiveness of bus services and encourage modal shift.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	No effect anticipated.
	SO3-Improved journey time reliability for all modes	1	Improvements to journey time reliability likely for bus and other highway users.
	SO4-Improved road safety within the sub-region	0	Indeterminate effect
	SO5-Improved accessibility within and beyond the sub-region	1	Improved bus service offer may lead to improved accessibility.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced queuing and smoother traffic flow should reduce emissions.
	SO7-Promoting a higher quality of life	0	
	Total Score (Sub-regional outcomes)	4	
Local Goals	LG1: Bus patronage	1	Corridor-wide journey time improvements should aid bus patronage growth.
	LG2: Bus as urban mode of choice	1	Corridor-wide journey time improvements should improve offer from bus operators
	LG3: People movement capacity	1	Corridor-wide improvements should enhance corridor people movement capacity
	LG4: Awareness of travel options	0	No effect anticipated.
	LG5:Active travel as urban mode of choice	0	No effect anticipated.
	LG6: Fewer vehicle trips to CBD	1	Improvements to bus service reliability may lead to modal shift on journeys towards CBD.
	Total score (Local goals)	4	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Corridor Signal Optimisation BCR= 3-5; Signal Bus Priority BCR= 3-5)	-2 Would be 100% internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	2

Assessment Step 4- Final Score

9

Official Junction Name: Shirley-Park Street
Official Junction ID: BP-S5

Notes on possible scheme- *scheme shown in Plan 13*
 BP-S5: Park Street- Signal priority for buses and outbound bus lane. Linked to BP-S4.

Buses per Hour	60BPH
Study cost (est)	£10,000
Implementation cost (est)	£15-£30,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Improvement of bus timings through corridor may help improve attractiveness of bus services and encourage modal shift.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Bus lane infrastructure increases visibility of bus priority to public.
	SO3-Improved journey time reliability for all modes	1	Improvements to journey time reliability likely for bus and other highway users.
	SO4-Improved road safety within the sub-region	0	Indeterminate effect
	SO5-Improved accessibility within and beyond the sub-region	1	Improved bus service offer may lead to improved accessibility.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced queuing and smoother traffic flow should reduce emissions.
	SO7-Promoting a higher quality of life	0	
	Total Score (Sub-regional outcomes)		4
Local Goals	LG1: Bus patronage	1	Corridor-wide journey time improvements should aid bus patronage growth.
	LG2: Bus as urban mode of choice	1	Corridor-wide journey time improvements should improve offer from bus operators
	LG3: People movement capacity	1	Corridor-wide improvements should enhance corridor people movement capacity
	LG4: Awareness of travel options	0	No effect anticipated.
	LG5:Active travel as urban mode of choice	0	No effect anticipated.
	LG6: Fewer vehicle trips to CBD	1	Improvements to bus service reliability may lead to modal shift on journeys towards CBD.
	Total score (Local goals)		4

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Corridor Signal Optimisation BCR= 3-5; Signal Bus Priority BCR= 3-5)	-2 Would be 100% internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	1
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	0
Total Score	2

Assessment Step 4- Final Score

10

Official Junction Name: Shirley-Anglesea Road
Official Junction ID: BP-S6

Notes on possible scheme- *scheme shown in Plan 13*
 Reallocation of space/ re-laning/ possible bus lane and alterations to bus stop arrangements to facilitate better operation and reduce conflicts

Buses per Hour	43 BPH
Study cost (est)	£10,000
Implementation cost (est)	£15-£30,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Bus lane infrastructure increases visibility of bus priority to public.
	SO3-Improved journey time reliability for all modes	1	Improved bus journey times.
	SO4-Improved road safety within the sub-region	0	No effect anticipated.
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect
	SO7-Promoting a higher quality of life	0	No effect
	Total Score (Sub-regional outcomes)		2
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	May slightly increase people movement capacity.
	LG4: Awareness of travel options	0	No effect.
	LG5:Active travel as urban mode of choice	0	No effect.
	LG6: Fewer vehicle trips to CBD	1	May help mode shift to bus for journeys to CBD as improves bus reliability/ journey time to CBD.
	Total score (Local goals)		4

Assessment Step 2- Value for money & funding

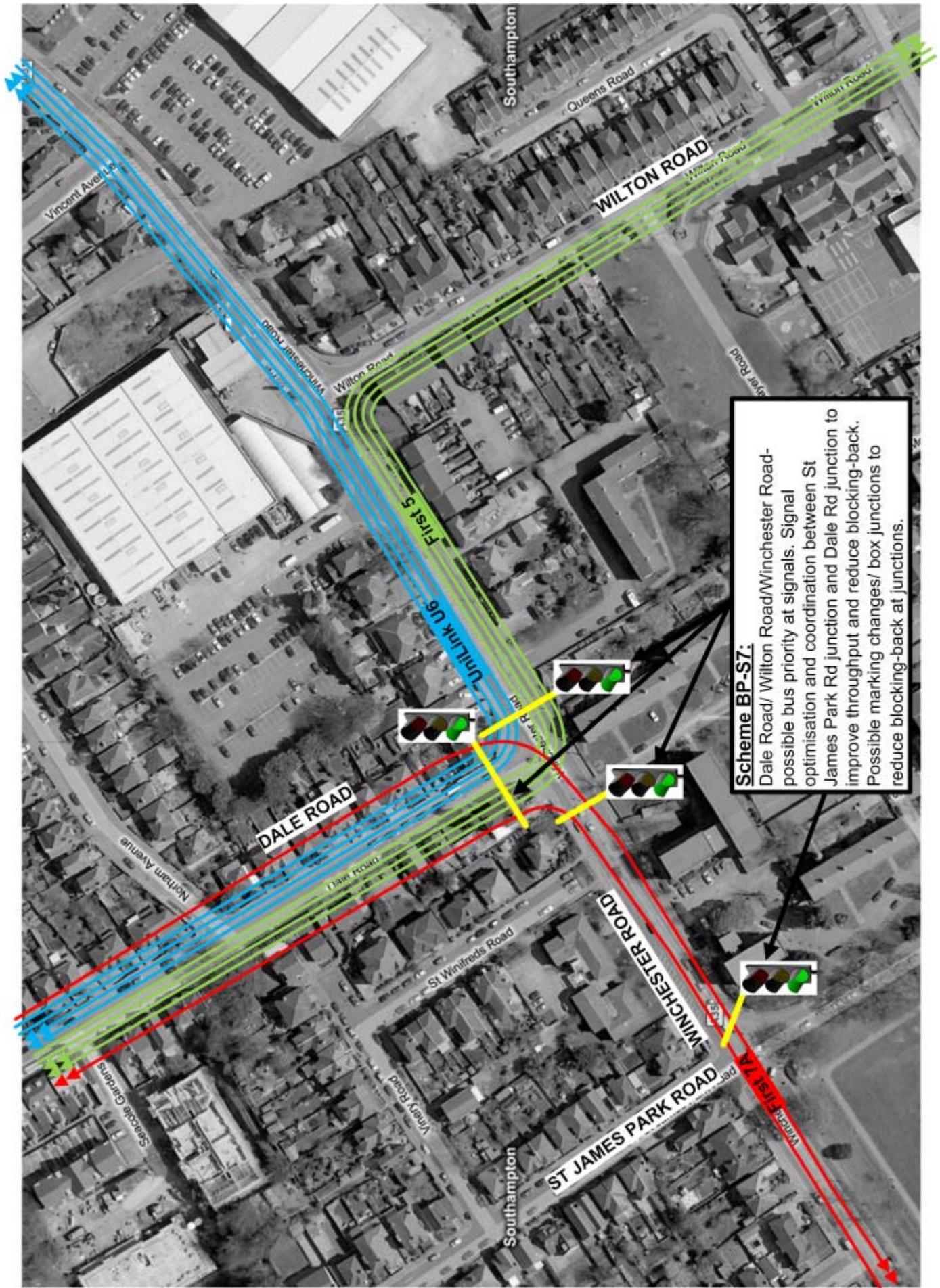
A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Corridor Signal Optimisation BCR= 3-5; Signal Bus Priority BCR= 3-5)	-2 Would require 100% internal funding.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	1
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	1
Total Score	3

Assessment Step 4- Final Score

8



Official Junction Name: Dale Road/ Winchester Road
Official Junction ID: BP-S7

Notes on possible scheme- *scheme shown in Plan 14*

Signal priority for buses and possible layout (lining) changes to aid traffic flow and bus movement.

Buses per Hour	10BPH
Study cost (est)	£5,000
Implementation cost (est)	£15-£30,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Would provide minor journey time reliability improvements for bus passengers
	SO4-Improved road safety within the sub-region	1	Primary access route to hospital- signal priority could be provided for ambulances.
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)	3	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	People movement capacity of junction should be improved.
	LG4: Awareness of travel options	0	No effect anticipated
	LG5:Active travel as urban mode of choice	0	No effect anticipated
	LG6: Fewer vehicle trips to CBD	0	No effect anticipated
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

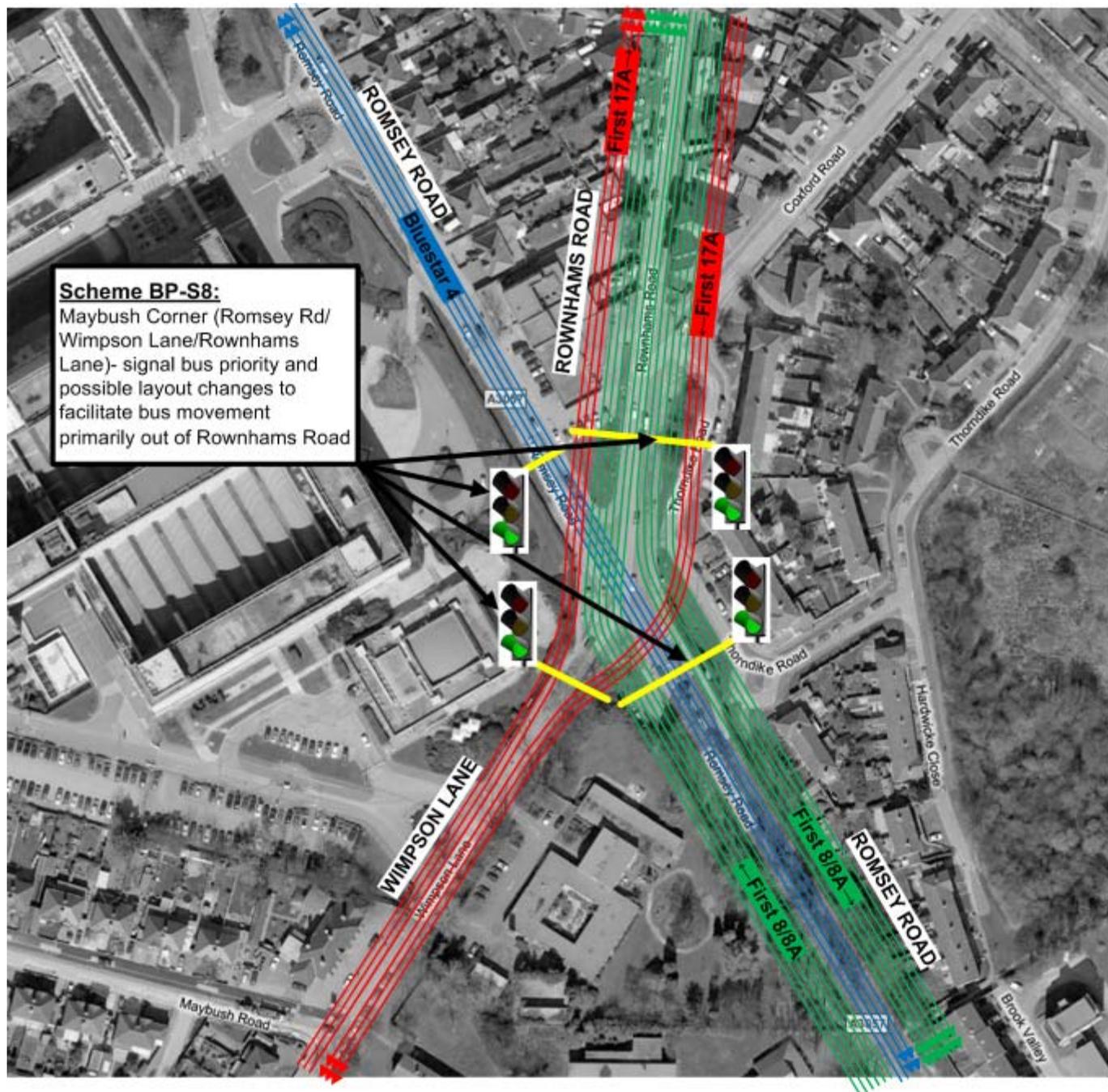
A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR= 3-5)	-2 Would be funded solely from SCC budget	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	1
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	0
Total Score	2

Assessment Step 4- Final Score

7



Official Junction Name: Maybush Corner
Official Junction ID: BP-S8

Notes on possible scheme- *scheme shown in Plan 15*
 Bus priority at signals at this junction. Could prioritise routes from Romsey Road into Rownhams Road; may also be able to prioritise First 17A move from Wimpson Lane into Rownhams Road.

