

**TRANSPORT INNOVATION FUND  
PUMP PRIMING 2<sup>ND</sup> ROUND BID**  
"Keeping Cambridge Moving"  
July 2006  
**CAMBRIDGESHIRE COUNTY COUNCIL**

**EXECUTIVE SUMMARY**

Cambridgeshire County Council was one of seven authorities to be successful in a bid for TIF pump priming funding for a study to examine road user charging and how best to deal with issues of congestion locally.

There are two strands to Cambridgeshire's TIF study: firstly, involving stakeholders in shaping future transport decisions in the County and, secondly, technical work looking at the nature and likely impact of any future scheme. Since being awarded funding, the County Council has made significant progress in both areas. In terms of stakeholder acceptance, a series of large-scale meetings and small-scale workshops with key stakeholders have been held. These have shown that there is a near universal acceptance that "something needs to be done". Stakeholders recognise the likely problems arising as a result of the significant planned growth in the area and see the need for a package of transport measures to address this. This package will need to include enhanced demand management.

On the technical side, the Council has worked closely with DfT officials in defining and planning what will be required for a full and proper assessment of a future TIF scheme. It has become apparent from these discussions that significantly more technical work will need to be undertaken than had originally been envisaged. This emerging thinking has been very valuable and will undoubtedly provide a much better approach to introducing future measures than would have been the case with the original bid. But it has also shown that the amount of money originally awarded is not sufficient to do all of the work that it is now agreed is needed.

This second bid is therefore for further funding to carry out the work needed to meet the DfT's additional technical requirements. Areas where significant extra work is needed include forecasting, optimisation of charging scheme design, investigating social and distributional implications, public perceptions, the wider reactions of the general public and appraisal.

The County Council recognises that many other parties, including the District Councils have interests in the outcome of this work, but none more so than the Highways Agency, who are working closely with the Council on its shared interests. They and other partners like EEDA and Cambridgeshire Horizons have agreed supportive contributions to the work. It is understood such contributions also qualify for pump priming funding towards the TIF study.

Subject to a successful outcome of the first phase of the work, the County Council would wish to progress to TIF partnership status with DfT in early 2007. This would enable the outline proposals to be developed in more detail, a business case worked up, and an implementation and delivery plan devised.

To date excellent progress has been made in capitalising on and taking forward the work on the Long Term Transport Strategy, and technical work is progressing to enable forecasts of the implications of road user charging to be made for TIF Partnership stage. The County Council is clear in its approach to the TIF programme

where it believes it is “in for the long term” in the development of integrated and sustainable transport.

The total bid is for £2,344,128. Of this, £1,172,064 is being sought from Government through this TIF bid. In forecasting this level of expenditure, the Council has a degree of uncertainty. There is the recognition that further discussions with Government may show the need for yet more technical work to be undertaken, even though most areas have now been developed fully. This is because the project, whilst a locally based fiscal demand management scheme, will be spearheading a national approach to road user charging and a number of the likely procedures have yet to be fully established.

### **BACKGROUND TO THE TRAVEL ISSUES OF THE CAMBRIDGE AREA**

Cambridgeshire is about to experience a major acceleration in housing growth to meet regional and national priorities. Planning policies call for an increase of 47,000 new homes in the Cambridge Sub-region between 1999 and 2016, and to see an increase in the size of Cambridge by one third, including some 19,000 new dwellings within the City by 2021. Even this level of growth has been questioned by the recently published Panel Report (6/06) from the EiP into the draft Regional Plan which suggests a further 4,300 dwellings should be sought in that timescale within the City.

The Local Authorities in Cambridgeshire, acting together and in partnership with other stakeholder interests have an enviable record of delivering innovative and successful transport to serve the Cambridge area in a sustainable manner and to address the traffic congestion issues. Very successful examples include the Cambridge Park and Ride system, the City Centre Core Scheme, much improved city wide cycling facilities, and rationalised and high frequency bus services. Such measures have proved successful in containing growth of traffic entering Cambridge to 1997 levels and reduced traffic levels within the City by 15% over ten years without negative impact on economic activity. However, it is recognised that a major change is needed to allow the further growth in planned development in and around the City. It has long been recognised that simply building roads into Cambridge is not an answer to addressing current traffic congestion growth prospects, and that more active demand management is required.

