



Chapter 12: Making the best use of existing assets

Chapter 12

Introduction

12.1 In this chapter we outline the role of the Transport Asset Management Plan and describe our maintenance regime for ensuring high quality roads and highways and set out our plans for street lighting and bridge maintenance.

We recognise that investment in the local transport network over the previous 5 years has been substantial. In addition to LTP funding we have received substantial levels of investment from the current European Objective One programme, and have been successful in drawing in other sources of funding.

We have to ensure maximum value from this investment, and to ensure it is efficiently and effectively managed and maintained. In doing so we will be supporting important areas of the LTP in relation to, for example, our Network Management Duty, improving road safety, improving the pedestrian environment and assisting with our commitments to environmental probity.

Our Aim

To establish an effective Asset Management Base, and to ensure maintenance regimes are targeted in ways that support the aims of the Plan overall and integrated with wider programme measures to address the shared and local priorities, we will seek maximum value for money through our procurement regimes.

Through the Best Value regime we will:

- Improve the state of footways.
- Agree with DfT new measures for measuring the condition of principal and non-principal roads.
- Improve the state of unclassified roads to the standards set for each local authority.
- As part of the Network Management Duty measure the extent of roadwork coverage.
- Set standards for the condition of street lighting.

We will also:

- Develop the TAMP and procurement practice to improve delivery.
- Monitor complaints under the DDA concerned with highway conditions.

The Role of the Transport Asset Management Plan (TAMP)

- 12.2 With the proposed introduction of Whole Government Accounting (WGA) and Resource Account Budgeting (RAB) into Local Authorities by 2007/08, the County Surveyors Society (CSS), and the Technical Advisory Group (TAG) of the Local Authorities Association, commissioned the production of a guidance document for the production of Highway Asset Management Plans (HAMP). This Framework document was launched in 2004 to enable Highway Authorities to start the process of creating their HAMP.
- 12.3 The Local Transport Plan expands the HAMP to include transport elements, namely a Transport Asset Management Plan (TAMP). This report updates the position in Merseyside since the production of the Provisional LTP in July 2005.

Current Situation

- 12.4 The Merseyside Asset Management Group continues to meet at monthly intervals to progress the production of TAMP's for each individual Authority. The Group have taken recommendations from the Framework Document and the Index of Items. However, the Index has been expanded to suit the requirements of Merseyside. Section 1 : Approach to Asset Management in Merseyside has been written and will form a standard introduction to all TAMP's in Merseyside.
- 12.5 A draft of Section 2 : Implementing Asset Management in Merseyside has been presented to the Group for discussion. The structure of this section will be similar for all Authorities but will be the first of many sections which will reflect the individual Policies and Objectives of each Authority. Asset valuation has also been introduced as a standard agenda item at the monthly meeting.
- 12.6 Highways in each district have been categorised utilising the Road Hierarchy (see Chapter 6) as defined within Well-maintained Highways : Code of Practice for Highway Maintenance Management. E.g. strategic routes, main distributor and secondary distributor etc. Each hierarchy is then split into various Road Types such as Dual 2-lane and single 2-lane etc.

Chapter 12

- 12.7 By determining the unit cost of construction for each of the different road hierarchies and types, the total value of the roads within each of the Districts can be determined.
- 12.8 A separate exercise will be undertaken to determine the value of other highway assets e.g. bridges and street lighting.

Future Work

- 12.9 A works programme has been produced for 2006 covering all the aspects of the production of TAMP's and the Asset Valuation requirements. The programme is split up into the various sections of the TAMP together with an ongoing item for Valuation. Figure 12.1 illustrates our approach.
- 12.10 The Group have taken a closer look at all the requirements of both the TAMP and Asset Valuation and amended the original programme which now has the completion date as December 2006. Links have been developed with other Group's in Merseyside for the provision of Asset Management and Valuation data. These include the Lighting Group and the Bridges Group.

Goal - To produce Merseyside HAMP / TAMP document for use by Merseyside districts by end of 2006

Action	Target	Revised Date	Date Action Completed	TRACKER POSITION	Target (Week Ending)														
					Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
4.0 Levels of Service																			
4.1	Identify and define current levels of service for the districts - Review and benchmark Levels of Service	15/12/05	15/12/05																
4.2	Identify and establish a baseline condition of assets and benchmark with other districts	02/02/06	02/02/06																
4.3	Define desired standards and levels of service based on local and regional expectations	02/03/06	02/03/06																
4.4	Identify best practice across region and beyond	30/03/06	30/03/06																
4.5	Identify organisational constraints and objectives relative to the delivery of services within the TAMP	30/03/06	30/03/06																
4.5a	Identify levels of service for the future - Identify and benchmark customer engagement practices to determine expectations that will assist with setting future delivery of the levels of service	25/05/06	25/05/06																