Buses per Hour	22BPH
Study cost (est)	£5,000
Implementation cost (est)	£15-£30,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Individual junction works unlikely to have significant effect on car dependence
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	As above
	SO3-Improved journey time reliability for all modes	1	Would provide minor journey time reliability improvements for bus passengers
	SO4-Improved road safety within the sub-region	0	No effect anticipated
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Indeterminate effect
	SO7-Promoting a higher quality of life	0	No effect anticipated.
	Total Score (Sub-regional outcomes)		2
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	People movement capacity of junction should be improved.
	LG4: Awareness of travel options	0	No anticipated effect
	LG5:Active travel as urban mode of choice	0	No anticipated effect
	LG6: Fewer vehicle trips to CBD	0	No anticipated effect.
	Total score (Local goals)		3

Assessment Step 2- Value for money & funding

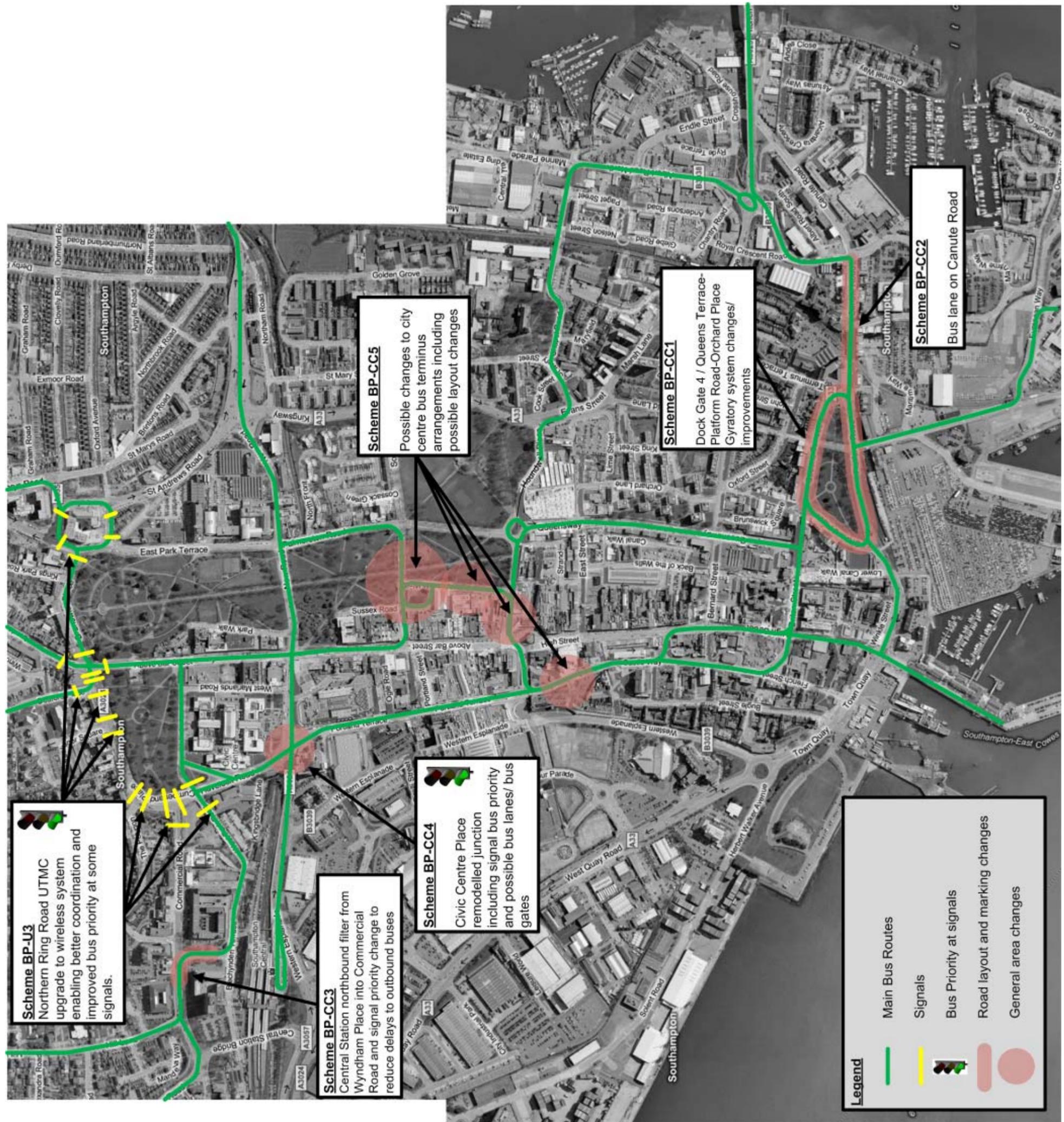
A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR= 3-5)	2- Should be funded via OS site S106	3

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	1
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	0
Total Score	1

Assessment Step 4- Final Score

10



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Official Junction Name: Platform Road/ Terminus Terrace
Official Junction ID: BP-CC1

Notes on possible scheme- *scheme shown in Plan 16*
Regional Growth Fund Bid for significant highway changes on Platform Road to make this a two way link with right turn into Dock Gate 4. Alterations to Orchard Place/ Queens Terrace gyratory system for local traffic also planned. Changes to the Town Quay junction would also be included as part of this work. Also improved cycle and pedestrian facilities. Modelling indicates large journey time improvements and reductions in queues would be achieved.

Buses per Hour	Circa 30BPH
Study cost (est)	£50,000
Implementation cost (est)	>£500,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	0	Benefits to PT users, cycle, pedestrians, but also benefits to car users so indeterminate effect.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	No effect anticipated
	SO3-Improved journey time reliability for all modes	2	Very significant reduction in congestion, queues and journey times.
	SO4-Improved road safety within the sub-region	1	Signal control of unsignalled junctions and more logical layout may provide safety benefit.
	SO5-Improved accessibility within and beyond the sub-region	1	Improved journey times would lead to improved accessibility.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	2	Modelling indicates large reductions in emissions and fuel sue.
	SO7-Promoting a higher quality of life	0	No effect anticipated.
	Total Score (Sub-regional outcomes)	6	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	2	Significant improvement in capacity for all modes.
	LG4: Awareness of travel options	0	No anticipated effect.
	LG5:Active travel as urban mode of choice	1	Improved ped and cycle facilities will improve network.
	LG6: Fewer vehicle trips to CBD	-1	Improvements may encourage more vehicle trips to/ through this part of the CBD.
	Total score (Local goals)	4	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
0 (Highway congestion relief scheme BCR =2-3)	-1 If implemented would be funded by RGF or by Port.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	-2
B. Estimated revenue cost (lower cost scores better)	0
C. Score for anticipated deliverability	0
Total Score	-2

Assessment Step 4- Final Score

7

Official Junction Name: Canute Road Bus Lane
Official Junction ID: BP-CC2

Notes on possible scheme- *scheme shown in Plan 16*

One way bus lane on Canute Road (probably eastbound evening peak only lane). To link to BP-CC1 Platform Road scheme and improve exit journey times through congested Ocean Village area junctions.

Buses per Hour	Circa 30BPH
Study cost (est)	£10,000
Implementation cost (est)	£30,000-£100,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Improvement of bus timings and reliability may help improve attractiveness of bus services and encourage modal shift.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Unlikely to have an effect.
	SO3-Improved journey time reliability for all modes	0	Bus journey time improvements may be offset by disbenefits for car traffic.
	SO4-Improved road safety within the sub-region	0	No anticipated effect
	SO5-Improved accessibility within and beyond the sub-region	1	Improved journey times on corridor would lead to improved accessibility.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	Benefits for reduced emissions from buses but indeterminate effect on car traffic emissions.
	SO7-Promoting a higher quality of life	0	No anticipated effect
	Total Score (Sub-regional outcomes)	3	
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	0	Any benefits for bus passenger movement may be offset by reduced efficiency of movement of other vehicles.
	LG4: Awareness of travel options	0	No anticipated effect
	LG5:Active travel as urban mode of choice	0	No anticipated effect
	LG6: Fewer vehicle trips to CBD	1	Improvements to bus service reliability may lead to modal shift on journeys towards CBD.
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Bus Lanes only BCR= 3-5)	-2 Would be internally funded	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	-1
C. Score for anticipated deliverability	1
Total Score	0

Assessment Step 4- Final Score

5

Official Junction Name: Wyndham Road/ Commercial Road/Hill Lane signal priority
Official Junction ID: BP-CC3

Notes on possible scheme- *scheme shown in Plan 16*

Bus signal priority at junction between Wyndham Place & Commercial Road, linked to signal priority at Commercial Road/ Hill lane junction.

Buses per Hour	In excess of 50BPH
Study cost (est)	£5,000
Implementation cost (est)	Under £15,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Major junction, benefits will improve journeys on many routes/ for many passengers
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	No effect anticipated
	SO3-Improved journey time reliability for all modes	1	Would provide minor journey time reliability improvements for bus passengers which are dominant mode on these links.
	SO4-Improved road safety within the sub-region	0	No anticipated effect
	SO5-Improved accessibility within and beyond the sub-region	1	Minor improvements to bus journey times & reliability may improve accessibility
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced queuing should help improve air quality.
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)		4
Local Goals	LG1: Bus patronage	1	Improved reliability may slightly boost patronage
	LG2: Bus as urban mode of choice	1	May slightly improve bus service offering, improving attractiveness.
	LG3: People movement capacity	1	Improvements to capacity and reliability for heavily used bus mode.
	LG4: Awareness of travel options	0	No effect anticipated.
	LG5:Active travel as urban mode of choice	0	No effect anticipated.
	LG6: Fewer vehicle trips to CBD	1	May help mode shift to bus for journeys to CBD as improves bus reliability/ journey time to CBD.
	Total score (Local goals)		4

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR = 3-5)	-2 Entirely internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	2
B. Estimated revenue cost (lower cost scores better)	1
C. Score for anticipated deliverability	2
Total Score	5

Assessment Step 4- Final Score

12

Official Junction Name: Civic Centre Place
Official Junction ID: BP-CC4

Notes on possible scheme- *scheme shown in Plan 16*

Major redesign and redevelopment of Civic Centre Place junction incorporating shared space philosophy including restrictions on movements at junction and more pedestrian freedom.

Buses per Hour	Circa 100 BPH
Study cost (est)	300,000
Implementation cost (est)	>£500,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	Improved environment for active modes, may improve bus priority. Improved bus stop facilities.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Addresses a significant barrier for active modes. May assist bus operations. Improved signage and bus stops/ interchange,
	SO3-Improved journey time reliability for all modes	1	Reductions in traffic volumes anticipated to lead to improved reliability.
	SO4-Improved road safety within the sub-region	2	Scheme will be designed to improve pedestrian safety.
	SO5-Improved accessibility within and beyond the sub-region	1	Improvements to pedestrian accessibility and possibly bus operations
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Reduced traffic volumes so likely reduced emissions.
	SO7-Promoting a higher quality of life	0	No anticipated effect.
	Total Score (Sub-regional outcomes)		7
Local Goals	LG1: Bus patronage	0	Minimal effects on aspects of bus operation affecting attractiveness and patronage.
	LG2: Bus as urban mode of choice	0	Minimal effects on aspects of bus operation affecting attractiveness and patronage.
	LG3: People movement capacity	0	Improved pedestrian movement capacity offset by lower vehicle movement capacity.
	LG4: Awareness of travel options	1	Improved bus stop facilities and interchange; pedestrian signage, pedestrian environment.
	LG5:Active travel as urban mode of choice	2	Will address a significant pedestrian barrier and benefit cyclists.
	LG6: Fewer vehicle trips to CBD	1	May lead to reduction in vehicle trips to CBD via this route.
	Total score (Local goals)		4

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
2 (Public realm junction improvements BCR= .5)	2- Wholly funded by S106 contributions	4

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	-2
B. Estimated revenue cost (lower cost scores better)	-2
C. Score for anticipated deliverability	1
Total Score	-3

Assessment Step 4- Final Score

12

Official Junction Name: City Centre Bus Terminus Arrangements (Vincent's Walk)
Official Junction ID: BP-CC5

Notes on possible scheme- *scheme shown in Plan 16*

Layover & interchange improvements at Vincent's Walk to improve information and passenger experience, and improve coherence of interchange and waiting experience. Some public realm and bus operation improvements may be included.

Buses per Hour	In excess of 50BPH
Study cost (est)	£50,000
Implementation cost (est)	£100,000-£500,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	2	High pax numbers, and benefits pax across entire city. Significant improvement in PT user experience, public realm & active travel (pedestrian) benefits
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	2	Information and interchange improvements would be a significant enhancement over present arrangement.
	SO3-Improved journey time reliability for all modes	0	No effect anticipated.
	SO4-Improved road safety within the sub-region	1	Potential safety benefits through public realm and road layout improvements.
	SO5-Improved accessibility within and beyond the sub-region	0	Minimal effect on accessibility.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	0	No effect anticipated.
	SO7-Promoting a higher quality of life	1	Improvement in user experience and city centre utility for bus passengers.
	Total Score (Sub-regional outcomes)	6	
Local Goals	LG1: Bus patronage	1	Interchange, information and waiting area improvements should boost patronage
	LG2: Bus as urban mode of choice	1	Interchange, information and waiting area improvements should improve attractiveness of bus service offer
	LG3: People movement capacity	0	No effect
	LG4: Awareness of travel options	2	Significant improvement to interchange experience and information.
	LG5:Active travel as urban mode of choice	1	Improvements to pedestrian environment.
	LG6: Fewer vehicle trips to CBD	1	Should encourage modal shift to bus for journeys to CBD.
	Total score (Local goals)	6	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
-1 (Interchange Improvements BCR= 1-2)	-1- Majority of scheme likely to be internally funded but some potential for S106 or funding from bus operators.	-2

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	-1
B. Estimated revenue cost (lower cost scores better)	-2
C. Score for anticipated deliverability	-1
Total Score	-4

Assessment Step 4- Final Score

5

Official Junction Name: Bus gate on Portland Terrace
Official Junction ID: BP-CC6

Notes on possible scheme- *scheme shown in Plan 16*
 Provision of a bus gate in both directions north of the mini-roundabout junction between Portland Terrace/Castle Way and Bargate Street in order to give buses priority on approach to this junction. Would involve installation of bus gate potentially in West Quay underpass, perhaps on current bus / taxi laybys.