Taken together further measures in prospect include:-

- Further improved public transport, including remote Park and Ride and the innovative Guided Busway Scheme, which will link Huntingdon / St Ives / Cambridge / Trumpington / Addenbrookes, and walking and cycling facilities,
- Travel plans and “softer” measures to encourage sustainable travel
- Demand management:-
  - Core scheme extension
  - Parking and charging policies
  - Re-allocation of road space
  - Control of signals

Although these are potentially powerful measures, they are unlikely to be able to manage the scale of the future travel demand pressures. Study work in preparation of a Long Term Transport Strategy indicates that stronger, fiscally based measures are required.

Support for this approach has come from various Government White Papers and at a more local level, from the County Council's Structure Plan (2003), which endorsed such measures.

At the Sub-regional level, the Government's A14 "CHUMMS", Cambridge to Huntingdon Multi-modal Study (2001), was instrumental in putting forward a package of key measures, namely:

- the proposed widening of the A14 itself from Ellington in the west of the County to Fen Ditton to the east of Cambridge,
- the provision of a guided busway along this corridor linking Huntingdon, St Ives, the new town of Northstowe and Cambridge – project which will commence in January 2007,
- more rigorous demand management measures within Cambridge.

The principles of the study recommendations were accepted by the then Minister for Transport in December 2001.

Again at a regional level, where strategic planning is now based, the thinking on changing travel behaviour and managing traffic demand is focusing on a sustained and active policy approach. The recently published Panel Report mentioned above has also concluded succinctly "that people will have to use their cars less in future". The report recommended a new policy for changing travel behaviour that advocates urban congestion charging as part of an integrated approach to support the objectives of the Regional Transport Strategy (RTS). These objectives include

- the promotion of sustainable alternatives to vehicular use;
- the design of schemes that avoid disadvantaging the region's rural communities and other regeneration areas dependent on road access; and
- schemes should produce resources for investment to support the other objectives of the RTS.

The Panel Report believes that with the aim of changing travel behaviour, there is the need to view road user charging as part of a package alongside campaigns to raise awareness and influence choice. Much of this is already in hand in Cambridgeshire, but there is the need to do more to encourage people to be receptive to initiatives for more sustainable transport and user charging if and when introduced.

An essential part of the package is improving the alternatives to the car, in the form of public transport, walking and cycling. Finally, the report is in no doubt at the scale of the challenge involved in a considerable cultural change and re-direction of resources.

### **INTRODUCTION TO THE BID**

The strong case for undertaking a TIF study of the Cambridge area was made in the first TIF bid of October 2005. The main items of the case broadly rested on:-

- the significant growth pressures that have been on Cambridgeshire and Cambridge in particular are set to increase as future housing focuses closely on the City and its employment regime. Such growth is resulting in travel demand growth and chronic traffic congestion.
- a very successful local track record in delivering both demand management and public transport improvements and cycling measures that have managed to contain traffic growth within the City to 1997 levels. However, a step change in demand management measures is required to meet the scale of growth facing the area.

- the Long Term Transport Strategy Study conclusions that existing demand management measures will not be enough to encourage a shift from the car, to more sustainable forms of transport to facilitate successful growth. Further that a more intensive regime of demand management will be required.
- a prospective list of measures and investments that would be required to address future demand, and that
- such improvements would benefit the “cluster” activities of high technology industry and academia in and around Cambridge, activities which are crucial to the future national GDP growth.

The earlier TIF bid itself was successful and the study work undertaken so far has begun has two main themes:-

- firstly stakeholder engagement on the travel demand issues which face the area along with high level political decision making, and
- secondly, the extensive technical investigation and forecasting needed to appraise a range of firmer demand management measures, this includes fiscal demand management.

Both have to work in concert with the aim of conceiving and ultimately delivering a solution to address the transport and development issues which face the Cambridge Sub-Region.

Work so far is indicating that the detailed investigation and appraisal work for a fiscal demand management scheme will be significant and the assessment of any scheme significantly more complex than originally thought. As discussions with DfT officials and with other TIF successful provincial authorities have progressed integrating all of the potential elements and responses from the travelling public will call for a more complex approach to scheme design and forecasting.

Also, it is clear is that the change in the type of demand management measures introduced will require some significant capital and initial running costs. These are likely to be beyond the ability of the County Council to fund from conventional, i.e. LTP sources. Such measures would necessitate funding of additional sustainable transport facilities to meet a greater demand. Sample costs are considered within Appendix 6 of the bid below.

