Transport Innovation Fund

Bid for Pump Priming Funding

submission from

Tyne and Wear LTP Partnership

7th October 2005

Contact:

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Joint statement by Tyne and Wear Authorities

As partners to the Tyne and Wear Local Transport Plan, we recognise the importance of an effective transport system in supporting the wider economic, social and environmental objectives for the area. Without effective transport systems we face reduced opportunities to revitalise our towns and cities, create a better environment, improve the quality of life and enhance the competitiveness, prosperity and sustainability of Tyne and Wear in the future.

Our authorities are aware of the threat that worsening road congestion poses to the effectiveness of the highway network which, in turn, compromises the realisation of our wider vision for Tyne and Wear. Congestion on major routes, including the A1 and A19, is already threatening the delivery of much needed development and regeneration. Future development plans for the conurbation are likely to be fully realised only if effective demand management strategies are in place, encouraging significant modal shift and smarter travel choices. The draft Regional Spatial Strategy for the North East recognises the need to investigate thoroughly the scope for more effective measures to curb future traffic growth, while forecasts developed for our second Local Transport Plan indicate the likely scale of problems arising from inaction.

Our commitment to manage traffic levels effectively is therefore a vital element of future regeneration strategies for the area. The challenge we face with our partners is to develop a robust approach which will ensure that congestion does not undermine long term regeneration and economic development of the conurbation but one which is sufficiently sensitive and proportionate to local problems that economic activity and competitiveness is not impaired.

The Tyne and Wear Local Transport Plan for 2006-2011 identifies the probable scale of future traffic growth locally. We recognised that continuation of current, conventional demand-management strategies may be inadequate to cope with local growth in congestion. Action is needed now to investigate the role of more robust options to manage congestion - not when problems have worsened to chronic levels.

In this context, our authorities are committed to a thorough investigation of innovative strategies for managing growth in future travel demands, ensuring that the adverse effects of widespread congestion are avoided. We are confident that an effective, integrated strategy can be derived from measures to reduce the demands for travel, improve network management, and enhance the attractiveness of complementary means of travel, particularly public transport. These mechanisms are integral parts of this submission for TIF Pump Priming monies.

Completion of the work programmes set out in this submission will enable the Tyne and Wear authorities to specify a long-term forward strategy for travel demand management. Progressively, opportunities identified by this research will form the basis for bids for funding from the Transport Innovation Fund. This approach will be key to delivery of the efficient local transport system needed for the future success of Tyne and Wear.

Pump priming monies from the Transport Innovation Fund present a timely opportunity to take forward detailed research into innovative and more far-reaching options for transport strategy Tyne and Wear. We welcome this opportunity and trust that Government will find the proposals in this submission worthy of its support.

To be co-signed by

5 Leaders of Tyne & Wear councils and the Chair of the Passenger Transport Authority

1. Background to the bid

1.1 This bid for Transport Innovation Fund pump priming money is being submitted by the Tyne and Wear Local Transport Plan partners. It has been prepared in response to the potential threats to the achievement of wider objectives posed by predicted traffic growth and worsening congestion. The bid recognises that current approaches to demand management are likely to require substantive additional measures to be effective in the future.

1.2 As an area with increasing problems of congestion but also significant continuing regeneration needs it is important that any solution developed recognises the specific characteristics and problems facing the County. The focus of the bid therefore is the thorough investigation of new and innovative options for future congestion management across the County with a view to identifying the most appropriate set of measures to resolve emerging problems in the medium to longer term.

1.3 The bid builds on proposals contained within the provisional LTP, and in particular investigation of the future options for congestion management. These have been given further urgency by more detailed analysis of the outcomes from the Strategic Transport Model, and the potential availability of TIF pump priming funding provides a timely opportunity to bring forward these investigations.