Buses per Hour	In excess of 50BPH
Study cost (est)	£5,000
Implementation cost (est)	£100,000 to £500,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	1	High pax numbers, and benefits pax across entire city but not a significant problem at this location so limited benefits.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	1	Visible bus priority.
	SO3-Improved journey time reliability for all modes	0	No significant effect anticipated- not a significant bus reliability problem at this location.
	SO4-Improved road safety within the sub-region	0	No effect anticipated.
	SO5-Improved accessibility within and beyond the sub-region	0	Minimal effect on accessibility.
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	-1	May worsen air quality and emissions due to more traffic stopped.
	SO7-Promoting a higher quality of life	0	No effect anticipated
	Total Score (Sub-regional outcomes)	1	
Local Goals	LG1: Bus patronage	0	Minimal effects on aspects of bus operation affecting attractiveness and patronage.
	LG2: Bus as urban mode of choice	0	Minimal effects on aspects of bus operation affecting attractiveness and patronage.
	LG3: People movement capacity	1	May slightly improve people movement capacity.
	LG4: Awareness of travel options	1	Visible bus priority.
	LG5:Active travel as urban mode of choice	0	No effect anticipated.
	LG6: Fewer vehicle trips to CBD	1	May lead to reduction in car trips to CBD via this route.
	Total score (Local goals)	3	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
1 (Signal Bus Priority BCR= 3-5)	-2- Scheme would be internally funded.	-1

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	-2
B. Estimated revenue cost (lower cost scores better)	-1
C. Score for anticipated deliverability	-2
Total Score	-5

Assessment Step 4- Final Score

-4

Official Junction Name: UTMC Upgrade for CBD northern ring road
Official Junction ID: ITS-10

Notes on possible scheme- *scheme shown in Plan 16*

UTMC upgrade from wired to wireless. Will help improve operation of system and implementation of better green waves/ SCOOT for traffic on ring road, and reduce operation cost. However system setup likely to benefit traffic on ring roads and potentially no benefit for bus traffic using crossroads junctions to cross ring road, dependent on system set-up.

Buses per Hour	In excess of 100 BPH through area
Study cost (est)	£5,000
Implementation cost (est)	£30,000

Assessment Step 1- Performance against Policy and Goals

Level	Goal/Outcome	Score	Reason
Sub-regional Outcomes	SO1-Reduced dependence on the private car through increased no of people choosing public transport, walking, and cycling	-1	System likely to prioritise car traffic on ring road rather than bus traffic. Some bus priority may be possible.
	SO2-Improved awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how	0	No effect anticipated.
	SO3-Improved journey time reliability for all modes	1	System likely to benefit all ring road traffic and potentially buses and other users at some junctions.
	SO4-Improved road safety within the sub-region	0	Ring road is an accident hotspot, improvements may benefit safety.
	SO5-Improved accessibility within and beyond the sub-region	0	Indeterminate effect
	SO6-Improved air quality and environment, and reduced greenhouse gas emissions	1	Smoother traffic flow may reduce emissions.
	SO7-Promoting a higher quality of life	0	No effect.
	Total Score (Sub-regional outcomes)	1	
Local Goals	LG1: Bus patronage	0	No effect if benefits for bus operations minimal/ non existent
	LG2: Bus as urban mode of choice	-1	Improvements to road traffic flow may increase attractiveness or car travel.
	LG3: People movement capacity	1	Should improve net person movement capacity north of CBD
	LG4: Awareness of travel options	0	No effect anticipated
	LG5:Active travel as urban mode of choice	-1	May act contrary to this aim.
	LG6: Fewer vehicle trips to CBD	-1	Improved journey time reliability may increase vehicle trips to CBD.
	Total score (Local goals)	-2	

Assessment Step 2- Value for money & funding

A. Score for estimated BCR for strategy/ delivery option	B. Score for match/ developer contribution funding	Total score
2 (Traffic signal network optimisation BCR= >5)	-2 Scheme would be 100% internally funded.	0

Assessment Step 3- Cost & feasibility

A. Estimated Capital Cost (lower cost scores better)	0
B. Estimated revenue cost (lower cost scores better)	2
C. Score for anticipated deliverability	2
Total Score	4

Assessment Step 4- Final Score

2

5 Southampton City Council ranking of scheme priority

The table below shows the outputs of our prioritisation methodology and the ranking this methodology with the current inputs gives for these schemes.

Table of final ranking priority

Scheme ID	Scheme Name	Sum Rank	Final Rank Position
BP-N5	Portsmouth Road/ Coopers Lane (Woolston Centre)	22	1
BP-CC3	Wyndham Place/ Commercial Road	23	2
BP-N1	New Road to Northam Road / Six Dials	23	2
BP-S2	Waterloo Rd/ Roberts Rd	24	4
BP-A4	Avenue junction with Winn Road	27	5
BP-S4	Shirley Corridor/ Shirley Centre	28	6
BP-N3b	Northam Corridor Signal Priority (Northam-Bitterne)	28	6
BP-S5	Park Street	31	8
BP-N2	Six Dials	31	8
BP-CC4	Civic Centre Place	32	10
BP-S3	Paynes Road/ Howard Road	32	10
BP-S6	Anglesea Rd	32	10
BP-A3	Avenue junction with Westwood Road	36	13
BP-CC1	Platform Road-Queens Terrace/Dock Gate 4	37	14
BP-N3a	Lances Hill Signal Bus Priority	39	15
BP-P2	Portswood Road/ St Denys Road/ Highfield Lane	40	16
BP-P6	Burgess Road/ High Road/ Stoneham Lane/ Stoneham Way junctions	41	17
ITS-10	City Centre Northern Ring Road UTMC Upgrade	41	17
BP-S8	Maybush Corner (Romsey Rd/ Wimpson Lane/Rownhams Lane)	42	19
BP-P4	Portswood Road/ High Road junction with Woodmill Lane/ Langhorn Road	43	20
BP-P1	Portswood Road between Lodge Road and St Denys Road junctions	44	21
BP-P3	St Denys Road between Belmont Road and Bitterne Park Triangle	47	22
BP-S1	Four Post Hill area (Shirley Rd/ Commercial Rd/ Central Stn Bridge/ Hill Ln)	47	22
BP3-N3c	Bitterne Rd W HOV Lanes	50	24
BP-A1	Avenue/ Lodge Road Junction	51	25
BP-CC2	Canute Road	51	25
BP-S7	Dale Road/ Wilton Road/Winchester Road	52	27
BP-A5	Avenue junctions with Highfield Avenue and Burgess Road	55	28
BP-P5	Woodmill Lane/ Wessex Lane	55	28
BP-N4	Bursledon Road/ Kathleen Road/ Hinkler Road	62	30
BP-CC5	Vincent's Walk	63	31
BP-A2	Avenue/ Lodge Road Junction	66	32
BP-CC6	Portland Terrace Bus Gate	74	33

The tables in Appendix 3 show the ranking for each scheme in each individual scoring area to enable better understanding of why the scheme final ranking is as above.

6 Bus operators scheme priority

We have previously consulted on the schemes contained within this document and have received comments from First Hampshire and Go-Ahead South Coast regarding which of the listed locations they regard as a priority. The table below outlines the priority for improvements at each location identified by these operators.

Table of bus operators scheme priorities

Scheme	Location	Bluestar Priority	Firstbus Priority	Agreed priority	Agreed High/ Highest priority
BP-CC1	City Centre (Platform Road)	High Priority Location	High Priority Location	Y	Y
BP-CC5	City Centre (Vincent's Walk)	Medium Priority Location	Medium Priority Location		
BP-U3	City Centre (Northern Ring Rd)	Medium Priority Location	Medium Priority Location		
BP-CC3	City Centre (Wyndham Pl/ Commercial Rd)	High Priority Location	High Priority Location	Y	Y
BP-CC4	City Centre (Civic Centre Place)	High Priority Location	High Priority Location	Y	Y
BP-CC2	City Centre (Canute Rd)	Highest Priority Location	Highest Priority Location	Y	Y
BP-S6	Shirley	High Priority Location	High Priority Location		
BP-S5	Shirley	Medium Priority Location	Medium Priority Location		
BP-S4	Shirley	High Priority Location	High Priority Location	Y	Y
BP-S3	Shirley	High Priority Location	High Priority Location	Y	Y
BP-S2	Shirley	High Priority Location	High Priority Location		
BP-S1	Shirley	High Priority Location	High Priority Location	Y	Y
BP-S7	Dale Road	High Priority Location	High Priority Location		
BP-S8	Rownhams Road	Highest Priority Location	High Priority Location	Y	Y
BP-P2	Portswood Road	Highest Priority Location	High Priority Location		Y
BP-P1	Portswood Road	Highest Priority Location	High Priority Location		Y
BP-N5	Manor Road / Itchen Bridge	High Priority Location	Highest Priority Location		Y
BP-N4	Bursledon Road	Highest Priority Location	High Priority Location		Y
BP-N3a/b/c	Lances Hill	Highest Priority Location	Highest Priority Location	Y	Y
BP-N2	New Road	Medium Priority Location	High Priority Location		
BP-N1	New Road	Medium Priority Location	Highest Priority Location		
BP-A5	Burgess Road	Medium Priority Location	Low Priority Location		
BP-A4	Winn Road	Medium Priority Location	Low Priority Location		
BP-A3	Winn Road	Medium Priority Location	Low Priority Location		
BP-A2	The Avenue	Medium Priority Location	High Priority Location		
BP-A1	The Avenue	Low Priority Location	Medium Priority Location		
BP-P3	Cobden Bridge	High Priority Location	Medium Priority Location		
BP-P4	Woodmill Lane	High Priority Location	Low Priority Location		
BP-P5	Woodmill Lane	High Priority Location	Not scored		
BP-P6	High Road	High Priority Location	High Priority Location		
BP-U2	The Avenue UTM upgrade	Not Scored	Low Priority Location		

Key to table

Highest Priority Location
High Priority Location
Medium Priority Location
Low Priority Location

Appendix 1 Southampton City Council LTP3 Scheme Scoring Methodology

Step 1: Scoring against policy goals

How well does the scheme address these local and policy goals?

Sub-regional goals (based on South Hampshire Joint Strategy Outcomes)

- SO1-Will it reduce dependence on the private car through increased numbers of people choosing public transport, walking, and cycling?
- SO2-Will it improve awareness of travel options available to people for their journeys, enabling informed choices about whether people travel, and how?
- SO3-Will it improve journey time reliability for all modes?
- SO4-Will it improve road safety within the sub-region?
- SO5-Will it improve accessibility within and beyond the sub-region?
- SO6-Will it improve air quality and environment, and reduce greenhouse gas emissions?
- SO7-Will it promote a higher quality of life?

Local Goals (objectives that support delivery of our “four pillars” to keep Southampton moving)

- LG1: Will it contribute towards a 50% increase in bus patronage?
- LG2: Will it contribute toward the bus replacing the car as the mode of choice for many types of short to medium distance journeys between the city and the suburbs?
- LG3: Will it help develop a traffic control system that is configured to support people movement capacity (ie bus priority) rather than net numbers of vehicle movements?
- LG4: Will it lead to an increased awareness of travel options?
- LG5: Will it help modes other than the car become the mode of choice for most short journeys, particularly in the city centre and inner suburbs?
- LG6: Will it help reduce the numbers of vehicle trips that park in the city centre?

Scoring Ranges

For each question above, the following scores are assigned based on how well we estimate the scheme performs:

Score	Contribution to policy goal
+2	Definite significant positive
+1	Probable significant positive; definite minor positive
0	Neutral/ indeterminate
-1	Probable significant positive; definite minor positive
-2	Definite significant negative

Step 2: Scoring by Value for Money and Funding

A. Scoring Ranges- Benefit Cost Ratio

What is the estimated Benefit Cost Ratio range for this scheme based on the identified BCR ranges for scheme types? (see Appendix 2 for BCR ranges by scheme type)

Score	BCR Range
+2	>5
+1	3-5
0	2-3
-1	1-2
-2	<1

Any schemes which would have a road safety benefit receive an additional 1 point at this stage.

B. Scoring Ranges- External Funding

What is the probability of obtaining external funding for the scheme?

Score	Probability of External Funding (including direct funding from DfT/ treasury)
+2	EF already available for 100% of scheme costs
+1	Good chance of full EF funding OR EF already available for 50-100% of scheme costs
0	Average potential for full EF OR EF already available for <50% of scheme costs
-1	Minimal probability of full EF or better chance of fraction of project funded from EF.
-2	No possibility of EF

Step 3: Scoring by Cost and Feasibility

Scoring Ranges

A. Capital Cost: **+2** (lower cost) to **-2** (higher cost) based on officer judgement, with particular consideration given to the effect on available funding for other projects that pursuing one more expensive project would have.

Cost scoring bands (for ITS/ Network management only)- these differ in different strategy areas dependent on typical scheme cost

Cost range	Capital Cost Scoring Band
Under £15,000	2
£15-£30,000	1
£30,000-£100,000	0
£100,000-£500,000	-1
>£500,000	-2

B. Revenue Cost: **+2** (lower cost) to **-2** (higher cost) based on officer judgement, including consideration of project lifetime (some projects could commit us to a multi-decade maintenance burden) and cost profiles across project lifetime.

C. Deliverability: **+2** (more deliverable) to **-2** (less deliverable) based on officer judgement considering the following criteria:

- Member priorities
- Public requests
- Officer priorities
- Public acceptability
- Issues such as land ownership, legal issues, cross-boundary issues
- Anticipated drain on Transport Policy resources delivering project (ie seeking to avoid projects which require excessive resources for the likely outcome)

Step 4: Ranking to give final score

In each step, all schemes are ranked by their score in the step. The final step of this process adds the rank positions of all steps for each scheme together to give a "final rank". The lower the value (ie the higher-ranked the scheme in various stages) the higher the position of the scheme in the final rank and the higher priority it is.

Appendix 2- Summary of Benefit Cost Ratios for different scheme types

A more detailed version with the individual schemes from which these bands were constructed, and references to publications where these BCRs are available, is available on request.