There is an array of potential charging schemes, charging methods and geographical boundaries for such a scheme even one based on a small City like Cambridge. The range of different behavioural responses to a charging scheme is significantly wide, varying from paying the charge, deferring travel, changing mode or even not travelling. The impact on vulnerable and “hard to reach” groups has to be explored and evaluated also. Against this uncertainty, there is potentially a helpful background of “Churn” within the local population, whereby personal and family circumstances change through time. This triggers decisions about lifestyle, residential location and travel requirements. The result is a constant change of population and one, which affects both short, and long term changes of the population. By its nature, a more restrictive demand management approach could influence how the population and even land use changed through time. In fully assessing the impact of a road user charging scheme, the Council will attempt to forecast these “second” and “tertiary” round effects.

The forecasting and the appraisal of such a scheme will be a challenge, but the bid that follows is aimed at fully addressing that challenge. The County Council recognises the importance of integrated and sustainable travel and is concerned to

see this developed in the Cambridge area in this respect “it is in for the long term” with the TIF approach to transport planning and delivery.

### **THE 2<sup>ND</sup> ROUND BID**

Cambridgeshire County Council has made good progress in undertaking its TIF project in the few months since the award of the TIF status, but in pursuing the project in liaison with DfT and others it has become clear that in fully exploring the potential of a TIF scheme, more research and detailed forecasting and appraisal work will be required to reach TIF “Full Business Case” stage. The Council hopes to reach TIF Partnership stage by early 2007.

Appendix 1 sets out the Study Structure Diagram. Appendix 2 shows the Study Area around Cambridge along with the prospective areas of development/ housing supply, and Appendix 3 shows the Indicative Work Programme to Partnership Stage and the Indicative Programme to Business Case Stage.

Responses to the specific topics raised in the pump priming bid guidance document are:-

#### ***POINT A—Current and Emerging Congestion Problems***

As a result of planned growth, there will be widespread and chronic traffic problems and congestion: exacerbating an already bad situation in Cambridge and the Cambridge Sub-region generally. Current transport policy and programmes include:-

- improvements to Public Transport services,
- provision of high standard Park and Ride facilities,
- core centre restrictions on access by general traffic.
- the active encouragement of walking and cycling through campaigns and the provision of dedicated infrastructure.
- “soft” and smart transport measures

These measures have been successful in achieving stability of traffic levels since 1997 with 170,000 vehicle movements per day entering and leaving the City, and have produced a 15% reduction in traffic levels within the City, i.e. along the River Cam screen line that bisects the City. There, traffic levels have fallen during that time scale from 77,000 to 65,000 movements per day. Also, during this period there has been a corresponding 11% increase in cycle use. The cycle is used for 12% of person journeys within the City and the 2001 census showed 18% of people commuted to work by cycle. The level of bus mileage in the City has grown by 22% during the last ten years as well. These changes have been against a background of significant economic growth in the City.

However, the Long Term Transport Strategy study work has shown that the current measures alone will not be able to address the travel demand that will result from the future growth and that a much stricter regime of demand management, potentially including road user charging will be needed.

#### ***POINT B—The Proposal Includes Stricter Demand Management***

The Cambridgeshire Local Authorities have been very successful in implementing a transport strategy in the Cambridge area that has promoted sustainable travel in response to growing demand. The County Council’s emerging Long Term Transport Strategy is concluding that the existing measures by themselves, i.e. those listed above will be inadequate to address the longer term demands and that stronger measures, indeed a step change in demand management is required.

The proposed work will evaluate a package of measures involving the scope and practicality of road user charging, along with modal shift and improved bus services. Several options for road user charging are already apparent and these will be examined and evaluated. The County Council would wish to work with DfT and other TIF Authorities to trial and take forward any such measures, which appear workable.

***POINT C—This proposal was Successful in the first Round***

Cambridgeshire County Council was successful in the first round of TIF bidding in October 2005, receiving an award of £385,000 in pump priming monies towards its investigatory work. The scheme has moved on with thinking developed as discussions with DfT Officials and fellow TIF awardees have clarified the task required to fully identify and justify the process and likely programme of measures.