1.4 The structure of the bid is as follows:

- Section 2 – a summary of the emerging congestion *problem* facing Tyne and Wear;
- Section 3 – an overview of the *objectives* for transport in Tyne and Wear;
- Section 4 – outlining the need for an approach to develop appropriate *trajectories and targets*;
- Section 5 – setting out the overall *strategy* for the pump priming bid;
- Section 6 – outlining the *innovations to be developed and appraised*;
- Section 7 – setting out the *bid proposal* in terms of required funding;
- Section 8 – specifying *timescales* for undertaking the various items of work and possible subsequent *implementation* of any measures;
- Section 9 – an *assessment of the main risks* associated with the project, and how these will be managed;
- Section 10 – outlining arrangements for *project management*;
- Section 11 – indicating the scope for possible *joint working* to increase effectiveness/reduce costs;
- Appendices providing more detail on the nature of the problem being faced, and the specific elements of work proposed.

2. Congestion – The Problems in Tyne and Wear

2.1 The provisional Tyne and Wear LTP for 2006-2011 recognises the increasing problem of congestion. Significant congestion problems are already evident in a number of areas, including the A1 corridor, Tyne and Wear crossings and main roads into central areas. Further investigation of future trends has been undertaken using the Strategic Transport Model developed as part of the LTP preparation process. These emphasise the potential for a significant increase in current problems.

2.2 Further detail on the extent of the potential extent of future problems is contained in Appendix 1. The key points from this are:

- Number of car trips within Tyne and Wear is predicted to grow by 19-20% over the period 2001-2021;
- Number of trips will under-estimate the increase in car mileage as trip lengths grow and car occupancy falls;

- Further overall decreases in public transport use are predicted under both high and low growth scenarios;
- An increase of 12% in work based car trips is predicted even under a low growth scenario;
- Increases of over 20% in non-work based car trips under both high and low growth scenarios;
- Significant increases in traffic levels (up to 35%) along main routes;
- By 2016 it is forecast that the volume of traffic on the A1 in Tyneside will exceed the capacity of the road by up to 49%.

2.3 The implication of the above is that clear potential exists for major highways capacity problems to emerge at key points in the network in future years, and particularly along the main routes unless effective action is taken.

2.4 In the light of the above tackling congestion is identified as an important issue for a number of reasons:

- *Regeneration* – the more difficult access to main built up areas becomes the more development pressures are likely to shift to surrounding rural areas. This has the potential to undermine the prospects for both attracting employment and retaining population and improving housing within the conurbation, jeopardising regional and local spatial and regeneration strategies. This is particularly important in an area such as Tyne and Wear where surrounding areas of Durham and Northumberland both see regeneration and attracting employment and housing as major priorities;
- *Economic* – congestion imposes additional costs on existing businesses through delays and unreliability of the wider transport network;
- *Social* – congestion interferes with day to day life, making access to services and social activities more problematic;
- *Environment* – noise and fumes from traffic congestion impair the environment for residents and businesses close to busy routes, as well as contributing to wider problems such as climate change;
- *Transport investment* – major investment in new transport infrastructure is only likely to be justified if complementary measures are in place to control future increases in traffic levels and their negative effects, thereby ensuring the benefits of schemes are sustained in the longer term. New infrastructure of this kind will still be needed, particularly to open up new development and regeneration opportunities in traditional centres as well as emerging areas such as Sunderland Arc and Northern Gateway.

2.5 The congestion management strategy proposed in the provisional LTP is based on the continuation of a range of relatively small scale interventions. The main development from the first LTP is to give a greater focus on action in the main centres and along key transport corridors.

2.6 The provisional LTP2 does however recognise that interventions of this kind are unlikely to be sufficient to manage congestion in the longer term. Accordingly a number of possible future initiatives were identified, including road user charging, to be the subject of investigation in the period up to 2011. However no specific timescales for this were set.

3. Objectives

3.1 The vision for transport in Tyne and Wear set out in the provisional second LTP is based on the following objectives :

- A more prosperous future;
- A healthier future;
- A safer future;
- A more sustainable future;

- A better environment;
- Access for all.