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Action	Target	Revised Date	Date Action Completed	TRACKER POSITION	Target (Week Ending)														
					Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
5.2 Lifecycle Planning																			
5.2a	Identify lifecycle options for managing and maintaining the assets (or groups) that will assist in closing gaps in service level performance	17/08/06	17/08/06																
5.3 Options																			
5.3a	Identify a range of options that can be delivered. Also identify shortcomings and impact on the deterioration /depreciation of the asset(s) if not delivered	14/09/06	14/09/06																
6.0 Decision Making																			
6.1	identify optimal regimes for operation and maintenance of the network and assets	12/10/06	12/10/06																
6.2	identify required budgets that will deliver various service levels (required, established, optimal regimes and desired / attainable service levels)	12/10/06	12/10/06																
6.3	undertake a risk assessment	12/10/06	12/10/06																
6.4	identify organisational constraints with the decision making process	12/10/06	12/10/06																

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					Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
7.0 Service Delivery																				
7.1	Identify forward works programmes for LTP2 and operational delivery relative to asset maintenance requirements from the TAMP process	continuous																		
7.2	Deliver Asset improvement through physical works in accordance with the plan	continuous																		
7.3	Identify and agree processes and procedures that assist in robust delivery of services that maintain the asset(s) to agreed standards	continuous																		
8.0 Reporting and monitoring																				
8.1	Agree on relevant performance measures and standards based on objectives of the plan	09/11/06	09/11/06																	
8.2	Measure performance of the delivery of the plan for continuous improvement purposes (implement improvement plans and actions when required)	09/11/06	09/11/06																	

Chapter 12

- 12.11 Reports on progress are regularly presented to the Merseyside District Engineers Group (MDEG) and recommendations from MDEG taken onboard as deemed appropriate.

Highway Maintenance

- 12.12 Highway maintenance is a key issue across Merseyside. Over the last five years, the condition of the roads has stabilised but there is still a considerable backlog of maintenance work which needs to be addressed. There are emerging concerns over the condition of the footway network and Merseyside did see a significant rise in the number of tripping claims, but there is evidence that this has been addressed through the introduction of inspection codes of practice and more robust inspection regimes.
- 12.13 Highway deterioration is a key factor through the area, with all Authorities having individual needs, which will be addressed through their own Asset Management Plans. However, there will be a close correlation across Merseyside on overall highway maintenance strategies.
- 12.14 The condition of carriageways and footways is a matter of concern not just for motorists but also for cyclists, pedestrians and bus passengers. It is essential that robust procedures, including condition surveys, are in place to identify and react to defects on the highway. Appropriate maintenance work must be undertaken before conditions are allowed to deteriorate and more extensive, costly and disruptive repairs are required.

Current Situation

- 12.15 Through our first LTP, it was intended that all capital maintenance funding would be directed towards improving the condition of the Principal Road network. The strategy was to ensure that at the end of a 10 year period, all Principal Roads would have some residual life, and capital funding was directed at ensuring that progress would be made towards achieving that target.
- 12.16 Following 2001, the DfT advised that this funding could be directed towards the Non-Principal Road network. The Merseyside Authorities re-directed some of their allocations from Principal to Non-Principal Roads. As a result it is now unlikely that we will achieve the objective of ensuring all Principal Roads have some residual life at the end of the ten year plan period.
- 12.17 Over the last two years, the majority of the trunk roads in Merseyside have been de-trunked and the responsibilities for their management and maintenance has been transferred to the Merseyside Authorities. The exception to this is Dunningbridge Road in Sefton which is deemed to be a strategic route between the motorway network and the Liverpool Docks and has remained a trunk road (see also Chapter 7).

Chapter 12: Making the best use of existing assets

- 12.18 Until March 2007, the Merseyside Authorities will receive a special grant to manage and maintain the former trunk roads but from this date the grant will cease and the Authorities will have to undertake this function from their FSS allocation. There is uncertainty as to whether the level of funding will be sufficient to maintain these former trunk road to the high standards commensurate with their status in the highway network.

Delivering Highway Maintenance

- 12.19 The Merseyside Authorities deliver highway maintenance based on:
- Well maintained highways – A Merseyside Code of Practice of Maintenance Management.
 - Deflectograph - Although this measures residual life of carriageway pavements but this method is now used infrequently and does not feature in Best Value Performance Indicators (BVPI).
 - SCRIM – This measures skid resistance of the carriageway and identifies sections which require attention to restore the skid resistance.
 - CVI – These are driven inspections which identify defects in carriageways.
 - DVI – These are walked inspections carried out on footways and carriageways and pick up more details than CVI's. The survey information is converted to a condition indicator which is used for the production of several BVPI's.
 - SCANNER - These are machine condition surveys which measures, by means of a laser, defined sets of defects in the surface of the carriageway. SCANNER will be the prime method of obtaining BVPIs over the next few years.
 - Routine Inspections – These are generally walked inspections carried out in accordance with "Well maintained highways". These inspections form the basis of Highway Authorities defence under Section 58 of the Highway Act 1980, against claims for damages for non-repair of the highway.
 - Insurance Claims – By analysing insurance claims, highway maintenance can be targeted at areas where high numbers of claims originate.
 - Ensuring road condition is maintained to a high standard, so that the proportion requiring maintenance in any future year is held at an optimum level.