***POINT D—Involvement of Appropriate Stakeholders***

Stakeholder involvement is being pursued at two levels. Firstly, the County Council is also pursuing a wider stakeholder involvement through direct engagement with over 150 Cambridgeshire based major interest and specific stakeholder groups. These represent road users, local business, health, media, education and social services. Under the theme of “Keeping Cambridge Moving”, a programme of briefing meetings and transport workshops are being held during 2006 to ensure the key opinion formers in the City are fully aware of the background to the work.

Also, the District Councils, like the County Council have endorsed the recommendations of the Long Term Transport Strategy that include the need for much stricter demand management measures in Cambridge.

Secondly, at a practical level with joint working with those stakeholders who have immediate interests and legal responsibilities in transport and / or planning. These include:

- the District Councils,
- the Highways Agency
- the GO-East Office
- Cambridgeshire Horizons
- EEDA
- Bus operators

Of these, third party contributions are anticipated or have been promised from:-

- Highways Agency- its interests extend to any impact of a charging scheme within Cambridge on the nearby A14, A428, and M11. Also, it is imperative that there is consistency of approach in forecasting with the forecasts for growth of traffic on the A14 when such forecast will be examined at the prospective Public Inquiry into the A14 improvements. The “CHUMMS” Multi-modal Study that established the case for the improvement to the A14, also identified the need for demand management measures within Cambridge.

The Highways Agency has just begun a local study into the medium / long term needs for an M11 widening, which needs to be aware of the future demand management measures that are likely to be introduced. The M11 and for that matter the A14, Northern Bypass to Cambridge provide a local distributor road function as well as a bypass.

A further interest of the Highways Agency is the potential of the A14 Ellington to Fen Ditton scheme to meet the TIF “productivity” criteria. Cambridge is a

key example of where the two strands of the Transport Innovation Fund overlap and interact. Each is relevant to the other. Concurrent with this bid, work by the Highways Agency is proceeding on the business case to assess the eligibility of that scheme for TIF grant.

The help of the Highways Agency is being sought in a separate exercise within the TIF study, to attempt to get a measure of any effect on the regional competitiveness of Cambridge with respect to other major centres with the introduction of a road user charging system. The Agency's South Midlands and Eastern Region Highway Model would be used to attempt to gauge any change in the relative level of attractiveness for travel to the different regional centres. This is unlikely to give a complete answer but will show the impact of a different charging regime of movement at a regional level.

- Cambridgeshire Horizons – its interests lie in delivery of the growth agenda in its widest sense) in the Cambridgeshire, and demand management of transport is a key feature of that delivery process.
- EEDA – its interests lie in the outcome for the economy growth of the Cambridge area and the impact of the introduction of such measures elsewhere on business.

In Cambridgeshire there is a history of engaging with and working closely with local bus operators to mutual advantage. Here the local authorities have brought forward bus priority measures and improved passenger facilities to accompany service improvements. Improved patronage is apparent, from these changes in the quality of service provision that has brought increased bus patronage of 45% within the City between 2001 and 2005, and some increases in patronage across rural Cambridgeshire of 31% during the same period.

The award in 2005 of £2.487m for “Kickstart” in Cambridgeshire is an example of the bus service support achieved, as is the recent successful completion of the statutory and procurement processes for the Cambridgeshire Guided Busway. This has included obtaining the legal powers, funding and service agreements for a project that is an innovation in public transport provision for the UK. The total scheme with route length of over 40km, and linking the Market Towns of Huntingdon, St Ives, and the new town of Northstowe into and through Cambridge, has every prospect of being a showcase of how high quality bus services can be delivered. Four local bus operators are in the process of “signing up to” running their services in competition along the guided busway.

***POINT E—Fit with the LTP***

The Long Term Transport Strategy is part of the LTP process and thus, there is a direct link from LTP to the TIF Study. The focus of Local Transport Plan is on improving public transport in the main transport corridors of the County and on the radial routes within Cambridge. There are seven main public transport corridors leading into Cambridge and “widening choice” and “managing demand “ are themes which underlie the policies and programmes to encourage a switch from the private car to bus or in some cases rail. Other rural corridors aim to replicate these ideals for travel to Huntingdon, Ely, St Neots, and Chatteris.

In terms of level of service, the target is to get frequencies to 15 minutes or better with improved bus information through multiple delivery media, and specific improvement schemes like the Cambridgeshire Guided Busway and Chesterton Station. Targets then focus on accessibility both for access to vehicles and improved/raised kerbs at bus stops. This work is aided by the accessibility

assessment work for the LTP. This has been crucial in identifying wards and social groups where priority action is required.