3.2 This vision seeks to integrate transport directly the broader strategic aims of each local authority. As a result it provides the basis for ensuring that transport is not seen as end in itself, but as a component in supporting the achievement of wider strategies such as Northern Way and Regional Spatial and Economic Strategies. Effective congestion management is a necessary element in supporting a number of key strategic policy priorities:

- Economic regeneration, greater economic competitiveness and prosperity – by reducing congestion and unreliability of the transport system, and improving the accessibility of the main growth areas;
- Population stability and reduced net out-migration – reducing the environmental intrusion and general disturbance from high traffic levels and promoting sustainable travel patterns;
- Health improvement and reduction in premature deaths – reducing pollution levels in the inner areas (including designated Air Quality Management Areas);
- Reducing inequality – providing a stable and improved public transport network accessible to all;
- Greater social inclusion and community cohesion – promoting increased levels of public transport use and provision;
- Environmental quality, sustainability and quality of life – reducing traffic levels, pollution and associated disturbance.

4. Trajectories and Targets

4.1 In order to be successful any scheme to reduce traffic growth needs to be effective in terms of:

- Transport impacts (overall traffic growth, local congestion, accessibility, modal shift to public transport);
- Related impacts (economic, land use, regeneration, social, environmental).

4.2 Given the complexity of the various inter-related effects, and the potential for these to have differing spatial effects depending upon the approach adopted, it is not appropriate at this stage to specify particular targets that any preferred scheme should seek to achieve. It is envisaged the work undertaken as part of the bid will identify:

- a set of indicators by which the transport and related impacts can be assessed to assist in the process of comparing options; and
- targets and trajectories to measure the effectiveness of any preferred option which emerges from the studies.

5. Strategy

5.1 The provisional LTP2 contains a congestion management strategy based upon the development of proposals within key transport corridors and areas. These are conventional interventions, for example travel plan development, road space reallocation and parking management.

5.2 The strategy for the pump priming bid is to investigate thoroughly all possible and effective measures over and above existing proposals. The focus of this will be the investigation of future options for effective congestion management identified in the provisional LTP2, specifically including consideration of the following:

- Options for road user charging;
- Development of a more consistent framework for car parking charges in the main retail and service centres in Tyne and Wear;

- Promoting a step change in the take up of travel plans through use of workplace parking charge powers;
- Development of comprehensive UTMC as a congestion management tool;
- The identification of the scale and nature of complementary measures (especially public transport improvements) needed to cater for the anticipated modal shift.

5.3 The aim will be to develop an integrated travel demand strategy capable of managing congestion while supporting wider strategic objectives. This will build on the results of previous assessments, notably TAMMS, and the work undertaken by Hazel McLean for the Northern Way Connectivity Grouping. It will include consideration of wide ranging spatial and economic objectives, as embodied in the Regional Spatial Strategy, Regional Economic Strategy and Northern Way, but also major local renewal initiatives, for example one of Government's Housing Market Renewal Pathfinders "*Bridging NewcastleGateshead*".

5.4 It is intended to form a partnership to progress the pump priming proposals. This partnership will build upon the long-established and successful joint working arrangements that exist in Tyne and Wear. Local highway authorities, as the bodies possessing powers to implement many of the required solutions, will take a lead in the development and appraisal of options. They will also provide the main link to wider corporate strategies and objectives, as well as to Traffic Managers developing related approaches under the responsibilities of the Traffic Management Act. Nexus, as the body responsible for co-ordinating overall public transport provision will also have a central role to play in any proposals. In addition it is intended to involve other bodies, for example:

- Public transport operators, to provide input on the scope and approach towards providing major improvements in provision;
- Transport Operations Research Group (TORG) at Newcastle University will provide independent academic advice to the work programme, drawing on the findings of wider research. TORG will provide the main point of contact for any linkages with the SOLUTIONS research project (see below);
- Highways Agency in relation to impacts on trunk roads through the study area, and possible complementary improvements;
- Government Office/Department for Transport, as key funding partners in the bid, and in order to provide links to wider national policy.

5.5 In order to be effective it is important the partnership remains a relatively limited and focused group, able to advise chiefly on the technical issues surrounding the project. However the need to establish contact with and seek input from other interests as part of the process is recognised. These include:

- North of England Assembly/Northern Way;
- Business;
- Regional development agency;
- Adjoining local authorities.

It is envisaged these will form part of a wider reference group to be consulted at important stages in the project.

6. Innovations to be developed and appraised

6.1 The pump priming proposals will investigate the following key areas:

- The options for and impacts of the measures highlighted in paragraph 4.2 above;
- The potential use of revenues raised through any such schemes;
- Complementary improvements needed to support any more comprehensive demand management strategy, including improved public transport;

- Attitudinal and public acceptability issues surrounding any scheme;
- Technical/operational considerations.