Integration with other Programme Areas

- 12.20 We develop our highway maintenance policies and programmes by considering and incorporating a wide range of strategies which influence how schemes are delivered. The following are all considered in determining the Authorities' maintenance regimes. They support the objectives and targets for this Plan and in particular the safe and efficient operation of the integrated network **described in Chapter 6**.

Chapter 12

Best Practice: Traffic Management Act

All works on the highway are co-ordinated through each Local Authority's Traffic Manager to ensure minimum disruption to traffic on the highway network. Where it is likely that a scheme will affect adjoining authorities, consultation is carried out with the appropriate Traffic Manager. For example, in 2005/6 extensive resurfacing of the A580 East Lancashire Road (a former Trunk Road) has been carried out. The scheme comprises 6km of carriageway resurfacing with part of the works in Knowsley and part in St Helens. The works were co-ordinated to ensure minimum disruption to traffic and also to ensure consistency of design standards for both sections of the scheme.

Public Transport Routes

- 12.21 A well maintained highway network makes a significant contribution to the efficient and effective operation of the public transport network as well as the quality of the journey. In partnership with Merseytravel, transport related highway improvements, including bus lanes, access kerbs, bus boarders, tactile paving and traffic signals, have been constructed and these require an effective inspection and maintenance regime.
- 12.22 Clear markings and a high standard of maintenance is required to ensure that bus lanes are safe and easy to use by buses.

Freight Routes

- 12.23 It is essential that the freight network is maintained to a high standard, given the volumes of traffic, sizes and weights of vehicles which use these routes. Abnormal load routes have also been identified across Merseyside and appropriate maintenance work is undertaken on these routes.

Cycle Routes

- 12.24 Recreational cycling and cycling to work and school are being actively promoted within this LTP via a revised cycling strategy. Well maintained cycle routes, both on-street and off-street, encourage cycling in a safer environment.

Footpath Routes

- 12.25 Different standards of maintenance are applied to footpath routes dependent on their importance and location. Approximately 80% of tripping claims arise from flagged footways which only comprise about 20% of the total footway network. There will be close integration with the Pedestrian strategy and our Rights of Way proposals.

Chapter 12: Making the best use of existing assets

Road Safety

- 12.26 Accident statistics are regularly reviewed to identify contributory factors which could be improved through appropriate maintenance (see **Chapter 10**).

Meeting the Needs of the Disabled

- 12.27 The Merseyside Authorities have produced a Code of Practice which identifies how provision should be made for disabled people using the highway network. Measures include the provision of dropped kerbs, tactile surfaces at junctions, avoidance of street furniture clutter, and ensuring footway routes are convenient and easy to use by pedestrians (see also **Chapter 6**).

Schools

- 12.28 Maintenance regimes are integrated with TravelWise to assist Travel Plans in schools across Merseyside. Initiatives include provision of improved footway routes, measures to help pedestrians cross roads, traffic calming, signs on footways and improved cycling facilities.

Environment

- 12.29 The more significant maintenance schemes often incorporate elements of landscaping which compliment the character of the local area. This can include the planting of trees, shrubs and wild flowers. On high speed roads and in locations where noise has been identified as a problem, the use of low noise surfacing, generally proprietary stone mastic asphalt is used to reduce noise levels and reduce the levels of spray (see **Chapter 11**).

Recycling

- 12.30 Each proposed scheme is carefully evaluated to determine which materials can be retained and incorporated into the works and which materials should be recycled. Careful design is paramount in ensuring a cost efficient solution. All construction materials, including kerbs, flags and road pavements, which are excavated on maintenance contracts, are recycled off site for re-use on highway schemes. The requirements for fill and sub-base are met by using recycled materials.
- 12.31 Base and binder course materials comprise a significant amount of recycled road material. The Merseyside Authorities and Merseyside Laboratories are working closely with the construction industry to develop innovative ways of incorporating recycled materials into highway schemes. (See **Chapter 11**).