Area	Intervention Type	Estimated BCR Banding	BCR Score
Smarter Choices	Comprehensive Smarter Choices Scheme	>5	2
Smarter Choices	Individualised Travel Marketing	>5	2
Smarter Choices	School Travel Plans	>5	2
Smarter Choices	Workplace Travel Plans	>5	2
Smarter Choices	Car clubs	Est 3-5	1
Smarter Choices	Home Shopping	Est 3-5	1
Smarter Choices	Organized car sharing	Est 3-5	1
Smarter Choices	Public transport information and marketing schemes	Est 3-5	1
Smarter Choices	Teleconferencing	Est 3-5	1
Smarter Choices	Teleworking	Est 3-5	1
Smarter Choices	Travel awareness campaigns	Est 3-5	1
Active Travel	Cycle Training & Marketing	3 to 5	1
Active Travel	GP Exercise prescription/ referral	>5	2
Active Travel	Infrastructure improvements for walkers and cyclists	>5	2
Active Travel	Individual new Cycle Routes/Cycle Route Upgrades	>5	2
Active Travel	Pedestrian Crossings	>5	2
Active Travel	Routes to school	>5	2
Active Travel	Whole Cycle Network Upgrades	2-3	0
Public Transport	Area Bus Improvements	3-5	1
Public Transport	Bus Lanes Only	3-5	1
Public Transport	Bus rapid transit	1-2	-1
Public Transport	Bus Vehicle Improvements	3-5	1
Public Transport	Interchange improvements	1-2	-1
Public Transport	P+R	2-3	0
Public Transport	Rail service improvements	1-2	-1
Public Transport	Rail station improvements	2-3	0
Public Transport	Signal Bus Priority	3-5	1
Public Transport	Single Bus Corridor Improvements Schemes	2-3	0
Public Transport	Smartcards	1-2	-1
ITS & Network Mgmt	Corridor signal optimisation	3-5	1
ITS & Network Mgmt	Real Time PT Information	>5	2
ITS & Network Mgmt	Signal Bus Priority	3-5	1
ITS & Network Mgmt	Traffic signal network optimisation	>5	2
ITS & Network Mgmt	Variable Message Signing	>5	2

Area	Intervention Type	Estimated BCR Banding	BCR Score
Public Realm	Benches	>5	2
Public Realm	Footway evenness & material quality improvement	<1	-2
Public Realm	General Public Realm improvements	2-3	0
Public Realm	Increased pedestrian space (reduced crowding)	<1	-2
Public Realm	Information panels	>5	2
Public Realm	Kerb upgrades	2-3	0
Public Realm	Large scale wayfinding signage scheme	3-5	1
Public Realm	Lighting improvements	3-5	1
Public Realm	Provision of/ improvement to Public open space	2-3	0
Public Realm	Public realm junction improvements	>5	2
Public Realm	Residential area renewal-public realm	2-3	0
Public Realm	Wayfinding Signage	1-2	-1
Road Safety	Enforcement- average speed cameras	1-2	-1
Road Safety	Enforcement- speed enforcement (police)	1-2	-1
Road Safety	Enforcement- Speed reactive signs	2-3	0
Road Safety	Enforcement-Speed cameras	2-3	0
Road Safety	Enforcement-Speed cameras	2-3	0
Road Safety	Infrastructure- Pedestrian bridge/underpass	1-2	-1
Road Safety	Infrastructure-Convert crossroads to roundabout	2-3	0
Road Safety	Infrastructure-Convert T junction to roundabout	1-2	-1
Road Safety	Infrastructure-Guardrails	2-3	0
Road Safety	Infrastructure-Local safety schemes- <£10,000	3-5	1
Road Safety	Infrastructure-Local safety schemes >£100,000	<1	-2
Road Safety	Infrastructure-Local safety schemes £10,00-£50,000	3-5	1
Road Safety	Infrastructure-Local safety schemes £50,000-£100,000	2-3	0
Road Safety	Infrastructure-Pedestrian crossing upgrades	2-3	0
Road Safety	Infrastructure-Road reconstruction and repair	1-2	-1
Road Safety	Infrastructure-Safety treatments (local safety schemes)	2-3	0
Road Safety	Infrastructure-Signals at Crossroads	3-5	1
Road Safety	Infrastructure-Signals at T Junctions	3-5	1
Road Safety	Infrastructure-Speed limit reductions in hazardous areas	>5	2
Road Safety	Infrastructure-Upgrade substandard road lighting	3-5	1

Appendix 3- Scheme ranking for each assessment step

Step 1- Rank of scheme compliance with policy objectives

Scheme ID	Scheme Name	Score	Final Rank Position
BP-CC4	Civic Centre Place	11	1
BP-CC5	Vincent's Walk	11	1
BP-CC1	Platform Road-Queens Terrace/Dock Gate 4	10	3
BP-N5	Portsmouth Road/ Coopers Lane (Woolston Centre)	9	4
BP-S5	Park Street	9	4
BP-N1	New Road to Northam Road / Six Dials	9	4
BP-N2	Six Dials	9	4
BP3-N3c	Bitterne Rd W HOV Lanes	9	4
BP-S4	Shirley Corridor/ Shirley Centre	8	9
BP-CC3	Wyndham Place/ Commercial Road	8	9
BP-P1	Portswood Road between Lodge Road and St Denys Road junctions	8	9
BP-N3b	Northam Corridor Signal Priority (Northam-Bitterne)	8	9
BP-P3	St Denys Road between Belmont Road and Bitterne Park Triangle	7	13
BP-A2	Avenue/ Lodge Road Junction	7	13
BP-S6	Anglesea Rd	7	13
BP-A5	Avenue junctions with Highfield Avenue and Burgess Road	6	16
BP-A1	Avenue/ Lodge Road Junction	6	16
BP-P4	Portswood Road/ High Road junction with Woodmill Lane/ Langhorn Road	6	16
BP-P5	Woodmill Lane/ Wessex Lane	6	16
BP-S2	Waterloo Rd/ Roberts Rd	6	16
BP-S3	Paynes Road/ Howard Road	6	16
BP-A4	Avenue junction with Winn Road	6	16
BP-S1	Four Post Hill area (Shirley Rd/ Commercial Rd/ Central Stn Bridge/ Hill Ln)	6	16
BP-CC2	Canute Road	6	16
BP-S7	Dale Road/ Wilton Road/Winchester Road	5	25
BP-A3	Avenue junction with Westwood Road	5	25
BP-N4	Bursledon Road/ Kathleen Road/ Hinkler Road	5	25
BP-S8	Maybush Corner (Romsey Rd/ Wimpson Lane/Rownhams Lane)	5	25
BP-N3a	Lances Hill Signal Bus Priority	5	25
BP-P6	Burgess Road/ High Road/ Stoneham Lane/ Stoneham Way junctions	4	30
BP-CC6	Portland Terrace Bus Gate	4	30
BP-P2	Portswood Road/ St Denys Road/ Highfield Lane	2	32
ITS-10	City Centre Northern Ring Road UTM Upgrade	-1	33

Step 2- Rank of scheme value for money and funding score

Scheme ID	Scheme Name	Sum Rank	Final Rank Position
BP-CC4	Civic Centre Place	5	1
BP-P2	Portswood Road/ St Denys Road/ Highfield Lane	4	2
BP-S8	Maybush Corner (Romsey Rd/ Wimpson Lane/Rownhams Lane)	3	3
BP-N5	Portsmouth Road/ Coopers Lane (Woolston Centre)	2	4
BP-CC1	Platform Road-Queens Terrace/Dock Gate 4	0	5
BP-S4	Shirley Corridor/ Shirley Centre	0	5
BP-S2	Waterloo Rd/ Roberts Rd	0	5
BP-A3	Avenue junction with Westwood Road	0	5
BP-A4	Avenue junction with Winn Road	0	5
BP-S1	Four Post Hill area (Shirley Rd/ Commercial Rd/ Central Stn Bridge/ Hill Ln)	0	5
BP-P6	Burgess Road/ High Road/ Stoneham Lane/ Stoneham Way junctions	0	5
ITS-10	City Centre Northern Ring Road UTMC Upgrade	0	5
BP-A5	Avenue junctions with Highfield Avenue and Burgess Road	-1	13
BP-S5	Park Street	-1	13
BP-CC3	Wyndham Place/ Commercial Road	-1	13
BP-P3	St Denys Road between Belmont Road and Bitterne Park Triangle	-1	13
BP-N1	New Road to Northam Road / Six Dials	-1	13
BP-N2	Six Dials	-1	13
BP-A1	Avenue/ Lodge Road Junction	-1	13
BP-P4	Portswood Road/ High Road junction with Woodmill Lane/ Langhorn Road	-1	13
BP-P5	Woodmill Lane/ Wessex Lane	-1	13
BP-S3	Paynes Road/ Howard Road	-1	13
BP-S6	Anglesea Rd	-1	13
BP-S7	Dale Road/ Wilton Road/Winchester Road	-1	13
BP-P1	Portswood Road between Lodge Road and St Denys Road junctions	-1	13
BP-CC2	Canute Road	-1	13
BP-N3a	Lances Hill Signal Bus Priority	-1	13
BP-N3b	Northam Corridor Signal Priority (Northam-Bitterne)	-1	13
BP3-N3c	Bitterne Rd W HOV Lanes	-1	13
BP-CC6	Portland Terrace Bus Gate	-1	13
BP-CC5	Vincent's Walk	-2	31
BP-A2	Avenue/ Lodge Road Junction	-2	31
BP-N4	Bursledon Road/ Kathleen Road/ Hinkler Road	-2	31

Step 3- Rank of scheme cost and feasibility scores

Scheme ID	Scheme Name	Sum Rank	Final Rank Position
BP-CC3	Wyndham Place/ Commercial Road	5	1
BP-N3a	Lances Hill Signal Bus Priority	5	1
BP-S2	Waterloo Rd/ Roberts Rd	4	3
BP-S3	Paynes Road/ Howard Road	4	3
ITS-10	City Centre Northern Ring Road UTMC Upgrade	4	3
BP-N1	New Road to Northam Road / Six Dials	3	6
BP-S6	Anglesea Rd	3	6
BP-A3	Avenue junction with Westwood Road	3	6
BP-A4	Avenue junction with Winn Road	3	6
BP-N4	Bursledon Road/ Kathleen Road/ Hinkler Road	3	6
BP-P6	Burgess Road/ High Road/ Stoneham Lane/ Stoneham Way junctions	3	6
BP-P2	Portswood Road/ St Denys Road/ Highfield Lane	3	6
BP-N3b	Northam Corridor Signal Priority (Northam-Bitterne)	3	6
BP-N5	Portsmouth Road/ Coopers Lane (Woolston Centre)	2	14
BP-S4	Shirley Corridor/ Shirley Centre	2	14
BP-S5	Park Street	2	14
BP-N2	Six Dials	2	14
BP-P4	Portswood Road/ High Road junction with Woodmill Lane/ Langhorn Road	2	14
BP-S7	Dale Road/ Wilton Road/Winchester Road	2	14
BP-S8	Maybush Corner (Romsey Rd/ Wimpson Lane/Rownhams Lane)	2	14
BP-P3	St Denys Road between Belmont Road and Bitterne Park Triangle	1	21
BP-A1	Avenue/ Lodge Road Junction	0	22
BP-A2	Avenue/ Lodge Road Junction	0	22
BP-P1	Portswood Road between Lodge Road and St Denys Road junctions	0	22
BP-CC2	Canute Road	0	22
BP-A5	Avenue junctions with Highfield Avenue and Burgess Road	-1	26
BP-P5	Woodmill Lane/ Wessex Lane	-1	26
BP-S1	Four Post Hill area (Shirley Rd/ Commercial Rd/ Central Stn Bridge/ Hill Ln)	-1	26
BP-CC1	Platform Road-Queens Terrace/Dock Gate 4	-2	29
BP-CC4	Civic Centre Place	-3	30
BP-CC5	Vincent's Walk	-4	31
BP-CC6	Portland Terrace Bus Gate	-4	31
BP-N3c	Bitterne Rd W HOV Lanes	-5	33

Appendix 8

Review of Large Scale Smarter Choices Programmes

Support for smarter choice measures grew after the publication of a 2004 Department for Transport (DfT) research study called Smarter Choices: Changing the Way We Travel which led to the funding of 4 large scale smarter choice programmes in the UK.

The 4 Smarter Choice programmes have now been delivered in 3 towns and 1 London borough over the last 6 years. From 2004 to 2009 the DfT funded the 'Sustainable Travel Town' programme, which saw the roll-out of smarter choice measures in Darlington, Peterborough and Worcester. From 2006 to 2009 Transport for London (TfL) funded a borough-wide programme, which focused on changing the travel habits of residents in the London Borough of Sutton. Most recently in 2009 a similar TfL-funded programme was launched in the London Borough of Richmond, which is currently being delivered until 2012.

This report reviews the evidential outcome of the 4 smarter choice programmes in Darlington, Peterborough, Worcester and Sutton and examines the extent to which these kinds of programmes are worth investing in.

Darlington – 'Local Motion'



Darlington has a population of 100,000 and is characterised by a trend of de-centralised employment where a growing number of jobs have been moved to out of town sites in business parks and retail distribution centres. Darlington has lower than average levels of car ownership (69%).

Local Motion was the brand name used to market Darlington's travel town programme. Over 5 years, Darlington spent £4.4 million on the programme. Almost 60% of this funding was spent directly on smart measures, of which personal travel planning and travel awareness campaigns received most investment.

In 2005 Darlington was selected as one of the 6 Cycling Demonstration Towns. This attracted an additional £1.5 million in funding, which was largely spent on cycling infrastructure.

Total investment per person per year: £8.80 (excludes Cycling Demonstration Town funding)

Peterborough – 'Travel Choice'



As a 'new town', Peterborough has seen substantial growth in residential developments over the past 40 years, and its urban population grew from 137,000 to 140,500 over the course of the travel town programme. Car ownership levels reflect the average for England, with around 74% of households owning a car.

Peterborough's travel town programme was branded Travel Choice, and received £6.8 million in funding over 5 years. Like Darlington, personal travel planning and travel awareness campaigns were the smart measures which received most investment. Around 50% of the total expenditure was allocated to smart measures.

Total investment per person per year: £9.80

Worcester – 'Choose How You Move'



Unlike Darlington and Peterborough, Worcester is run by a county council rather than unitary authority. The travel town programme, branded Choose How You Move covered the City of Worcester, which has a population of around 93,500. The city has high levels of car ownership with an above average figure of 77%.