Proposals for each of the above are described in more detail below.

Options/impacts of measures

Road user charging

6.2 This project will break new ground by assessing distance-based charging, rather than focussing solely on cordons. Traditional approaches to road user charging have tended to look at tightly focused cordons, often around areas of particularly intensive activity (e.g. London) or restricted access (e.g Durham). Some work has already been undertaken looking at the option of similar more local charging cordons around the main centres (Newcastle/Gateshead, Sunderland and Metro Centre). While these tests were relatively crude and further investigation will be needed, a proposal with cordons limited solely to the main centres seems unlikely to be appropriate as a solution to congestion problems in Tyne and Wear because:

- The main areas of current traffic growth are not into the main centres. Over the period 1994-2004 traffic travelling into central Newcastle decreased by 2%, while within Tyne and Wear as a whole it increased by 16%;
- Northern Way recognises the polycentric nature of the conurbation, which means that the imposition of highly localised charges will tend to divert car based trips, rather than lead to modal shift. Localised cordon charges for the main centres were tested in the STM as part of the preparatory work for the provisional LTP. These showed the likelihood of significant diversion of car trip from main centres if localised charges were applied, with little modal transfer as a result. It is important that any demand management approach supports key land use policy aims if it is not to have unintended effects in terms of worsening accessibility and congestion problems as jobs and services locate increasingly to out of town centres with lower levels of accessibility by sustainable modes.

6.3 As a result it is considered a wider range of options for any future road user charging needs to be considered, aiming to tackle both peripheral traffic growth and the root causes of dispersal of development. Therefore this pump priming bid intends to investigate the following specifically:

- The impacts of a uniform distance based charge within the following areas:
    - Tyne and Wear;
    - A more restricted area defined approximately by the trunk roads (A1/A19) around central Tyneside;
    - Localised charging around areas of specific congestion.
- The impacts of a graduated distance based charge based on contours defined by the above;
- The combination of a distance based charge with an outer cordon. This would allow for the testing to take account of practical realties. While equipment for distance based charging might reasonably be fitted readily to vehicles resident within any charging area, there will inevitably be vehicles from outside the charging zone which need access within it;
- The above will be tested against do nothing and more traditional central area cordon charging options to assess their relative effectiveness.
- All the above will be tested against a number of potential charging regimes, including flat (all day), peak hour only and graduated regimes

Figure 6.1 gives an indicative illustration of the above options.

6.4 Initial testing of options will be undertaken using the Strategic Transport Model for Tyne and Wear. This will refine the number of options to a limited number whose combined land

use/transport impacts will then be subject to more rigorous testing. Detailed consideration of local spatial/land use strategies can be taken forward as part of the SOLUTIONS research project. More detailed consideration of local traffic flow impacts is expected to be possible through the application of local models developed for the A1 corridor (with participation of the Highways Agency), Sunderland City Centre and central Newcastle/Gateshead.

Parking charges

6.5 The polycentric nature of Tyne and Wear, and the potential for charging to divert car based trips to out of town centres rather than alternative transport modes (s6.2 above), make the interactions between such centres of major importance in developing any comprehensive demand management strategy. The provisional Tyne and Wear LTP, building on work undertaken by the North East Regional Bus Forum identifies the disparity in charges for car parking at regional centres as a significant problem in promoting more sustainable travel patterns. The interaction between parking charges and road user charging in terms of changing the nature and destinations of journeys made mean that the development of a more consistent longer term framework for charging policy needs to be in place.

Workplace parking charges

6.7 A much more extensive adoption of travel plans, minimising unnecessary mileage and ensuring alternative means of access are available, will be important in helping business to adapt to any road user charging scheme and reducing any avoidable costs which may result. To date the uptake of travel plans within Tyne and Wear has been limited, reflecting the difficulties in promoting effective plans on an entirely voluntary basis.

6.8 The provisional LTP proposes investigation of the use of workplace parking charge powers as a means of promoting a greater take up and commitment to travel plans by existing organisations. It is proposed that this would be on a revenue neutral basis, with charges only being imposed where organisations failed to develop suitable travel plans.