Chapter 12

Delivering the Programme

- 12.32 In delivering our programme, Partnerships and consultation are essential.
- Partnership Arrangements with the private sector include:
Liverpool City Council has entered into a 10 year partnership arrangement with Enterprise PLC. This partnership arrangement was introduced following a Best Value review of street based services in 2001 including the delivery of its maintenance functions.
 - The use of the Laboratory (MELS) for the provision of road weather forecasting provided by PA Weather Centre, and the maintenance of the hardware and software for monitoring the winter forecasts with Vaisala TMI Ltd.
 - Investigating whether there are any benefits for joint working to provide maintenance services across Merseyside.

Consultation & Satisfaction Surveys.

- 12.33
- Prior to the commencement of any maintenance works, consultation with the public is undertaken to ensure that they are aware of the extent and duration of the works. Following completion of maintenance schemes, satisfaction surveys are undertaken to verify if there are any lessons to be learned from the scheme.

Liaising with Local Businesses.

- 12.34
- Whenever works are likely to impact on local businesses, consultation is undertaken to minimise the disruption which is likely to be caused. This may result in alternative working practices, including weekend and overnight working. There is a clear link within the role of Traffic Managers.

Working with Transport Providers

- 12.35
- Liaison with the transport providers is undertaken to ensure minimal disruption to services.

- 12.36 All the Merseyside districts identify and share best practice resulting from their individual maintenance operations delivered across the districts through the Merseyside District Maintenance Engineers Group (MDEG).

Efficiency Savings

- 12.37 We are complying with the requirement to make 2% yearly savings in accordance with Gershon principles. Examples of the way these savings are being made include:-

Chapter 12: Making the best use of existing assets

Cashable Savings

- 12.38 The five Merseyside local authorities have worked together to procure joint contracts, thus producing economies of scale, and certainty for suppliers and contractors. These include:-
- A joint contract to provide weather forecast information. This contract valued at £27,500 per annum, will save approximately £5,000 per annum for the Merseyside Authorities.
 - A joint contract to provide hardware and software for weather prediction. Each Authority will contribute about £9,500 per annum, a saving of £2,000 per annum.
 - The five Councils are jointly procuring the provision of highway condition surveys and will shortly award the contract, following completion of O.J.E.U. procedures. A significant saving, through following this joint approach, is expected.
- 12.39 Many of the construction contracts being carried out in Merseyside embody the partnering principles put forward by Egan and Leythan. Generally these incorporate a target price. If actual costs outturn at less than the target cost, there has been gain share for the Contractor and the Local Authority. On one particular partnering contract, over £300,000 was returned to the client as gain share. This was re-invested by carrying out additional works.
- 12.40 The high level of highway tripping claims has led many Authorities to consider looking at how these could be reduced.

Best Practice: Highway Inspection

In St. Helens a "Code of Practice for Highway Inspection" was introduced together with comprehensive training for Highway Inspectors. The code is clear and unambiguous and enables any claim against the Authority to be defended in Court. Since the introduction of the Code of Practice highway claims for tripping have showed a significant decrease. The insurance premium for 2006/07 has fallen from £900000 to £620000 – a Gershon cashable saving of £280000 which has been reinvested in highway maintenance.

Chapter 12

12.41 Several term maintenance contracts have been re-negotiated without an increase in rates leading to savings for the Local Authorities.

Non-Cashable Savings

12.42 We have been targeting accident reduction in order to improve road safety. This was described in Chapter 10. In St. Helens the killed and seriously injured figure of 104 (1994-98 average yearly figure) was reduced to 74 in 2005 – a reduction of 30 killed and serious injured. This equates to a non-cashable Gershon saving of almost £10m for 2005 when compared with the 1994-1998 figures.

12.43 Extensive use of partnering contracts has led to a greater amount of pre-contract planning, and a better, more co-ordinated approach, leading to reduced disruption to businesses and pedestrian and vehicular traffic. In a town centre refurbishment contract, the work was undertaken after extensive consultation with shopkeepers and businesses in the town centre. Works across entrances to shops was carried out after these had closed in the evening. Turnover in shops was not affected by the works saving an estimated £500,000 in potential lost revenue.

12.44 Co-ordination between neighbouring Authorities has led to a reduction to the delay and disruption which can be caused to vehicular traffic. As an example a major re-surfacing scheme on the A580, carried out in separate contracts by St. Helens and Knowsley was co-ordinated to minimise disruption. Delay was significantly reduced, saving almost £1m when compared with undertaking the contracts separately.

Chapter 12: Making the best use of existing assets

5 Year Programme

- Produce asset management plans for the maintenance of highways and to ensure that carriageways and footways are maintained to prescribed standards.
- Ensure that maintenance regimes continue to be implemented in ways that bring the greatest benefit to other programme areas.
- Recognise in particular the importance that highway maintenance can contribute to road safety and to ensure that schemes are designed to help reduce road casualties.
- Ensure that the inspection of highways is carried out in accordance with recommended standards, enabling a robust defence against highway claims.
- Ensure that all material excavated as part of maintenance works is recycled and that all material used in highway maintenance schemes incorporates as much recycled material as possible.
- Build and develop existing partnership with Local Authorities and the private sector to ensure that cost-effective highway maintenance is provided effectively for the benefit of the community in Merseyside.