The TIF proposals would enhance and accelerate the provision of alternative measures to the car in these corridors. The introduction of a TIF system would encourage a modal switch with different charging scenarios encouraging this switch principally to the corridor bus services and cycling schemes that would be significantly improved as part of the TIF scheme.

It is in tackling congestion that some of the more significant targets come into play. These include:

- More than 22.5 million bus (passenger) boardings in Cambridgeshire by 2010/11
- More than 62,400 passengers per day using Cambridge bus services by 2010/11
- More than 56,000 passengers per day using Cambridge bus services by 2006/07
- A range of punctuality targets to be met by 2010/11
- Tougher mode share targets for cycling (10.6% increase by 2010/11 over 2004/5)
- Targets on peak hour traffic flows crossing the radial and river cordons within Cambridge by 2010/11
- Targets on proportions of journeys to school by non-car modes.
- Improved satisfaction levels by bus users
- Geographically based air quality targets, including a minimum emissions standard for buses entering the centre of Cambridge by 2009

Appendix 4 repeats from the 1st round TIF bid submission, the list of types of measures that could form part of the ultimate TIF scheme.

Appendix 6 goes further in detail and shows an extract from the current LTP programme for schemes that would have a relevance to TIF. There has been some enhancement beyond the LTP programme to try to capture the early additional costs to the County Council of introducing a TIF scheme. It is taken for granted that the Cambridgeshire Guided Busway, for which funding has been agreed and the A14 Ellington to Fen Ditton improvement schemes will be provided independently of the TIF congestion funding considerations, although both would contribute to the success of the broader TIF ideals. The A428 from Caxton Common to the A1, although a trunk road scheme is vital for regional prosperity, but with increasing inter-regional traffic pressure, the link between Cambridge and St Neots is not ideal for communications between Cambridge this market town.

***POINT F—Scope for More Public Transport Use and Modal Shift***

The plans for large scale housing and employment growth in and around Cambridge provide a particular opportunity to changes travel patterns and achieve a modal shift. When people first move into a new area, they are the most amenable to developing new travel habits and routines. This opportunity must be taken during the planning of this growth.

There have been a number of successes in encouraging the use of bus services in and around Cambridge City. These include the growth in the use of the Park and Ride system to one and a half million passengers per year and the growth of bus services and patronage with improved corridor services and radial services

(particularly “CiTi” services), are leading examples. Public transport is set to improve yet further.

The completion of the statutory procedures, the funding arrangements and the service agreements for the previously mentioned Cambridgeshire Guided Busway signal the introduction of a new chapter in the provision of high quality inter urban and urban public transport. This scheme, which is flexible in its ability to serve a group of market towns and link them to key areas in Cambridge, is innovative in exploiting this long standing guiding technology.

The scheme will provide additional rural Park and Ride sites and also provide a new phase of urban public transport by running routes that run through or link the Cambridge Science Park, the prospective Chesterton Sidings Station, the City Centre and Addenbrookes Hospital and research area. The attractiveness of this system will be the ideal means of encouraging a switch of mode. The scheme, between St Ives and Cambridge will have an accompanying cycle route alongside, and alongside the length to the south of the City centre.

The TIF scheme (i.e. one that introduced road user charging successfully), would create increased demands on public transport services and cycling facilities. At this stage it is not clear by how much. Helpfully, the existing local model, which is to be used to take the study up to TIF partnership stage has a good representation of the existing public transport network and service frequency. The extra demand, by corridor for bus services should become apparent when the model is run. This, it should be noted would be only a “first round” effect but would give an indication of what additional service capacity would be required.

“Second” and “Tertiary” round effects and their implications on bus service and other facilities would only be forecast at final business case stage when the revised and upgraded integrated MENTOR/SATURN (strategic /local) model will be available.