6.9 Further work on the development of this idea is proposed as part of the bid, principally in terms of feasibility and scooping. If the intervention is identified as appropriate, early implementation in advance of more complex, wider measures, should be possible.

UTMC – Urban Traffic Management & Control systems

6.10 The LTP2 proposes the development of UTMC within Tyne and Wear as an important element in improving traffic management and information, with the possibility of a future bid for major transport scheme funding. As part of this pump priming bid this work will be extended to look specifically at the scope for using UTMC as a means of congestion and demand management. Integration of UTMC with real-time driver information systems to enhance destination, mode and journey-time choice will be explored. The review of traffic signal control protocols across the main urban centres will be possible jointly with the development of the Network Management Plan under the Traffic Management Act. It is anticipated that this element of the programme will be completed with input from local Network Managers and links to the National Traffic Control Centre protocols for incident management.

Use of revenues

6.11 One of the main objections to any form of road user charging has been on the grounds that it represents an additional tax on the public, and motorist in particular. However most ‘revenue neutral’ approaches have suffered from the problem that, in reducing costs for motorists in less congested areas/times, they would promote greater levels of land use

dispersal and higher levels of traffic in such areas, thereby ultimately increasing overall levels of congestion and unsustainable travel patterns.

6.12 In order to overcome the above pump priming funding will be used to investigate a number of options for use of any revenue generated by a charging scheme. This will include the more conventional use of income to fund local transport improvements, but will also look at the potential use of revenue to compensate local businesses and residents through, for example:

- Use of revenue to provide a rebate on business rates, thereby compensating businesses for any loss of trade as a result of the charging regime;
- Use of revenue to provide a rebate to local residents, either through the Council tax or other means. This would help support efforts to increase the attractiveness of inner city areas and compensate for the disruption and pollution caused by congestion and traffic within them;
- Improvements of levels of public transport service and reductions in fare levels within affected areas.

The focus will be on the 'added value' in terms of potential acceptability and practicalities of returning any revenues collected to residents and businesses within the affected areas. At one extreme this could be seen as a 'negative tax' on sustainable travel, with car users in the area ultimately little worse off, and also as providing a degree of compensation for residents in heavily trafficked areas for the disturbance and pollution occasioned by it.

Complementary measures

6.13 Identification of the scale and nature of public transport improvements needed to cater for transport needs displaced from the private car is an essential element in the development of the approach. Many bus and Metro services are already overcrowded at peak hours, and the dispersed nature of travel demand within the conurbation may create a need for additional services to locations or corridors outside the traditional radial pattern of public transport service provision. The provision of effective and attractive alternatives in advance of any extensive demand management is seen as essential, and will be informed by the results from the modelling of the various demand management options.

6.14 The pump priming bid will have regard to the proposed process of investment in the Metro system over the next 20 years, which currently the subject of detailed discussions between Nexus and the DfT, and will additionally develop in detail a number of options for the provision of improved public transport, including:

- upgrading of major bus corridors in the conurbation. Buses already benefit from bus priority lanes in Tyne and Wear, plus a range of other measures including advanced stop lines at traffic signals, bus only gates and prioritisation at signalised junctions. A considerable amount of background work has already been done on the scope for this as part of Project Orpheus;
- the development of extensive park and ride sites and services on key routes into congested areas to allow for ease of transfer from private to public transport;
- the introduction of new and improved public transport services. This would include the provision of additional capacity on existing routes and the possibility of wholly new services (e.g. orbital bus routes);
- the introduction of various fares interventions to improve the attractiveness of public transport;
- the introduction of control zones in urban centres to control bus quality/emission standards;
- a consideration of options for the future structure/operation of the bus network, including possible use of powers such as quality contracts;
- improving perceptions of safety and security, for example through increased staffing levels.

As part of the feasibility study, a comprehensive review of the role of public transport in supporting a local congestion management strategy will be completed. This approach will consider the nature of local needs for the extent, price and quality of public transport provision, as part of an integrated demand management strategy. The review will also consider the best mechanisms by which such standards of provision can be delivered across Tyne & Wear, e.g. Statutory Quality Partnerships, Quality Contracts etc.