Addressing the Shared Priorities

Making the best use of our resources and ensuring robust asset management are essential to the shared priorities.

- It addresses congestion by helping to keep the roads free flowing;
- In so doing it assists air quality and addresses noise, bio-diversity and sustainable procurement;
- Well maintained assets are essential for the Access Plan by providing a safe and pleasant pedestrian and footway environment and well maintained roads and appropriate treatments have a real impact on road safety.

Chapter 12

Street Lighting

Introduction

- 12.45 It is recognised that improved street lighting saves money through reductions in crime and road traffic accidents whilst creating a quality environment for the community. It is a critical supporting element to our pedestrian and cycling proposals particularly in relation to the Access Plan, the reduction in road traffic accidents and in improving quality of life.
- 12.46 In general, the standard of street lighting maintenance across the Merseyside Region is to a high standard that ensures as far as possible safe, economic, effective and reliable operation, to meet the Government's ten-year Transport Plan 2010 target to eliminate the backlog of outstanding structural maintenance it is proposed to implement a planned replacement programme, based on the age profile submitted to the DfT, to address the outstanding number of existing stock in excess of 30 years old. It is recognised that improved street lighting saved money through reductions in crime and road traffic accidents whilst creating a quality environment for the community. The advantages of replacing ageing columns with modern technology ensures that each installation is mechanically and electrically safe, requiring less maintenance being both energy efficient and vandal resistant whilst avoiding light pollution.

Promoting Best Practice

- 12.47 The Merseyside Lighting Engineers Group is producing a Strategy Document with the aim of examining key street lighting activities carried out across the Region, to compare current practice, and produce a recommended best practice for each activity under review.
- 12.48 The Strategy is designed to improve the Regions ability to deliver cost effective lighting to promote security and reduce road traffic accidents. It also clearly sets out the importance of street lighting to supporting other programme areas, and operating to the highest standards of environmental probity.
- 12.49 The Strat-E-Gis system will be used to allow effective cross referencing of priority areas and street lighting. **More detailed information is provided in Chapter 14.**
- 12.50 Our aim is to strike a balance between achieving cost effective, lighting schemes, to satisfy commitments to the environment, whilst ensuring that we conform to existing best practice, design parameters to ensure the night-time safety of road users and the residents of Merseyside. It is likely that we will adopt a common standard for rural areas.

Chapter 12: Making the best use of existing assets

- 12.51 Improved street lighting should be considered as a potential strategy in any crime reduction programme in co-ordination with other intervention strategies. Depending on the analysis of the crime problem, improved street lighting could often be implemented as a feasible, inexpensive and effective method of reducing crime.
- 12.52 The group is committed to pursuing greater links with Merseyside Police and CDRPs to ensure that lighting improvement strategies reflect the needs of the community at large in relation to reducing the fear of crime.
- 12.53 There are therefore also strong links to the TravelSafe initiative particularly in terms of linking street lighting to public transport hubs and creating safe routes. Further development with, for example the HMRI initiative (described in Chapter 9) is being examined.
- 12.54 In recent years there has been growing recognition that excessive, poorly designed and badly aimed lighting may have adverse effects. Glare from excessively bright or poorly aimed lights causes dazzle, with safety implications for motorists and pedestrians, particularly the elderly.

Chapter 12

Figure 12-2: Street Lighting: Five Year Programme

Topic	Task	Objective	Targets & Trajectories	Links to LTP	Strategic Partners	Timespan
Street Lighting Network Management: Cross Boundary Strategy Policy	Production of a Policy Document with a common purpose in mind examining the key Street Lighting maintenance activities carried out across the Region.	Compare current practice and produce a recommended best practice policy for each activity identified for review.	Cost effective reactive / planned preventative maintenance.	Value for Money Sustainability	Lighting Authorities MDEG DfT	Outline Scope 6 months Policy Document 18 months
Street Lighting Design: Cross Boundary Strategy Policy	Production of a cross boundary Policy Document outlining Merseyside's street lighting design policy.	Assess the impact that new European Standard BSEN13201 will have on existing design principles.	Cost effective, lighting schemes to satisfy our commitment to the Environment. Whilst ensuring conformity to existing best practice design parameters.	Crime & Disorder Environment Road Safety Safe & Attractive Neighbourhoods (Street Clutter) Regeneration	Lighting Authorities Environmental TG Road Safety TG Access TG	Initial Assessment 3 months Policy Document 12 months