***POINT G.—Fit with Government Aims and Objectives***

The Government has set high level strategic aims and objectives for transport in its 2004 Transport White Paper, “The Future Of Transport”, which the Cambridgeshire County Council and the TIF study work recognise and seek to support-

- **economic growth to ensure the country can compete and win in the global knowledge economy.** (A TIF scheme would complement the economic growth of the research, high tech and commercial activities which are focused on Cambridge.)
- **commitments to social justice through policies to expand opportunity and tackle the most deep seated causes and symptoms of social exclusion.** ( There is an awareness that any fiscal demand management scheme needs to account for the vulnerable user and “hard to reach “ groups. Appropriate assistance with the travel needs of such groups would need to be available.)
- **the long-term goal of reducing carbon emissions.** (It will need to be demonstrated within the study that any TIF scheme, which sought a reduction in the use of the car would produce a significant net reduction in carbon emissions.)
- **recognition of the fact that we cannot simply build our way out of these problems.** (The nature of the urban fabric of Cambridge precludes such an approach, and this has long been recognised that road building would not be an appropriate policy response in Cambridge.)
- **the long term transport strategy which supports economic growth and development.** (The LTTS for which the TIF project is fundamental, fully supports economic growth and addresses the Sub-Regional growth agenda through improving accessibility through out the local area.)
- **proposals meet the public need for transport,** (The scheme would deliver locally additional sustainable means of transport (ie smarter travel, improved bus services,

- and cycle facilities) as alternatives to the private car and this is an objective of the TIF study.), **and**
- **the management of the local transport network is consistent with the environmental goals in local transport governance.** (The TIF project recognises the need to manage the Cambridge transport network to achieve these environmental benefits.)

In taking cognisance of Government aims and objectives for transport, the County Council notes the emphasis that Ministers have more recently placed on specific objectives in relation to road user charging / pricing and key points are:

- the need to address current and growing congestion, especially where that is linked to economic success
- the need for a greater understanding of scheme design, technology, implementation and operation;
- the prospect of a combination of improved public transport and cycling facilities under a road user charging regime, which the approach the Cambridge TIF scheme is taking.
- a desire to see a greater use of public transport through patronage growth,
- areas under economic pressure experience increased travel demand which can lead to severe traffic pressure which needs to be addressed, and
- the lessons learnt from this pathfinding TIF work will be applicable elsewhere in particular the public react to different proposals.

Cambridgeshire's LTP highlights how our approach to transport policy and delivery meets the Government's shared priorities for transport, namely improving safety, accessibility and air quality and reducing congestion. In particular, the TIF scheme would clearly further these priorities.

Taken together, both Government and local objectives form a close policy and practical fit with the TIF scheme for the Cambridge area.

#### ***POINT H—The Coverage of the Scheme***

The focus of a charging scheme would be the City of Cambridge, within and around which much of the current and prospective congestion occurs. No assumptions are being made at this stage about the form of any possible road user charging system, (ie area, cordon, link based), but it could be contained within or even outside the boundaries set by the A14 and M11 Trunk Routes. Because of the potential localised impacts on those routes, the Highways Agency is undertaking a partnership role within the project. In any event, the determination of a prospective charging area will emerge as the study progresses.

Any fiscal demand management undertaken in the City would have a wider impact. This impact could stretch out to the ring of Market Towns, ie St Neots, Huntingdon, St Ives, Chatteris, Ely, Newmarket, Haverhill, Saffron Walden, and Royston, from where mode selection for travel to Cambridge would take place. Cambridge lies at the hub of the Cambridge Sub-region. The nine market towns that surround it depend to some extent on the City for employment and sub-regional retail provision. The knowledge, medical and high tech focus of the Cambridge economy is of national importance and is dominant in the Sub-region as well. Thus, the impact on travel to Cambridge of a fiscal demand management scheme will need to be assessed and appropriate measures, eg enhanced corridor bus services, remote Park and Ride sites provided.

The County Council is impressed with some of the research work currently being undertaken at Leeds University (ITS) into the "optimal" geographic design of road

user charging schemes, indeed the University has been using a model of Cambridge as one of its theoretical test sites. It is proposed that assistance and advice would be sought from Leeds University during the determination an optimum charging area.

***POINT I—Innovative Content and How Transferable***

The system will by its nature be innovative and introduce:-

- further elements of choice for motorists, which the system will have to predict, accommodate and account for.
- potentially additional hardware / software into vehicles,
- the prospect of paying additional costs for their car travel, and
- new alternative transport options.
- additional street furniture.

The County Council would wish to design a system around a selection of the technologies that DfT intend to recommend to Local Authorities, but proposes to take specific communications and charging systems advice from the expertise at Transport Operations Research Group (TORG), based at Newcastle University. TORG is a leading centre of such expertise in Europe. Such advice would tailor a system that would best suit the Cambridge situation.