6.15 It is anticipated that any eventual full TIF bid would include major upgrading to provision for other sustainable modes of transport, notably cycling and walking. However this funding would be likely to involve a significant acceleration of current programmes, and it is not envisaged the underlying approach will be altered radically as part of the development of the above options. Therefore there is no major element of funding sought for these modes as part of the pump priming bid.

6.16 The role of goods transport will be considered in the assessment of congestion management options. Opportunities to enhance provision for goods vehicles as well as mechanisms to better manage the delivery of goods to central areas will be assessed for their contribution to congestion management.

Public acceptability

6.16 The issue of public acceptability is probably one of the main reasons for the current limited extent of road user charging, and therefore is an issue of fundamental importance for any proposal to examine. A degree of public acceptability (though not necessarily a clear majority) will be a necessary prerequesite for the implementation of any ultimate proposal.

6.17 Pump priming funding will be used to develop a communications strategy identifying the most appropriate means of undertaking public consultation on any proposals. This will include a review of analysis and experience from previous proposals elsewhere, as well as further investigation of the current position within Tyne and Wear.

Operational Considerations

6.18 Successful implementation of any road user charging scheme will be dependent upon the identification of appropriate technology and procurement. A review will be undertaken of existing technology available for road user charging systems, including the results of current systems and recent trials within the UK and abroad. The issue of effective procurement will also be addressed, again drawing on experience elsewhere.

7. Bid proposal

7.1 The total pump priming bid is for £950,000 with annual costs as set out below:

2005/6	£50,000
2006/7	£425,000
2007/8	£475,000

A more detailed breakdown of the activities involved with this is provided in table 7.1.

7.2 Major elements of match funding will be provided by the partnership in undertaking the work involved in the bid. In particular the LTP plan partners have already committed some £275,000 for further development of the Strategic Transport Model between October and March 2006, while identified funding for the Tyne and Wear elements of the Solutions project is currently some £130,000. Ongoing work on developing complementary public transport improvements through Project Orpheus will also provide further significant match funding.

7.3 All the above are exclusive of any input in terms of staff time and from other projects. In the light of this it is considered there will be no problem in demonstrating 50/50 match funding for the project overall.

7.4 Costs overall will be minimised by linking into and use of existing initiatives. Use of the Strategic Transport Model and linking into the Solutions project in particular will help save substantially on costs which would otherwise have been incurred in assessing the transport and land use impacts of possible interventions. The availability of recent work on the scope/feasibility of improvements to public transport infrastructure as part of Project Orpheus will also provide significant cost savings overall.

8. Timescales/implementation

8.1 The elements of work outlined above will broken down into a series of discrete tasks which will then be used as the basis for preparing a detailed programme of work to be completed by the end of 2007/8.

8.2 Identifying the process and time needed for the introduction of any measures resulting from the pump priming work will be an important element in the work undertaken under the various headings in section 6. This will provide the basis for the timing of funding needed as part of any eventual full TIF bid.

9. Risk assessment

9.1 As a piece of preparatory work the risks associated with the bid are considered to be relatively minor. Tools such as the Strategic Transport Model are already operational and the Solutions project is underway.

9.2 Given the above the main risks to the project are:

- Delays in development and testing of options. The complex and specialised nature of transport modelling means that the potential for delays in the development and testing of options cannot be ruled out altogether. Development of the Strategic Transport Model to be used to undertake initial appraisal is now complete, reducing significantly the risks associated with this element of the work. However the more detailed development of this model necessary for more rigorous testing of options will inevitably be subject to a degree of risk. Appointment of a TIF Project Manager (see below) will also provide a clear focus of responsibility for ensuring that progress on the project is maintained;
- Delays to the Solutions Project. Solutions is a project funded principally by EPSRC and as a result has its own management and monitoring arrangements in place to ensure satisfactory progress;
- Cost increases. The main element of the bid, the evaluation of options for future demand management initiatives and consequent requirement for complementary improvements, will rely chiefly on existing initiatives and as a result it is not envisaged that major increases in costs should result;
- Shortfalls in Pump Priming funding. The bid partners recognise the need for the investigations proposed as part of this bid to take place in order to enable major decisions regarding the future of the transport network within Tyne and Wear to be taken. However, given constraints on available resources, any shortfall in funding from this source will mean that significant delays to the timescales for developing appraising and implementing proposals are likely.