Chapter 12: Making the best use of existing assets

Topic	Task	Objective	Targets & Trajectories	Links to LTP	Strategic Partners	Timespan
Crime & Disorder	Develop improved links with Police and Safer Community initiative's carried out across the Region.	To ensure that future lighting improvement strategies reflect the needs of the community at large by targeting identified crime hot spots.	Evaluate the impact that improved street lighting has on reducing the fear of crime by monitoring detailed night time crime data analysis.	Crime & Disorder At Risk Groups Strategic Routes Quality of Life	Police Safer Communities MerseyTravel MIS	6 months
Light Pollution	Production of a cross boundary Policy Document outlining Merseyside's policy in relation to the Global problem of light pollution.	To ensure that all new & replacement street lighting schemes installed consider the impact of light pollution during the initial planning stage.	Planned long term reduction of light pollution.	Environment Quality of Life Procurement	Environmental TG	12 months
Replacement / Refurbishment Street Lighting Scheme Prioritisation	Production of standardised scheme assessment scoring methodology.	Scheme prioritisations rating to ensure that a wide scope of factors is included for consideration during the scheme selection process.	Effective scheme selection with budget limitations.	Crime & Disorder Environment Road Safety Strategic Routes At Risk Groups Regeneration	Environmental TG Road Safety TG Access TG MerseyTravel Travelwise Group MIS	? months

Chapter 12

Topic	Task	Objective	Targets & Trajectories	Links to LTP	Strategic Partners	Timespan
Energy Procurement	Alignment of existing energy agreements.	Explore further the possible benefits of forming a Regional best value – risk acceptance pricing procurement strategy.	Maximise the benefits of aggregate purchase.	Value for Money Procurement	Lighting Authorities MDEG	? months
Alternative Funding Streams	Cross Boundary initiative to explore alternative match funding streams.	Further utilise existing Central Government / European & third party funding streams to assist in delivering future street lighting replacement / refurbishment programmes.	Maximise potential to replace inadequate street lighting stock within limited budget confines.	Value for Money Procurement	Lighting Authorities MDEG	? months
Removal of Street Clutter	Meeting the requirements of Phase 3 of the Disabled Discrimination Act.	To ensure that newly installed street lighting columns and associated equipment were at all possible do not prohibit access.	Limit the number of street lighting columns required to meet design standards ensuring were at all possible columns are sited to the rear of footways.	Road Safety Public Safety	Access TG	On going

Chapter 12: Making the best use of existing assets

Topic	Task	Objective	Targets & Trajectories	Links to LTP	Strategic Partners	Timespan
Stakeholder Consultation	Cross boundary stakeholder consultation exercise.	Agree format of questionnaire associated costs. Determine research value measured against long term objectives.	Align future street lighting strategy with the needs of the community at large.	Crime & Disorder Environment Road Safety At Risk Groups	Environmental TG Road Safety TG Access TG MerseyTravel Travelwise Group MIS	? months
Research Objectives	Instigate a number of high profile street lighting related research projects.	Agree research brief, and associated costs. Determine research value measured against long term objectives.	Assist in establishing, best practice maintenance and design based principles.	Value for Money Procurement Sustainability Environment	Lighting Authorities MDEG HA Environmental TG MIS Merseyside Labs	? months
Sharing Resources	Explore the possibility of greater cross boundary resource / knowledge based working arrangements.	Identify areas where cross boundary initiatives will benefit each Authority, Stakeholders and the wider community without affecting each Authorities sovereignty.	Establish cross boundary initiatives relating to training, bulk procurement and specialised work programmes resulting in cost savings and greater buying power.	Value for Money Procurement	Lighting Authorities MDEG	? months

Chapter 12

Topic	Task	Objective	Targets & Trajectories	Links to LTP	Strategic Partners	Timespan
Recycling	Develop a cross boundary recycling initiative.	Identify redundant equipment that can be salvaged or recycled and target manufacturers that can demonstrate that they produce environmentally friendly products.	Ensure, were cost effective and practicable all redundant equipment is recycled or salvaged for re-use and that all new equipment specified is recyclable.	Environment Recycling Sustainability	Environmental TG	? months
Asset Management	Develop a cross boundary street lighting Asset Management Plan	Identify key data sets, collect inventory and populate database compatible with each Authorities Highway Management System	Ensure that all street lighting columns and associated equipment is included within database and maintained accordingly.	Value for Money Asset Management Sustainability	MDEG – Asset Management Sub Group	? months
Renewable Energy	Instigate a number of cross boundary trial installations utilising renewable energy sources.	Agree extent of trial, brief and associated costs prior to implementation. Agree reporting methodology to monitor design life cost savings against installation / maintenance costs.	Produce report detailing potential savings and environmental benefits to assist in determining future strategy.	Innovation Environment Sustainability	Environmental TG	? months