The challenges of developing and applying new technologies is acknowledged, and so the adapting of existing technology to design of the scheme will itself be innovate and many of the lessons learned in Cambridge will be applicable elsewhere.

A Cambridge scheme would be an early scheme, probably ahead of any other significant scheme and would provide an opportunity to test public acceptability a well as techniques and equipment.

***POINT J—Long Term Financial Viability***

The intention of the TIF work is to establish the practicality and long term implications of a road user charging scheme on the Cambridge area. It is not known at this stage whether a financially viable system can be devised. However, the anticipation is that a suitably designed scheme would have widespread travel and environmental beneficial effects, which outweighed any short term dis-benefits. In Cambridge, the aim is to investigate and devise a self- financing scheme which would generate net revenues which would be devoted to providing and improving a sustainable transport network.

***POINT K—Timescale to Delivery of Scheme***

Timescales for taking forward the elements of a TIF programme of schemes is still not certain, but they are being examined. Following discussions with DfT Officials, and considering the formal guidance, the model development work, social and economic impact surveys and economic appraisal wok will be more extensive than originally thought and this is the basis of the bid for further funding and work. Nevertheless, the intention is to minimise the timescale overall.

However, if the County Council were to take the decision that fiscal demand management was the most effective supportive option for ensuring delivery of a sustainable transport system in the Cambridge area, developing a charging system through to implementation could take about 3 years. This would include seeking and obtaining the necessary powers and is on the assumption that suitable technologies were available to identify, monitor (if necessary), and charge the motorist. During this time there would need to be accelerated investment in measures that would provide attractive alternatives to the use of the car, in order that those potentially affected

could see the prospect of benefits. Such measures would represent an acceleration of the programme given in the current LTP (See appendix 6).

The County Council has an excellent record of delivery of innovative public transport schemes, and taking projects through complex and occasionally difficult statutory processes. However, powers under Part Two of the Transport Act 2000, have not been sought before by the County Council and there would be a significant element of learning in the process. Also, the County Council it would wish to work closely with DfT should there be the need for further legislation.

To arrive at the decision specified above, the County Council would wish to have successfully progressed through the suggested stages of “TIF Partnership”, “Programme Entry”, “Conditional Approval” and “Full Approval” with DfT.

**Possible Programme Leading to Implementation of TIF Scheme**

To October 2006	Data collection to support development of Preliminary and Full Business case
To December 2006	Stakeholder engagement, principles and constraints, later outcomes Preparation of material for TIF Partnership Application
January 2007	Submission of TIF Partnership Application
Spring 2007	Household interview surveys to support full business case
Summer 2007	Preliminary business case submitted
Summer 2008	Full business case submitted
Late 2008	TIF Programme entry
Late 2009	Public Inquiry into Demand Management scheme, leading to Conditional Approval
Late 2010?	Full TIF Approval and Implementation

***POINT L—Current Programme***

Monies obtained under the first round of TIF pump-priming bids are being used to support the development of the TIF Partnership Application. DfT funding of £70K(05/06) and £224 (06/07) has been allocated to this task. Of the original allocation this leaves £90k (07/08) to support the development of the business case.

The programme submitted as part of the first round pump priming bid has effectively been superseded as a result of discussions with DfT. Work to date has focused on a number of key areas including political and stakeholder engagement as well as a range of technical tasks. Progress with each of these is set out below.

***Political Engagement***

Here significant progress has been made with the completion of the Long Term Transport Strategy since commencing the TIF Study. The Strategy’s recommendations have been endorsed by the County Council’s Cabinet and Full Council. The Strategy has concluded that even with the significant improvements to the transport system that are already planned for the area, such as the Cambridgeshire Guided Busway and the A14 improvements, only when some intensive form of demand management is implemented is there a significant shift away from the private car and thus the containment of congestion.

Also, each of the Lead Planning and Transport Members of the District Councils within Cambridgeshire has endorsed these recommendations, along with their respective District Cabinets.

### Stakeholder Engagement

To pursue stakeholder engagement, a series of larger scale meetings /presentations and smaller scale workshops have been successfully undertaken. These represent a first stage of engagement to address the transport issues generated by the long term growth in the area. This engagement process has demonstrated a widespread acceptance of the growth planned for Cambridgeshire together with a clear understanding of the implications of that growth. The workshops have resulted in a wide recognition of the need for more intensive demand management and agreement that "something must be done". Stakeholders have stressed the need for a package of measures including further public transport, walking and cycling improvements allied to stronger demand management measures.