10. Project Management

10.1 Overall responsibility for management of the above process will be through the established joint working arrangements within Tyne and Wear, including member input through the Tyne and Wear Joint Lead Member group. Technical issues will be considered by the proposed TIF partnership (paragraph 4.4 above), reporting to lead members via the Tyne and Wear Joint Transport Working Group.

10.2 Given the importance and complexity of the TIF process it is intended to appoint a specific TIF project manager. This appointment could be either through internal secondment or use of an external consultancy. The role of the project manager will be to ensure the effective progress of the project, monitor and control spending, and co-ordinate the necessary administrative and reporting arrangements associated with the project.

11. Joint Working

11.1 It is recognised that some of the elements of the TIF pump priming bid may be common to a number of areas. The partners would be happy to investigate the scope for working in conjunction with other pump priming areas on issues of common interest where this could reduce overall costs and/or improve the development of common standards and development of best practice.

Appendix 1 – traffic growth in Tyne and Wear

Background trends

Travel patterns in Tyne and Wear have traditionally been characterised by low levels of car ownership and consequently high level of public transport use. However this situation is now changing rapidly, with levels of growth in car ownership over twice the national average, and declining public transport mode share (tables 1 and 2)

Table 1: change in car ownership 1991-2001

	% households with 1 or more car		
	1991	2001	% change
England and Wales	68	73	7.4
Tyne and Wear	49	58	18.4

Source: national census

Table 2: change in mode of travel to work 1991-2001
(% by mode, Tyne and Wear)

	1991	2001
Car	54.0	62.0
Public transport	27.0	20.5
Other	16.7	11.2
Work from home	2.3	6.3

Source: national census

The growth in car ownership has led to a steady increase in traffic levels over the past 10 years. This has been accompanied by increases in peripheral development, away from the traditional urban core. This has resulted in much lower levels of traffic growth, and in some cases decreases, in the main centres (Table 3).

Table 3: traffic growth in Tyne and Wear 1994-2004

	1994	2004	% change
Tyne and Wear	6853	7894	15.7
Newcastle inner cordon	351010	343056	-2.3

Note: figures for Tyne and Wear are million vehicle km. Figures for inner cordon are traffic counts.
Source: DfT, Newcastle cordon counts

Future increases

The Strategic Transport Model (STM) was used to test the potential for growth in traffic levels over the period 2001-2021. Two broad scenarios were tested:

- A high growth assumption, based on TEMPRO predictions for future employment growth; and
- A low growth assumption, using half the TEMPRO assumptions. This is broadly in line with more local estimates of the future increase in jobs.

In both cases housing and population totals were constrained to those contained in the draft Regional Spatial Strategy.

The results from the STM showed a significant potential for future increases in traffic levels within Tyne and Wear, with even the low growth assumption showing an increase in car trips of nearly 19%. The output from the STM will tend to under estimate the total increase in vehicle mileage, as average trip length is increasing, while car occupancy is falling. Other key points to be drawn from this information (Table 4) include:

- Further decreases in public transport use, under both high and low growth scenarios;
- An increase of 12% in car based work trips even under the low growth scenario;
- Similar increase in non-work based car trip of over 20% for both high and low growth scenarios.

Table 4: predicted trip growth, Tyne and Wear 2001-2021

Total trip (000s)		2021	2021		% change 2001-2021	
	2001	high growth	low growth		high growth	low growth
Public transport (no car)	243	207.3	204.6		-14.7	-15.8
Public transport (car)	143.1	168.8	156		18.0	9.0
Total public transport	386.1	376.1	360.6		-2.6	-6.6
Car	1412.6	1693.2	1675.8		19.9	18.6
All	1798.7	2069.3	2036.4		15.0	13.2
Work based trips (000s)		2021	2021		% change 2001-2021	
	2001	high growth	low growth		high growth	low growth
Public transport (no car)	75.9	58.2	55.4		-23.3	-27.0
Public transport (car)	69.7	82.7	76.4		18.7	9.6
Total public transport	145.6	140.9	131.8		-3.2	-9.5
Car	365.5	427.6	409.4		17.0	12.0
All	511.1	568.5	541.2		11.2	5.9
Other trips (000s)		2021	2021		% change 2001-2021	
	2001	high growth	low growth		high growth	low growth
Public transport (no car)	167.1	149.1	149.2		-10.8	-10.7
Public transport (car)	73.4	86.1	79.6		17.3	8.4
Total public transport	240.5	235.2	228.8		-2.2	-4.9
Car	1047.1	1265.6	1266.4		20.9	20.9
All	1287.6	1500.8	1495.2		16.6	16.1