The programme received a total of £4.4 million over 5 years, of which just over 40% was spent directly on smart measures. Of these, personal travel planning and walking and cycling promotions received most investment.

Total investment per person per year: £9.40



Sutton – ‘Smarter Travel Sutton’



The London Borough of Sutton is an outer London borough with a population of around 187,000. It consists of 7 district centres including Sutton town centre. At 77%, the borough has one of the highest car ownership levels in London and an above average level on a national scale.

The 3-year programme branded Smarter Travel Sutton received £5 million of funding from Transport for London.

Smarter Travel Sutton

Total investment per person per year: £8.90

Behaviour Change Interventions

All programmes involved a wide range of travel planning tools and social marketing techniques to achieve behaviour change. In many cases, individual projects were delivered in partnership with key stakeholders such as the local police, environmental charities, bike shops, the local Primary Care Trust, transport consultants, design agencies, regional transport agencies and the local chamber of commerce.

Key elements of each programme included:

- The development of a strong brand identity
- Personal travel planning –individual households were visited and offered tailored advice and information on local travel options.
- School travel planning
- Workplace travel planning
- Travel awareness campaigns and direct marketing techniques
- Major festivals, events and roadshows
- Dedicated website containing links to specific projects and offering general travel advice and information
- Additional cycle parking
- Car club scheme (Sutton only)

Results: Mode Shift, Awareness and Attitudes

All four smarter choice programmes resulted in a reduction in car trips and an increase in sustainable travel modes. Counters in each area indicated a reduction in traffic of between 2.4% and 3.2%, with Darlington and Sutton seeing the greatest reductions. In terms of mode share, all travel towns saw a percentage point reduction in car drivers ranging from -2% to -4% (see table 1). Darlington and Sutton saw the largest percentage decrease in car use (driver and passenger) with 13% and 10% decreases respectively.

Use of public transport (mainly buses) increased significantly in Peterborough and Worcester. Peterborough saw the greatest rise in bus patronage with a 33% increase (see table 1). Although external factors such as population growth and concessionary fares could have fuelled this increase, Peterborough spent the highest proportion of its funding on public transport information and marketing.

Walking levels grew during the smarter choice programme delivery in each travel town. In Darlington, Peterborough and Worcester the household surveys indicated that walking trips per person increased by between 10% and 14%. Conversely the national trend pointed towards a 9% decrease in trips per person. Mode share data also suggested that walking had increased in each travel town with Darlington and Sutton seeing the greatest increases (see table 1).

Sutton and Darlington saw significant rises in cycling levels by the end of the smarter choice programmes. Cycle counters in Darlington showed an increase in cycling levels of 50% to 60%, and as much as 75% in Sutton (compared with only 12% in London). Mode share data also pointed towards huge percentage rises in both places with a 200% increase in Darlington and 250% increase in Sutton (see table 1). A low baseline at the beginning of each programme attributed to these large figures as well as the particular focus both travel towns placed on healthy travel. Darlington's status as a Cycling Demonstration Town also helped to boost cycling, with greater investment in cycle infrastructure and intense promotional activity. On a national level, cycling trips per person were seen to decrease by 9% and in Croydon, Sutton's data control area, cycling flows decreased by 12%.

Table 1: Mode share in travel towns before and after smarter choice programmes

All car (driver and passenger)	Before	64%	66%	66%	58%
	After	56%	61%	62%	52%
	Change in % point	-8%	-5%	-4%	-6%
	% increase/decrease	13% decrease	8% decrease	6% decrease	10% decrease

The development of a strong brand identity was a strategy adopted in each travel town. This helped to create public awareness of each smarter choice programme. Sutton was the only travel town which measured awareness of the overall programme against a control sample. When asked if residents had heard of Smarter Travel Sutton, 32% of Sutton residents replied 'yes' compared to only 4% of residents in the control borough.

Public support for all smarter choice programmes was evident with 81% of Sutton residents agreeing that it was the type of service that should be invested in, and between 85% and 94% of residents in the 3 other travel towns agreeing that sustainable transport modes should be made a priority in transport policy.

Attitudinal surveys suggest that perceptions of sustainable travel modes were more positive after the delivery of the smarter choice programme in each travel town. Table 2 shows that residents in Darlington, Peterborough and Worcester were more satisfied with public transport after the intervention, and each travel town saw a reduction in residents agreeing that there was no alternative to the car. Table 3 shows that after the Smarter Travel Sutton programme, a growing number of residents strongly agreed with statements such as 'the benefits of walking and cycling outweigh the convenience of using a car', 'there are lots of bus routes local to me' and 'there is provision for cyclists in my area'. A decline in the number of residents who agreed that access to a car was essential was also evident in Sutton. Although these trends were also apparent in the control area, they were less marked with smaller percentage changes.

Table 2: Attitudes towards public transport and alternatives to the car in Darlington, Peterborough and Worcester before and after the smarter choice programmes.

		Satisfied with public transport (%)	Public transport is better than it was 4 years ago (%)	Public transport will be better in 4 years (%)	There is no adequate alternative to the car (% agree)
Darlington	2004	39%	30%	30%	44%
	2008	45%	26%	29%	41%
Peterborough	2004	28%	27%	34%	33%
	2008	51%	35%	32%	30%
Worcester	2004	26%	19%	18%	54%
	2008	37%	31%	34%	48%

Table 3: Attitudes towards public transport and alternatives to the car in Sutton and the control area before and after the smarter choice programme.

		Having access to a car is essential to me (% strongly agree)	The benefits of walking and cycling outweigh the convenience of using a car (% strongly agree)	There are lots of bus routes local to me (% strongly agree)	There is provision for cyclists in my area (% strongly agree)
Sutton	2006	69%	25%	54%	26%
	2009	63%	30%	71%	30%
Control area	2006	73%	19%	56%	18%
	2009	69%	23%	57%	22%

Social, Environmental and Economic Impacts

As well as creating modal shift, the smarter choice programmes made a positive impact on other areas such as the local economy, carbon reduction targets, air quality, health and quality of life.

The reduction seen in car trips is likely to have helped reduce congestion and improve journey reliability. Darlington and Peterborough's smarter choice programmes helped to eliminate potential congestion created by substantial increases in population and employment.

Smarter choice programmes help to improve the local economy by encouraging communities to make short trips to district centres within easy walking and cycling distance. Studies also show that businesses receive more trade from passing pedestrian flows opposed to vehicle flows. Investment in physical measures to attract pedestrians and cyclists often result in enhancements to the public realm, which can help attract local businesses to an area.

The smarter choice programmes all contributed to carbon reduction targets of each Local Authority. Household surveys from Darlington, Peterborough and Worcester helped to provide an estimate which suggests that 17,510 tonnes of carbon dioxide per annum could have been saved across the 3 towns over the 5 year programme period.

All 4 travel towns saw rises in walking and cycling, which will have contributed to increased levels of physical activity. Sutton's smarter choice programme resulted in a joint initiative with the local Primary Care Trust called Active Steps. It promoted walking and cycling as regular forms of exercise to people with certain health problems. The initiative has raised the profile of combining transport and health projects and has shown to have increased levels of physical activity amongst participants.

Although difficult to measure, it could be argued that smarter choice programmes can have a positive impact on quality of life. For example each travel town made it easier to access a range of destinations, improve the experience of end to end journeys and increase social capital by encouraging community engagement. Other positive externalities include widening employment opportunities by improving access to workplaces, improving pupil attendance at school, offering tailored travel information for people with mobility difficulties, and offering cheap travel options to people who can't afford to run a car.

Conclusion

It is evident that the smarter choice programmes in each travel town have been successful in reducing car use and increasing the take up of more sustainable modes. These trends are significantly different or more marked in comparison to those seen in control areas. Large scale smarter choice programmes contribute positively to a range of objectives such as supporting economic growth, reducing carbon emissions, increasing physical activity and improving quality of life. Public support for such programmes is high, and when implemented, it has been seen that public attitudes towards sustainable travel become increasingly positive.

The financial cost of a large scale smarter choice programme is broadly £11 per year per head at today's prices. Based on the outcomes achieved in the 3 DfT funded travel towns, estimates suggest that the implied benefit-cost ratio is around 4.5 (allowing only for congestion effects). This figure could double if environmental, consumer-benefit and health effects were also taken into account. As these projects were also pilots it is anticipated that higher benefits would be returned if the lessons learnt during their delivery were taken into account in new schemes. One key lesson to consider is the evolving nature of partnership working. On the health side there are considerable benefits to the local authorities and the health sector in working together and sharing resources to achieve more with less. Potential exists to achieve this through merging functions for example the current recourses for the healthy schools initiative and the school travel plan are separated but could potentially be

combined into one programme. This suggests that investment in a Sustainable Travel City for Southampton would have a significant cost benefit.

Sources

The Effects of Smarter Choices Programmes in the Sustainable travel towns (Feb 2010) – Sloman et al

Darlington Sustainable Travel Town Travel Behaviour Research (Mar 2009) - Social Data & Sustrans

Peterborough Sustainable Travel Town Travel Behaviour Research (Mar 2009) - Social Data & Sustrans

Worcester Sustainable Travel Town Travel Behaviour Research (Mar 2009) - Social Data & Sustrans

Smarter Travel Sutton Third Annual Report (Feb 2010) – Transport for London & London Borough of Sutton

Appendix 9

Types of Smarter Choices Interventions

Smarter Choices initiatives and Travel Plans generally consist of a variety of measures working in combination; however some of the measures listed below can be used as stand-alone measures.

Travel information and awareness campaigns

This can include ensuring that employees/residents etc are provided with information on travel options available to them including public transport timetables and maps of public transport, walking and cycling routes. Travel marketing can also include provision of marketing material, potentially measures such as installation of Real Time Information within workplaces and destinations, and other measures designed to maximise awareness and ease of access to information on people's travel options.

Provision of facilities and Infrastructure

Workplace travel plan measures can include provision of infrastructure to aid users of active modes. This can include provision of facilities such as changing rooms and secure cycle parking. In the case of new developments, the provision of active travel facilities such as footways and cycle lanes may be required as part of the planning permission agreement- these items of infrastructure act to support Travel Plans. Provision of pool bikes, bike doctor, and pool cars can also encourage modal shift and reduce the impact of trips made, particularly from employment sites.

Financial incentives

Measures which promote use of certain modes through reducing the cost of use, or other financial incentives, are a powerful tool for effecting modal shift. Financial incentives are most commonly used in Workplace Travel Plans and may include tax free and/ or discounted public transport season tickets, tax free and/or discounted bike loans/ purchase, and in some cases, financial incentives for those who travel to work by active modes.

Public Transport Information and Marketing

Improvements to Public Transport's; infrastructure and services, information and marketing make it more accessible to people. Working in partnership with local authorities, bus companies implement measures of shared objectives of improved quality of service. Local authorities assist by providing marketing and information that integrates the public transport facilities so that the authority-wide network is promoted (Goodwin et al, 2004).

Measures to restrict single occupancy car use

Measures to reduce single occupancy car use, such as limitations on car parking provision, or compulsory car park permits, are also options. Some workplaces may choose to charge car users to park, whilst others may restrict car parking permits to essential users or those working antisocial hours, etc.

Pro-cycling initiatives

Pro-cycling initiatives include any measure that aims to encourage cycling for transport, leisure or sport purposes. Initiatives can range from improvements to physical infrastructure e.g. the enhancement of the local cycle network, to promotional events and activities such as 'try-a-bike' sessions or cycle safety training. Further details are included in the Active Travel chapter

Pro-walking initiatives

Pro-walking initiatives' aim to discourage car use for shorter journeys and for individuals to use, enjoy and take pride in their immediate environment. They also address issues that can make walking an unpleasant experience, looking safety and security as well as the quality and condition of their facilities. Some schemes simply concentrate on the health of individuals and the cost of car uses for short journeys. Some schemes create walking options for those who usually feel a car is necessary, such as walking buses where children can walk whilst being supervised. Other schemes such as Park and Stride aim to take car traffic away from congested areas and reduce overall car mileage. Further details are included in the Active Travel chapter

Car Clubs

Car clubs offer an alternative to own car ownership. . Research shows that for every car club vehicle made available, up to 20 people will give up their private cars, and that car club members reduce their mileage by up to 40 per cent. "City Car Club" operates a fleet of cars based at locations around Southampton and operate on a pay as you go basis. Typically members are required to pay an annual membership fee then a small fee each time they book the car

Car Sharing Schemes

Car sharing schemes aim to encourage individuals to share private vehicles for particular journeys, to reduce the number of cars on the road. Formal schemes often focus on commuting journeys or for longer-distance leisure journeys. Schemes may be operated via internet based sites open to all users, or may be confined to users within one particular organisations (Goodwin et al, 2004).. These can some times be almost at a public transport scale, such as minibuses for schools collecting up to 8 children.

Teleworking

Employers encourage employees to adopt a range of remote working practices (i.e. more flexible practices than simply commuting to a fixed workplace every day), including working at home or in a closer location than their main workplace, for some or all of the time (Goodwin et al, 2004).

Teleconferencing

Teleconferencing includes the use of telecommunications to facilitate contacts that might otherwise have involved business travel e.g. meetings, training sessions, interviews or information provision. It typically involves two or more people in a multi-way phone conversation or video link or web link. There are a range of ways in which teleconferencing can be provided, including private facilities, public facilities, special rooms fitted with equipment or facilities available via individual PCs etc (Goodwin et al, 2004).

E-Commerce

Electronic commerce, commonly known as e-commerce, eCommerce, or e-business consists of the buying and selling of products or services over electronic systems such as the Internet and other computer networks. E-commerce reduces the need to travel. (Wikipedia!)