Chapter 12: Making the best use of existing assets

Topic	Task	Objective	Targets & Trajectories	Links to LTP	Strategic Partners	Timespan
Lamp Technology	Review current light sources technology available for use within street lighting applications.	Share experience / knowledge base to determine effective approach to future strategy.	Following review, ensure, were cost effective and practicable new lamp technology is utilised.	Innovation Environment Crime & Disorder Sustainability	Environmental TG	? months
Electronic Ballasts	Review current electronic ballast technology available for use within street lighting applications.	Share experience / knowledge base to determine effective approach to future strategy.	Following review, ensure, were cost effective and practicable new electronic ballast technology is utilised.	Innovation Environment Sustainability	Environmental TG	? months
Tele-management	Instigate a number of cross boundary trial installations utilising telemanagement systems currently available.	Agree extent of trial, brief and associated costs. Agree reporting methodology to monitor design life cost savings against installation / maintenance costs.	Produce report detailing potential benefits and long term cost savings to assist in determining future strategy.	Innovation Value for Money Sustainability Environment	Environmental TG	? months
Column Structural Assessment	Evaluate effectiveness of current structural testing methods available.	Agree on standard method of structural testing and instigate cross boundary planned test programme.	Carry out agreed structural testing on agreed % of ageing column stock per year.	Innovation Value for Money Sustainability	?	? months

Chapter 12

Topic	Task	Objective	Targets & Trajectories	Links to LTP	Strategic Partners	Timespan
Alternative Column Materials	Review column materials available for use within street lighting applications.	Share experience / knowledge base to determine effective approach to future strategy.	Following review, ensure, were cost effective and practicable new materials are utilised.	Innovation Environment Sustainability	Environmental TG	? months
Performance Indicators / Benchmarking	Agree minimum of three local performance indicators to forward as part of Annual Progress Report as well as the two national Indicators. Establish localised benchmarking group.	Define local performance indicators and measurement Criteria	To be agreed?	Value for Money	MDEG MIS	? months

Addressing the shared priorities

In summary high quality street lighting is important.

- It keeps traffic moving efficiently in hours of darkness and minimises risk of congestion.
- Free flowing traffic will reduce emissions and assist air quality.
- It is essential for the Access Plan by contributing to safe communities and ease of travel by public transport in hours of darkness.
- It is essential for road safety in hours of darkness.

Bridge Maintenance

Introduction

12.55 The condition of bridges across Merseyside can determine the role of routes. It is essential, for environmental and economic reasons, that identified public transport and freight routes in particular are able to be used for their purpose. It is also essential to maintain the condition of other high capacity routes to prevent traffic being diverted to less suitable routes, in particular through residential areas. Integration of the bridges programme is an essential part of the Road User Hierarchy (RUH, described in Chapter 6).

Current Situation

12.56 The main focus during the lifetime of LTP1 has been assessment of Network Rail bridges. Progress on this work has been slow, largely due to Network Rail procedures related to this work. However, subject to no more significant delays this work will be substantially completed by summer 2006. The focus is now turning to undertaking BE4 assessments on those rail bridges that have failed the assessment to determine responsibility for funding of strengthening works, and feasibility studies to determine the most appropriate means for strengthening the bridges, taking into account costs and disruption during the works.

12.57 All other highway supporting structures, including retaining walls and cellars, have now been located and assessments are well under way to identify any such structures that show any signs of distress.

Chapter 12

- 12.58 The previous policy objectives have been reviewed and updated. They reflect current circumstances and are as follows:
- The inspection of all Council owned highway structures to ensure their safety for users of the highway, including as a minimum, a General Inspection every two years and a Principal Inspection every six years. Inspections to include for the establishment of a Bridge Condition Indicator (BCI) for each bridge.
 - Strengthen weak highway supporting structures on Primary and Strategic routes and those weak highway supporting structures on other roads where there are no suitable alternative routes for restricted vehicles, or the route is of local importance and the introduction of a permanent weight restriction would have implications for local businesses, public transport or restrict economic growth.
 - Identify and prioritise programmes of structural maintenance works based on the findings of the bridge inspections and the associated Bridge Condition Indicators. Priority will be given to those schemes where if left the BCI would fall significantly. Account will also be taken of the road hierarchy in order to maintain structures to an appropriate standard based on its role within the network.
 - Assess compliance of footbridges and subways with the requirements of the Disability Discrimination Act and implement reasonable measures to address areas of non-conformance.
 - Introduce best practice for the management of bridges in line with the County Surveyors Society Code of Practice for Bridge Management introduced in September 2005.
 - Introduce a Highway Structures Asset Management System by March 2008.