Source: Tyne and Wear Strategic Transport Model

More detailed analysis of the outputs from the STM have given an initial indication of the potential traffic growth along particular routes. Leaving aside any questions of traffic congestion, growth of traffic of this magnitude must pose a serious threat to the local environment in terms of increased noise, air pollution, severance to pedestrians and increased danger to cyclists (Tables 5 and 6).

Table 5 – Increases in car traffic on river cordons – 2001-21 high growth

Cordon	**AM peak**	**Inter-peak**
Tyne northbound	23%	26%
Tyne southbound	16%	24%
Wear northbound	27%	31%
Wear southbound	15%	26%

Source: Tyne and Wear Strategic Transport Model

Table 6 – Growth of car traffic 2001-21 on typical urban main roads – high growth

District	**Road**	**AM peak**	**Inter-peak**
Sunderland	Chester Road	16%	16%
South Tyneside	Victoria Rd, Hebburn	21%	13%
Gateshead	Durham Road	27%	24%
Newcastle	Great North Road	35%	24%
North Tyneside	Whitley Road, Longbenton	29%	16%

Source: Tyne and Wear Strategic Transport Model

Main centres

Additional work has been undertaken looking at the pattern of trips to the traditional main centres within Tyne and Wear (Newcastle/Gateshead and Sunderland).

Total trip (000s)		2021		% change 2001-2021
	2001	high growth		high growth

Public transport (no car)	81.6	74.2		-9.1	
Public transport (car)	50.8	62.3		22.6	
Total public transport	132.4	136.5		3.1	
Car	187.4	220.5		17.7	
All	319.8	357		11.6	
Work based trips (000s)		2021		% change 2001-2021	
	2001	high growth		high growth	
Public transport (no car)	29.2	26.1		-10.6	
Public transport (car)	26.9	37.7		40.1	
Total public transport	56.1	63.8		13.7	
Car	43.9	47.4		8.0	
All	100	111.2		11.2	
Other trips (000s)		2021		% change 2001-2021	
	2001	high growth		high growth	
Public transport (no car)	52.4	48.1		-8.2	
Public transport (car)	23.9	24.6		2.9	
Total public transport	76.3	72.7		-4.7	
Car	143.5	173.1		20.6	
All	219.8	245.8		11.8	

Source: Tyne and Wear Strategic Transport Model

This shows a different pattern of change, particularly for work based trips. In particular there is an overall increase in the numbers travelling to the central area by public transport, while the increase in work based travel by car is much lower.

Initial testing of central area cordons was also undertaken using the STM. Using a £5 central area charge for the main centres of Newcastle/Gateshead, Sunderland and the Metro centre this indicated the potential for this to lead to major diversion of trips to more suburban areas, with relatively little modal shift

The above emphasises the importance of any demand management strategy providing the right solution for Tyne and Wear. An ill-considered solution could easily drive jobs and trade out of the traditional centres to more suburban, out of town locations, leading to an eventual increase in traffic and congestion.

Cross Tyne cordon charge

Some initial work has also been done on the possibility of a charge on river crossings, as recommended in the TAMMS study. The principal function of this test at this time is to demonstrate the potential differing impacts of a scheme not based on main centre cordons, rather than develop a specific proposal.

The most important difference in the results from these tests is that they would cause much less diversion of trips from main centres to the suburbs than the cordon strategy. Whereas the testing of main centre cordons saw major diversion of trips to suburban locations, and the potential for an overall increase in car trips as a result, the reduction in such trips with cross river tolls is marginal, with modal shift to public transport.