References

DfT (2005) Making residential travel plans work: Good practice guidelines for new development. HMSO

Goodwin P et al (2004) Smarter Choices – Changing the way we travel. DfT, London

DfT & DCSF (2007) School Travel Plan Quality Assurance - Advice Note

Appendix 10

Delivering a Smarter Travel City for Southampton

There is a baseline of smarter choices activity already taking place but the benefits from delivering a Sustainable Travel City are compelling. This section maps out the City Councils desire to progress with such an initiative and the key stages

The flow-diagram below sets out the recommended process for delivering an effective behaviour change programme based on lessons learnt from the Smarter Travel Sutton programme. The insight report will establish the audience or market segments and identify appropriate messages and channels that will help achieve the behaviour change. (Summer 2010)

The strategy will provide information on the aims and objectives, governance, costs and staffing requirements, milestones, projects/tools and monitoring and evaluation. (Autumn/Winter 2010) A Preparation Phase allows time for the team to be assembled, materials procured and projects developed so as to make maximum impact once launched. (Spring 2011)

The delivery phase should initially be at an intensive level for 3 years. (Summer 2011 – Summer 2014)

The programme could then be mainstreamed and continued as part of an on-going legacy. (Autumn 2014 onwards).

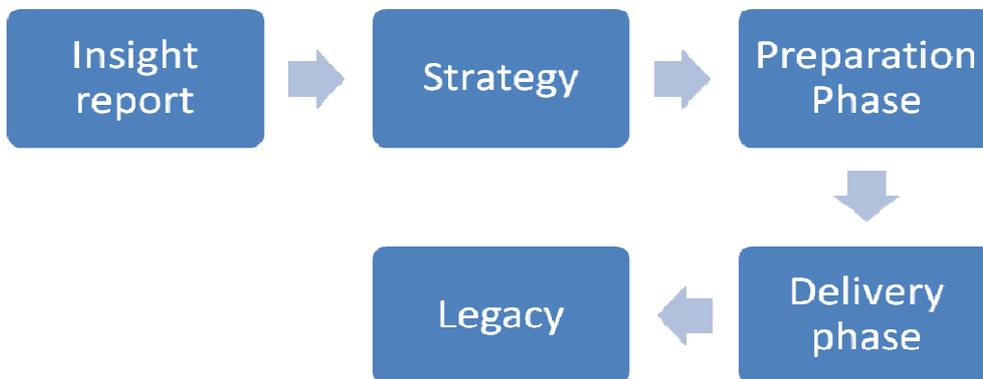
Local Sustainable Transport Fund

The Local Sustainable Transport Fund (LSTF) (announced December 2010) which is funded by the DfT is for a 4 year period to 2011-15.

The establishment of the LSTF reflects the importance the Government attaches to helping build locally a strong economy and addressing at a local level the urgent challenge of climate change and the commitment made in the Coalition Agreement to promoting sustainable travel initiatives.

The City Council will bid for a range of sustainable travel measures. Packages might, for example, include measures that promote walking and cycling, encourage modal shift, manage effectively demands on the network, secure better traffic management, improve road safety and improve access and mobility for local communities.

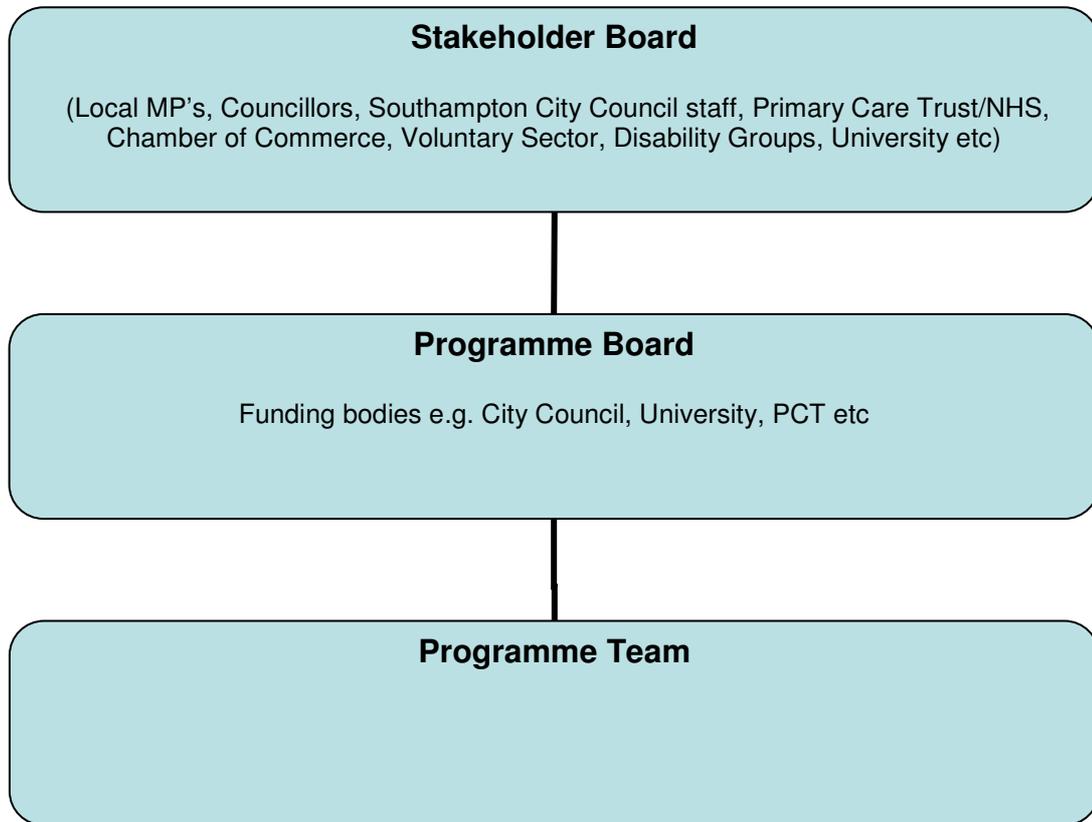
The allocation of funding will be based upon criteria will be measure to ensure it meets the core objectives of supporting economic growth and reducing carbon. Bids will also need to demonstrate value for money, deliverability and affordability of package proposals.



Governance arrangements for Southampton

Whilst Southampton City Council as the Highway and Transport authority is the main organisation responsible for encouraging sustainable travel, partnership working with key stakeholders is considered essential to ensure a successful outcome.

The diagram below shows an indicative governance chart with the exact membership and remit to be confirmed in due course.



It may be possible to host the core delivery team (programme team) in an organisation other than the Council, for example within the University of Southampton's Transport Studies Group. This would enhance the opportunities for associated research and reporting, for identifying further funding opportunities and be closely linked with the teaching programme.

Appendix 11

Active Travel Schemes Delivered During LTP2

The table below summarises the schemes delivered during the LTP2 period. This table shows infrastructure schemes (new pedestrian and cycle facilities) and also promotion and marketing schemes, training projects, and events.

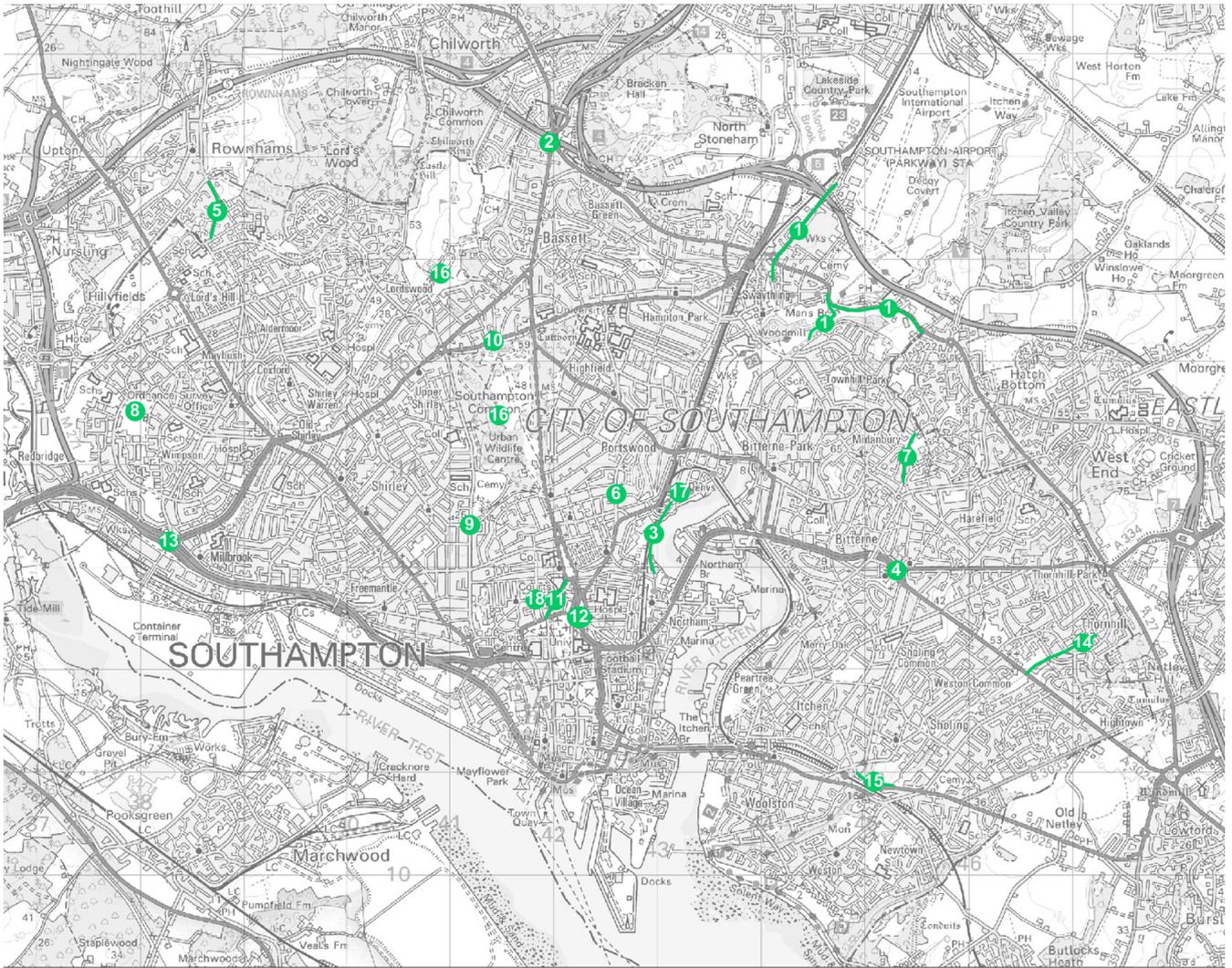
Map No	Scheme Name	Scheme Type	Scheme Value, £,000	Year
1	NCN23 Riverside Park to Cutbush Lane and Wide Lane, Swaythling Cycle path improving link between city centre and Airport via St Denys, Bitterne & Mansbridge.	  	??	200x
2	Chilworth A27 and Bassett Avenue- Cycle routes to North Baddesley and Chandlers Ford		15	2006
3	Sustrans Connect2- Northam Bridge to Priory Road via Horseshoe Bridge and the Riverside	   	1000	2010
4	Improved access to Bitterne Precinct		??	??
5	Lordshill links to Rownhams Road North to North Baddesley		70	2007
6	Spring Crescent refuge for walkers and cyclists in Portswood Road	 	15	2007
7	Townhill Way Shared cycle facility towards Bitterne	  	15	2008
-	Cycle Parking - City wide		25 Per Year	2005 - 2010
-	Advanced Stop Lines – City wide		1000	?? 20 05- 2010
8	Mansel Park recreation ground cycle path	  	??	??
9	Hill Lane/Raymond Rd Toucan crossing for access to Southampton Common	   	??	??
10	Burgess Rd- Butterfield road (Old Bassett Pub site) Toucan crossing to Southampton Common	   	114	2006
11	London Road- new road scheme includes cycle facilities and improved pedestrian environment	  	1300	2008
12	Jury's Inn roundabout-cycle path and crossings; Dorset street- cycle facility improvements	    	32	2008
13	Millbrook Roundabout – major improvements with toucan crossings on all arms of roundabout with shared cycle lane on perimeter	    	2700	2008
14	Thornhill Hinkler Green area - new cycle way and walking route to Bursledon Road	 	100	2009

Map No	Scheme Name	Scheme Type	Scheme Value, £,000	Year
15	Millers Pond – Portsmouth Road new path and cycle route to link to Oasis school	 	90	2009
-	Cycle parking at Doctors' surgeries		3	2005/8
16	Greenways – Common Sports Centre and parks	 	??	2005/8
-	Schools “ Go Ride “ training scheme		5	2005/10
-	Cyclo-cross events including National and International competitions	 	7	2005/10
-	Cycling and Walking , Healthy Lifestyle promotion		??	2005/10
-	Hosting the International Police Mountain Bike Association conference	 	6	2006
-	Setting up of Southampton City Patrol Teams on cycles and Hampshire Fire and Rescue Service		12	2006/8
-	Street Tread project and Big Bike celebration	 	1000	2008
-	Tour of Britain 2007 stage 1 finale	 	50	2007
-	Skyride 2010	 	75	2010
-	Production of leisure cycle routes maps in conjunction with Sustrans	   	4	2009
17	DIY Streets, St Denys	  	135	2010
18	Legible Cities phase 1	 	350	2010

Key to Scheme Types

Scheme Type	Icon
New cycle route	
National cycle network	
Other cycle facility improvements	
Pedestrian facility improvements	
Pedestrian crossing	
Promotion	
Safety	
Events	