Bridge Condition Indicators

- 12.59 Consultants were commissioned by the Highways Agency and County Surveyors Society to develop performance measures for highway structures. The draft procedures are being utilised throughout Merseyside for bridge inspections undertaken in 2005/06 in order to establish a base line position prior to the formal introduction of the procedures.
- 12.60 Average bridge condition indicators for each of the Merseyside districts will be monitored and work prioritised to eliminate any significant variance in average BCI's across the districts.

Chapter 12: Making the best use of existing assets

Bridge Strengthening

- 12.61 Strengthening of weak Council-owned bridges on primary and strategic routes has been completed. However, work on the strengthening of Network Rail-owned bridges has been slow with only a handful of schemes completed across Merseyside. As there is now a much clearer understanding of the bridges that require strengthening, the cost of strengthening work and the proportion of costs to be borne by the local authorities, it has now been possible to agree a draft programme for the strengthening of these bridges with Network Rail. As track possessions for major routes often have to be booked twelve months in advance, it is important funding commitments for these works are agreed at the earliest opportunity.
- 12.62 Prioritisation of strengthening schemes will to a large extent be dictated by who is funding the works and the impact on the highway network until strengthening works are undertaken. However, account will also be taken of the impact on other programme areas such as public transport routes, freight routes, environment and the Traffic Management Act. This will be a key element for the Traffic Managers in exercising their NMD.

Bidston Moss Viaduct

- 12.63 Bidston Moss Viaduct is a 730-metre long steel box girder bridge forming part of the Merseyside Strategic Freight Network. It carries the M53 and the Kingsway Wallasey Tunnel Approach road over the A554 roundabout and over the New Brighton Railway line. The structure also carries the A5139 Docks Link North and South slip roads that take traffic to and from the Birkenhead Docks and Twelve Quays Ferry Terminal. These roads form part of the Wirral PRN and consequently this structure has a vital role in the local and regional transport infrastructure.
- 12.64 The viaduct was opened in 1971 and now carries over 50,000 vehicles daily including over 3,000 heavy goods vehicles. The viaduct is jointly owned by the Highways Agency, Wirral Borough Council and the Merseyside Passenger Transport Authority. The approximate ownership ratios (in terms of surface area of the structure) being 45%, 35% and 20% respectively.
- 12.65 The viaduct was strengthened in 1995 and again in 1999 to meet the standards required for new legislation allowing heavier vehicles of up to 40 Tonnes onto UK roads. During these works several defects were identified and, in 2000, parts of the structure were subject to weight and lane restrictions to help reduce the traffic loading effects.

Chapter 12

- 12.66 Since then, the Highways Agency has taken the lead role in determining the strategy for the interim management of the viaduct, and for the development and procurement of any necessary repair works. Rigorous and comprehensive assessment has been undertaken, and options for the future of the structure are now being considered in terms of best value and life-cycle cost.
- 12.67 In January 2005, following an interim report on the viaduct's current assessed capacity, a 3-Tonne weight restriction was introduced on the main M53 / Tunnel Approach section and all HGVs diverted via the Docks Links following some emergency strengthening works to the slip road sections.
- 12.68 It is hoped that the preferred permanent improvement option for the structure will be determined by the end of 2007, enabling the partners to identify timescales and preliminary cost estimates. In the meantime interim strengthening work is being carried out so that HGVs can be returned to one lane of the main viaduct and the current 3-Tonne restriction removed.
- 12.69 Permanent insitu-strengthening could commence as early as 2008/09, subject to funding availability, whilst construction of an off-line replacement option would be unlikely to commence prior to 2012.
- 12.70 Whichever permanent option is adopted, the Highways Agency have indicated that their share of the works will be funded from their Structures Renewal Programme.
- 12.71 The funding contribution from Wirral Borough Council is likely to be significant and the necessary bids will be made through the appropriate LTP processes in due course.

5 Year Programme

The use of Bridge Condition Indicators (BCI) across Merseyside to enable the programme to be reviewed in order to deliver best value within the funding available.

- Improve the average BCI for Merseyside and bring the average condition of bridges in each district to a similar level.
- Prioritisation of strengthening schemes taking account of funding partners.
- Assess the impact on the highway network until strengthening works are undertaken.
- Take account of the impact on other programme areas such as public transport routes, freight routes, environment and the Traffic Management Act in determining priorities.
- Audits undertaken to ensure compliance of subways and footbridges with the requirements of the Disability Discrimination Act.

Addressing the Shared Priorities

12.72 Well maintained bridges as part of the RUH will;

- Assist with congestion by keeping all main routes open and operating efficiently, and, in so doing reduce emissions.
- For the Access Plan by ensuring bridges do not contribute to community severance or present barriers to those with disabilities.
- Be essential to ensure safety for all users.