Map of Scheme Locations

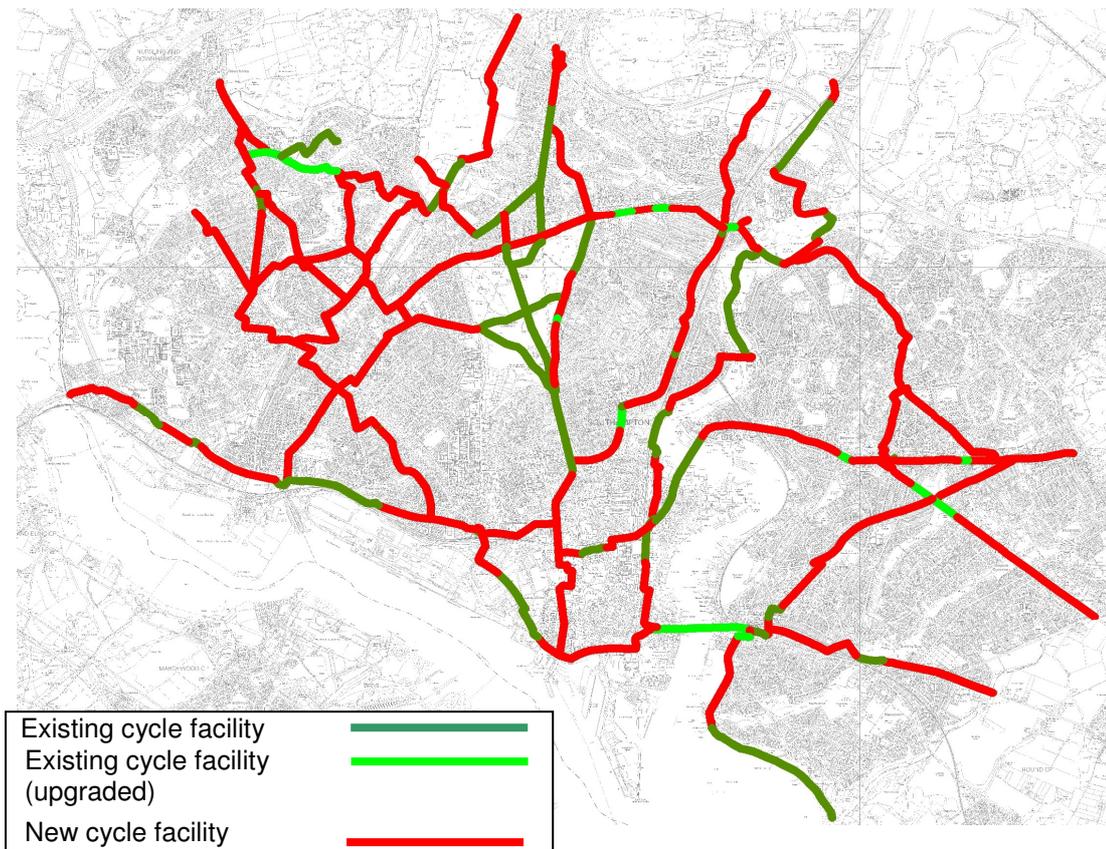


Appendix 12

Proposed Strategic Cycle Network

The strategic cycle network outline we have developed consists of existing and proposed routes. It is intended that proposed routes would tie into existing routes as much as possible. The key aim of the network is to provide continuous cycle routes along the main commuter corridors. This would mean that cycle lanes and paths would not stop and restart along parts of a route.

The proposed network totals 86.5 kilometres in length, of which 24.5 kilometres currently exist as cycle facilities. This aspirational improvement to the network will be developed over a period of time and will be regularly reviewed so as to maximize budgets and developer contributions



Our proposed network has identified cycle facilities in line with recommended design considerations. Off road cycle facilities are proposed for routes with high volumes of traffic and/or high traffic speeds, whilst on-road designated lanes are identified for many sections of route with moderate traffic volumes. Some parts of the network consist of quiet roads where advisory cycle facilities would be sufficient. As well as improved cycle route infrastructure, the network will be backed up with considerably improved direction signage and significant safety improvements and potential cycle priority at major junctions.

Unfortunately the constrained nature of the highway network in a few locations restricts what improvements are possible. However the network would provide a largely seamless system of continuous cycle routes, and a considerable improvement to the cycling experience compared to present on many routes.

Based upon 2010 prices, construction of the proposed 62km of the Strategic Cycle Network would cost around £25 million. It is estimated that for £14 m we could deliver 47km of this; the remainder being very expensive.

Completion of this network could take several decades at the current level of investment, so it is important to be realistic about how rapidly we could deliver the network gradually, in phases as budgets are allocated. We will require contributions from developments adjacent to the network to fund delivery, in addition to financing the network from capital investment by SCC and also from, where possible, funding delivered through partnerships with specialist organisations and also through central government funding sources if applicable. We will also seek to deliver parts of the network in conjunction with major highway work schemes where a strategic cycle route exists in the vicinity of a highway improvement project.

It should also be noted that sections of the Strategic Cycle network works will deliver improved facilities for pedestrians and in particular less mobile users- as all new infrastructure must be designed to be compliant with the Equalities Act (2010), and also all new cycle infrastructure by its nature provides an opportunity to improve footways and pedestrian crossings in the area.

The design and priority for delivery or elements of this outline network will be refined using the results of the planned cycle users routes survey in 2011, and a final Strategic Cycle network for delivery over the coming years will be presented in the Cycling Strategy.

Appendix 13

Public Realm Evidence

Detailed Evidence and Research

Evidence in this section has been sourced from a range of projects. The recent work by TfL features quite heavily in this section, particularly in relation to Pedestrian Ambience and Economic Benefits, which have been explicitly included in the Basic Version of the Valuing Urban Realm Toolkit.

Pedestrian Ambience

TfL commissioned a detailed study by Accent and Colin Buchanan entitled Valuing Urban Realm – Business Cases for Urban Spaces. This established the relative importance of various changes to pedestrian ambience, measured through the TfL Pedestrian Environment Review System (PERS). Specific issues considered include:

- Effective width;
- Dropped kerbs;
- Gradient;
- Obstructions;
- Permeability;
- Legibility; and
- Lighting

For any street or space where a public realm scheme is proposed or has been implemented, each of these criteria is given a score between -3 and +3 for the before and after situation. The report defines the ambience benefit for each scoring level in pence per minute per person. Comparing the before and after situation, it is possible to calculate the financial benefit of the change in each of these individual PERS criteria per person per minute. Using data on pedestrian activity and the time they spend in the street, an the overall Net Present Value benefit to pedestrian ambience can be calculated using usual discounting methods over the lifetime of the scheme.

The study includes three worked examples of public realm enhancements in London, which calculated the partial BCR values attributable to pedestrian ambience. These varied in value between 0.2 and 1.9. Therefore, in most cases, improvements to pedestrian ambience is not likely to be sufficient justification in isolation for the delivery of a public realm project. However, it would make worthwhile a contribution towards the overall benefits

Economic Benefits

Gehl diagram

These are the findings of urban quality consultant Jan Gehl who through his research and publications has been highly influential on the design of successful public spaces through his understanding of what encourages Life Between Buildings (his first book published in 1971). As a result, over the last 40 years in his home city of Copenhagen, 100,000 m² of traffic dominated spaces have been converted to 100,000 m² of traffic free city space for pedestrians. Streets and squares have been replaced with fine stone materials, and street lighting and furniture have been upgraded. The city centre now exudes character and an inviting atmosphere.

“The streets seem to signal: Come, you are welcome. Walk awhile, stop awhile and stay as long as you like. City space has been given new form and a new content.”¹²⁶

Gehl goes on to explain that it is *“first life, then spaces, then buildings – the other way around never works”* – this is fundamental to the success of our city. This is reinforced by the influential American researcher, William H. Whyte, who studied how people behaved in public spaces and has influenced our understanding of the importance of well designed public spaces in facilitating civic engagement and community interaction. He notes *“what attracts people most, it would appear, is other people”*. Get the range of optional activities right; such as sitting on a bench, in a street café, people watching, looking at public art, heritage interpretation or street entertainment; set in an

¹²⁶ New City Spaces, 2003 – Jan Gehl and Lars Gemzoe

attractive well designed space and line it with buildings then people will be attracted. This is echoed by the Joseph Rowntree trust in 'The Social Value of Public Spaces' –

"...the success of a particular public space is not solely in the hands of the architect, urban designer or town planner; it relies also on people adopting, using and managing the space – people make places, more than places make people..."

In Copenhagen, Gehl has determined that the increase in people using the city is directly proportional to the increase in car free public space, over the last 27 years (up to 1996) increasing by 350%. For every 14m² of additional space for pedestrians one new person has visited and enjoyed the city. In this respect the 'dwell time' of people visiting the city is vital for economic growth of the city centre: the longer people stay in a place the more money they are likely to spend. Gehl has also surmised that the number of people using the city centre is directly proportional to the number of seats available. In Copenhagen the growth has been in outdoor seating for cafes indicating, that when more seats are available more people sit down and stay longer in the city. Equally this can only happen if there are attractive places where people want to sit, such as wider pavements, more squares and less noise and dust from traffic. Despite the climatic differences, the level of public outdoor activity on a summer's day in Copenhagen equals that of Rome. Through an improved network of car free streets and squares the use of the bicycle has increased by 65%, though the amount of car traffic in the city has remained unchanged for the last 25 years (source: *Public Spaces Public Life - Copenhagen 1996* by Jan Gehl and Lars Gemzoe).

"The better the quality of the public space, the more people you find there using it as a place, not just as a movement corridor" (Jan Gehl).

In 2007, the East Midlands Development Agency commissioned ECOTEC to undertake a study of Economic Impact of the Public Realm. This comprehensive study undertook a considerable amount of research, including a literature review, case studies across the UK and specifically within the East Midlands. The latter included surveys of stakeholders and businesses. Some key findings and conclusions from the report are outlined below:

"The findings and conclusions of the assessment of economic benefits and impact that has arisen from research undertaken in both the qualitative and the quantitative tradition reveals that there is a significant body of international and national evidence that suggests that a high quality public realm and investment in this is critical to the competitiveness of place. This suggests that investment in the public realm generates 'economic benefit streams' that translate into 'economic impact' through a number of mechanisms:

- ▶ *Attracting investment*
- ▶ *Increasing land and property values*
- ▶ *Attracting visitors*
- ▶ *Increasing tourism*
- ▶ *Improving productivity*
- ▶ *Enhancing image*

Case studies of public realm projects from across England provide further evidence of the positive economic benefits that arise from investment in the public realm and critically echo some of the strategic findings of the broader literature review. In particular, they identify that business, employment and wealth creation can be stimulated by increased consumer and producer expenditure arising from an increase in business and visitor activity in and close to high quality and imaginative public spaces. The role of the public realm in improving image and identity and the positive impact that this has on the ability of locations to compete for scarce investment is also again revealed. As too, is the opportunity for a positive uplift in the value of land and property.

The views of inward investors are more complicated and perhaps therefore less clear cut. Almost half of the inward investors to the region consulted during the course of the study considered that the quality of the public realm was important to the success of their business. However, over two thirds did not rate it highly as a factor in deciding to locate in the East Midlands. Other factors including access to markets, transport facilities and quality of labour scored more highly. The public realm is treated as a secondary factor in locational decision making by inward investors into the East Midlands but is viewed as being important to the success of their business."

The work of the Commission for Architecture and the Built Environment (CABE) has identified the crucial role of our public realm in supporting economic and social wellbeing:

“The aim of creating a more sustainable society based on the husbanding of our resources (especially resources for transport) depends on the quality of our streets. This means that conflicts over the use of the street have to be given a much greater priority. (Paving the Way, 2002, CABE).

In the 2006 CABE publication, “Paved with gold – The real value of good street design”, research in London showed that *“an achievable improvement in street design quality can add an average of 5.2% to residential prices on the case study high streets and an average of 4.9% to retail rents”*. This consistent with the findings of work undertaken by MVA Consultancy on behalf of TfL, which concluded that *“the private sector gains positive value from a high quality urban realm and this has been quantified and related to a system of measuring quality”*.

Looking at one specific scheme in The Cut, Southwark, MVA calculated that the overall increase in property value was three times the cost of implementing the scheme. Given these benefits, MVA undertook a survey of 400 businesses in London to see if they would be willing to make a contribution towards public realm enhancements. The majority did not, but *“even taking these ‘non payers’ into account, we found that business did value improvements to lighting, pavement surfaces and environmental quality and were willing to make a one-off payment equivalent to about 2.5% of their current annual business rate per m² for each increment of improvement on the PERS [Pedestrian Environment Review System] scale”*.

Both the CABE and MVA studies stress the potential negative aspect of these findings:

“High property prices can have a downside, potentially restricting local access to home ownership and reducing retail diversity”. (CABE)

“Most value is gained by those who own the properties rather than (necessarily) businesses that operate within them”. (MVA)

In reflection of this, the TfL does not include the increase in private property value as a benefit within its BCR calculations in its *Valuing Urban Realm Toolkit*, as this is not a *social welfare benefit* (i.e. the total well being of society), as defined in the DfT’s Webtag Toolkit.

Webtag is now starting to quantifiably consider the wider [economic] benefits of transport interventions. This includes agglomeration benefits, labour supply impacts and output change in imperfectly competitive markets. Agglomeration impacts are likely to be the most relevant as these relate to *concentration of economic activity over an area*. It could be argued, for example, that comprehensive public realm improvements within a city centre, such as Southampton, would lead to agglomeration benefits to companies based within that centre, through the provision of much higher quality pedestrian linkages between them. The quality of the centre could then potentially provide a virtuous circle to encourage more related businesses to locate within the centre. There needs to be further work and research to properly quantify the impact of public realm interventions on these wider benefits.

In summary, there is a considerable body of evidence to demonstrate the economic benefits of public realm projects. However, the empirical evidence primarily relates to increase in residential and commercial property values. It is not appropriate to include such benefits

Transport Impacts

This is already a well understood aspect of transport appraisal. Specific issues considered included Journey Times, Accident and Collision data.

Journey Times

Journey times are often one of the most cost benefits in the appraisal of transport projects, particularly Major Road Schemes. However, there has been criticism of late that the large cost benefit of such schemes is due to large numbers of people gaining from small and relatively insignificant journey time savings.

In terms of public realm projects, it is anticipated that Journey Time Savings for vehicular traffic are likely to form a less significant part of the overall BCR calculations. Most schemes are relatively short in length, compared to a more significant road or public transport improvement scheme. Although many schemes aim to reduce vehicle speeds, the impact on overall journey times is likely to be small. Even if average maximum speeds are reduced, this doesn’t necessarily mean that overall journey times would increase. For example, a scheme, which removes formalised control by traffic signals, may reduce delays at junctions and pedestrian crossing points, as well as average maximum speeds.

Public realm schemes can reduce journey times for pedestrians, through the provision of better crossing facilities, where waiting times are reduced.

The forthcoming Intermediate version of TfL's *Valuing Urban Realm Toolkit* will include calculations on Journey Times. Without prejudging the calculations, it is not anticipated that journey times will have a significant impact on the BCR of public realm projects, particularly compared to Major Road Schemes, where journey times are often the dominant part of the BCR calculations.

Road Safety

Public realm schemes generally have a significant focus on improving the environment for Active Travel modes and particularly pedestrians. This often includes specific measures to reduce the direct impact of traffic movements, including traffic calming to reduce speeds or management measures to reduce vehicle volumes.

The London Road Improvement Scheme aimed, through design, to reduce vehicle speeds and through the right turn ban onto the Inner Ring Road, divert southbound through traffic onto more suitable routes. The three year moving casualty rate for London Road before and after implementation of the Improvement Scheme is illustrated below:

Table 1: London Road Before and After Annual Average Casualty Data

	Before (2003 to 2005 inclusive)	After (2009 to 2010 inclusive)
Serious Casualties	1.0	0.0
Slight Casualties	7.3	5.5
Total	8.3	5.5

Calculations show that the benefits of reducing casualties over a 15 year period are equivalent to nearly twice the capital cost of implementing the scheme. In other words, reducing casualties in isolation of other factors provides a BCR of nearly 2.0. This is primarily due to the reduction in seriously injured casualties, which have a much higher cost to society of £185,220 compared to £14,280 for slight casualties, at the latest quoted 2007 prices.

As the traffic management measures implemented to reduce through traffic using London Road have had a wider impact on the surrounding road network, an assessment has been made of casualty data on this wider network. This shows less overall change, suggesting that the reduction in the number of casualties has potentially transferred to the wider network. In particular, the overall number of KSIs and all casualties was noticeably higher in 2010, although this has also been the case across the city as a whole. It is difficult to draw firm conclusions on this, as it is difficult to know in most cases whether a casualty on the wider network specifically relates to traffic diverted from London Road. An examination of the serious casualties (which have the greatest impact on the BCR calculations) that occurred in 2009 and 2010 on the wider network suggests that they do not generally relate to the wider impact of traffic changes in London Road. The situation will be monitored on an ongoing basis and the poor casualty record in 2010 may turn out to be an isolated poor year.

These figures demonstrate that reducing casualties can potentially form a significant part of the overall benefits of a public realm project. However, these benefits will only be realised on streets with a poor road safety record, which can be addressed by public realm works. Care also needs to be taken to ensure that casualties are considered over the whole area that the public realm scheme has an impact.

Active Travel Benefits

There is a growing body of evidence that demonstrates that increasing the use of active travel modes (walking and cycling) can have a significant benefit, primarily due to the wider health benefits to the population. However, it is also important to note that increasing the proportion of journeys made by Active Travel modes can make a contribution towards accommodating increased travel demand, without increasing vehicle traffic, leading to reduced levels of congestion.

In March 2010, the Government Office for the South West and Department of Health published *Value for Money: An Economic Assessment of Investment in Walking and Cycling* by Dr Adrian Davis. This identified the significant cost of increasing levels of physical inactivity in the UK:

"Illness as an outcome of physical inactivity has been conservatively calculated to be £1.08 billion per annum in direct costs to the NHS alone (2007 prices). Indirect costs have been estimated as £8.2 billion per annum (2002 prices).

The document also recognises that “*walking and cycling have been identified as a key means by which people can build physical activity into their lifestyles*”.

The review considered the BCR of a range of walking and cycling projects across the UK and elsewhere. The average BCR was 13:1 for UK projects.

It also highlighted research from Cycling England, which assessed the overall benefits from increasing cycling. This has demonstrated that in order to break even (i.e. a BCR of 1:1), an investment of £10,000 needs to generate one additional regular cyclist over a 30 year period. Therefore, to meet a Very High BCR of 4, the £10,000 investment would only need to generate 4 additional cyclists.

The DfT’s Webtag analysis toolkit for transport projects now incorporates specific guidance on the appraisal of walking and cycling schemes. This includes an appendix that assesses three case studies. This includes a breakdown of the proportions of the various benefits. In all three examples, physical fitness benefits account for over half the benefits and up to 75% in one case, followed by Journey Ambience. Congestion, accidents, absenteeism and environmental benefits make up no more than a quarter of total benefits. Whilst this is a theoretical exercise, it does illustrate that improvements in physical fitness are the main benefit to arise from cycling and walking schemes.

Public Realm projects aim to create a wide range of benefits. However, a consistent aspect of public realm projects is to provide an improved environment for pedestrians and cyclists and reduce the impact of dominance of vehicular traffic. Emerging evidence clearly demonstrates that increased use of Active Travel modes can have significant benefits, particularly around physical fitness. This should therefore be an important consideration in the overall appraisal of public realm projects.

It’s not clear at this stage whether the more advanced editions of the TfL *Valuing Urban Realm Toolkit* will incorporate a quantitative appraisal of the benefits of increasing the use of Active Travel modes, particularly the significant health benefits. However, evidence clearly indicates that this should be an important consideration in the appraisal of public realm projects.

Other Benefits

This section considers other potential benefits of implementing public realm projects.

The TfL commissioned Accent / Colin Buchanan study, which quantitatively defined pedestrian ambience, highlighted a number of user and wider benefits from implementing public realm projects, which have not been considered in detail above. These include:

- The impact of a scheme on socialability and community;
- The use of public spaces for leisure activities, including recreational and cultural activity;
- Changes in the cost of crime;
- Improved accessibility for the mobility impaired; and
- Reduced severance, which can help people to access the full range of transport, employment and education opportunities.

These issues are not currently quantified, but are identifiable benefits from implementing public realm projects.

Appendix 14

Data Collection and Monitoring Programme

Data Collection	Indicator	Delivery Agency	Annual Cost	2011/12	2012/13	2013/14	2014/15	2015/16	Total Cost
Modal Split Manual Traffic Counts (41 sites)	Modal Split by Corridor	Hampshire County Council	£21525.00	x	x	x	x	x	£21525.00
12hr Manual Traffic Counts (31 sites)	Peak Period Traffic Flows	Hampshire County Council	£16275.00	x	x	x	x	x	£81375.00
Automatic Traffic Counters (6 sites)	Peak Period Traffic Flows	Hampshire County Council	£5500.00	x	x	x	x	x	£27500.00
Manual Cycle Counts (2 sites)	No. of Cycle Journeys	Hampshire County Council	£2100.00	x	x	x	x	x	£2100.00
Automatic Cycle Counters (6 sites)	No. of Cycle Journeys	Hampshire County Council	£2550.00	x	x	x	x	x	£12750.00
Bus Operator Passenger Data	Annual Bus Patronage	Transport Policy Team	£0.00	x	x	x	x	x	£0.00
RTIS - Compliant Bus Services Report	Bus Punctuality Non-Frequent Services	ROMANSE	£0.00	x	x	x	x	x	£0.00
RTIS -	Bus Punctuality Frequent Services	Hampshire County Council	£0.00	x	x	x	x	x	£0.00
Road Traffic Accident Reports	No. of People Killed or Seriously Injured	Highways Service Partnership	£0.00	x	x	x	x	x	£0.00
	No. of Children Killed or Seriously Injured	Highways Service Partnership	£0.00	x	x	x	x	x	£0.00
	No. of Slight Injuries	Highways Service Partnership	£0.00	x	x	x	x	x	£0.00
Highway Condition Survey	% of Principal Roads in need of Repair	Highways Service Partnership	£0.00	x	x	x	x	x	£0.00
	% of Non-principal Classified Roads in need of Repair	Highways Service Partnership	£0.00	x	x	x	x	x	£0.00

Data Collection	Indicator	Delivery Agency	Annual Cost	2011/12	2012/13	2013/14	2014/15	2015/16	Total Cost
	% of Unclassified Roads in need of Repair	Highways Service Partnership	£0.00	x	x	x	x	x	£0.00
Footway Condition Survey	% of Footway in need of Repair	Highways Service Partnership	£0.00	x	x	x	x	x	£0.00
Journey Time Surveys	Peak Period Journey Times by Corridor	ROMANSE	£0.00	x	x	x	x	x	£0.00
Classified Flow Surveys?	Modal Split by Corridor	ROMANSE	£0.00	x	x	x	x	x	£0.00
Cycle Corridor Survey?	Identify frequently used cycle routes to enable targeting of measures	Consultant?	£14500.00	x					£14500.00
Smarter Choices Survey	Identify change in public attitudes towards Smarter Choice modes of travel	Consultant?	£50000.00	x			x		£100000.00
iTrace Reports	Work based Travel Plans – Standards Achieved	Transport Policy Team	£0.00	x	x	x	x	x	£0.00
School Travel Survey	School Travel Plans – Standards Achieved	Transport Policy Team	£0.00	x	x	x	x	x	£0.00
Passenger Focus Survey	Satisfaction with Bus Services	Passenger Focus	£0.00	x		x		x	£0.00
National Highways and Transport Survey	Satisfaction with Public Realm (footways, cycle facilities etc)	MORI	£0.00		x		x		£0.00
Legible Cities Report	% of Legible Cities programme implemented	Transport Policy Team	£0.00		x		x		£0.00

Appendix 15

LTP2 Performance & Proposed LTP3 Targets

Table 1 – LTP2 and LTP3 Indicator Commonality

LTP2 Indicator	Base	2006/07	2007/08	2008/09	2009/10	2010/11	LTP3 Indicator	Base	Target
South Hampshire Indicators									
							Journey times along key corridors		
							Regional Public Transport Trips		
City Indicators									
Peak Period Traffic Flows	30784	30275	29193	28734	28113		Peak Period Traffic Flows by Corridor¹	See Table 2	
Peak Period Modal Split	Car	72.9%	72.4%	72.7%			Modal Split by Corridor²	See Table 3	
	P/T	24.1%	24.5%	24.3%					
Bus Patronage	19.3M	19.3M	19.7M	19.8M	19.1M		Bus Patronage	19.1M	28.5M
Bus Punctuality (Frequent Services)	2.68mins	2.62mins	2.63mins	2.37mins	1.37mins		Bus Punctuality (Frequent Services)	2.25mins	2.00mins
People Killed or Seriously Injured	111	90	85	96	99		People Killed or Seriously Injured		
Children Killed or Seriously Injured	19	9	9	12	10		All Child Casualties		
% of Principal Rds in Need of Maintenance	N/A	23.0%	14.2%	11.0%	8.3%		% of Principal Rds in Need of Maintenance		
% of Classified Rds in Need of Maintenance	N/A	20.0%	9.0%	8.2%	7.4%		% of Classified Rds in Need of Maintenance		
Local Indicators									
Average No. of Daily Cycling Trips	1334	2866	3267	3537	3424		Average No. of Daily Cycling Trips³		

LTP2 Indicator	Base	2006/07	2007/08	2008/09	2009/10	2010/11	LTP3 Indicator	Base	Target
Inner Cordon Walking & Cycling Modal Split							Inner Cordon Walking & Cycling Modal Split		
% of Unclassified Rds in Need of Repair	N/A	14.8%	13.0%				% of Unclassified Rds in Need of Repair		
% of Footway in Need of Repair	36.6%	12.0%	31.0%				% of Footway in Need of Repair		
							Peak Period Journey Times by Corridor¹	See Table 2	
Bus Punctuality (Non Frequent Services) – Start Points	73.0%	72.9%	63.6%	66.4%	72.0%		Bus Punctuality (Non Frequent Services) – Start Points		
Bus Punctuality (Non Frequent Services) – Intermediate Points	77.3%	78.4%	63.7%	75.9%	71.0%		Bus Punctuality (Non Frequent Services) – Intermediate Points		
							MORI Survey Public Realm Satisfaction		
Satisfaction with Public Transport							Satisfaction with Public Transport		
							% of Journeys made using Smart Cards		
% of Workforce Covered by a Travel Plan	35.0%	24.1%	28.8%	29.6%	29.8%		Gold Standard Work Place Travel Plans⁴		
% of School Popn. Covered by a Travel Plan	77.0%	96.0%	100%	100%	100%		Gold Standard School Travel Plans⁴		
No. of Slight Injury Casualties	892	739	792		657		No. of Slight Injury Casualties		

¹These indicators will now be reported by corridor and are shown in a separate table

²This indicator will now be reported by corridor and is shown in a separate table

The data collection methodology for the average no. of daily cycle trips will be changed for LTP3 to be more reflective of the city's key cycle corridors. Consequently the LTP3 base and target figures are not derived from LTP2 performance

⁴The methodology for reporting on travel planning will be changed for LTP3 to reflect quality of travel plans rather than quantity

Table 2 – Peak Period Traffic Flows & Journey Times by Corridor

Corridor	Peak Period Traffic Flows (7am – 9am)				Peak Period Journey Times (Inbound)	
	Base (In / Out)		Target (In / Out)		Base	Target
Western Approach	6328	3475	6500	4000		
Shirley Road	1098	1000	1100	1000		
The Avenue	2158	1504	2200	1500		
Bevois Valley	1378	897	1300	750		
Eastern Approach	3819	1481	4000	1600		
Itchen Bridge	2698	852	2700	780		

Table 2 – Peak Period Modal Split (for people crossing the Inner Cordon excluding goods/trade) by Corridor

Corridor	Base				Target			
	Walking	Cycling	Public Transport	Car	Walking	Cycling	Public Transport	Car
Western Approach	0.5%	0.5%	11.0%	87.5%	1.0%	1.5%	16.5%	81.0%
Shirley Road	7.5%	1.0%	28.5%	63.0%	10.0%	3.0%	30.0%	57.0%
The Avenue	9.0%	5.0%	18.0%	68.0%	12.0%	6.0%	20.0%	62.0%
Bevois Valley	5.0%	1.0%	19.0%	75.0%	7.0%	3.0%	22.0%	68.0%
Eastern Approach	3.0%	1.0%	21.0%	75.0%	5.0%	3.0%	23.0%	69.0%
Itchen Bridge	4.0%	2.0%	26.5%	67.5%	6.0%	4.5%	29.0%	60.5%