The second stage of the stakeholder engagement programme which is due to be carried out in the Autumn and Winter 2007 will focus on outcomes and outputs of the first stage of the TIF technical work. This work will have made a preliminary examination of a range of demand management measures. Details of the programme of stakeholder engagement is given in Appendix 3A.

### Technical Work

Considerable progress has been made with technical work. The Long Term Transport Strategy Study included modelling with forecasts to 2021 and as mentioned above, all the local Councils have endorsed its conclusions and recommendations.

Areas in and around Cambridge that are forecast to experience significant and chronic congestion have been identified. Four potential future strategy scenarios were examined. The results showed that the only strategy that produced a satisfactory level of mode shift to contain congestion and car use was that incorporating more intense demand management measures.

Two Area Development Studies for the East and North West of Cambridge have also been completed. These have identified infrastructure measures that will be needed to enable their satisfactory establishment as areas for growth. The outputs from these studies will feed into the TIF study work.

### Preparation of TIF Partnership Application

Publication of additional TIF study guidance and new "WEBTAG" units which will govern the appraisal of TIF schemes, released following the submission of the first round bid, have had significant impacts on the methodology adopted for the TIF Partnership work as well as on preparations for the development of the business case. Thus several work streams are now underway to prepare a TIF Partnership application, ready for submission early in 2007, and necessary preparations for the business case work are in hand to ensure a seamless transition from one phase to the next.

A key element of the current work programme has been close liaison with the DfT modelling and appraisal team. Regular meetings have been established to ensure that the methodologies adopted for the Partnership work, and those proposed for the Business Case development, are agreed as the programme goes forward. This has been a challenging task, seeking to incorporate the requirements of changing and developing appraisal guidance whilst maintaining a degree of pragmatism about the work to be undertaken. The immediate focus has been on the level of appraisal required for the TIF Partnership application and the development of the modelling tools to support this appraisal. This liaison is proving a useful two way process, as

this proactive role is helping the development of national guidance. A similar way of working has also developed in the Socio Economic Impact area.

#### Model Development

Whilst Cambridgeshire County Council already had access to an integrated land-use and transportation model, the requirements of the new appraisal guidance meant that, a number of significant model development tasks had to be undertaken to ensure that the model is able to deal with likely user responses following the introduction of road pricing, and indeed, that the effects on different user groups can be adequately reflected. Therefore key activities have been:

- enhanced modelling of the existing park and ride sites around Cambridge;
- increased functionality to ensure that additional park and ride sites can be adequately modelled; and,
- detailed segmentation of the user class matrices.

Whilst it has been agreed with DfT that the current County modelling tool, subject to the enhancements described above, will be adequate for option testing at the TIF Partnership stage, it has also been agreed that significant enhancements are required for the Full Business Case appraisal. Therefore a programme of data collection, to inform a substantial model update, has been identified. In order to ensure that the updated modelling tool will be available to carry out the business case appraisal, close working arrangements have been established with the Highways Agency (and its consultants) as joint owners of the model. Funding for the model enhancements forms part of the second round bid for pump-priming. Further details are provided under Point M below.

#### Appraisal Framework

A draft appraisal framework, which will be used throughout both the TIF Partnership and the business case work, has been discussed with DfT. Further enhancement and clarification of this is currently underway, to be agreed with DfT prior to the main appraisal activities.

#### Socio-Economic Research

New guidance has significantly enhanced this area of assessment within the overall appraisal framework, and one that relies heavily on primary research and data collection. A proactive approach with DfT has led to Cambridgeshire developing a preliminary assessment process, based upon the use of existing data sources and the County's accessibility planning work, to support the TIF Partnership Application. The development of this methodology with DfT has contributed to the recently published TAG guidance on the assessment of Social and Distributional Impacts. Cambridgeshire has been asked to give a presentation about this work, to the RPLLG meeting in August. The methodology for the TIF Partnership Application has been designed to inform both the option assessment at the Partnership Application stage as well as the methodology for the business casework. This work is currently underway.

#### Wider Economic Benefits

The assessment of Wider Economic Benefits is a relatively new area of appraisal, and as such Cambridgeshire is currently liaising closely with DfT to identify a pragmatic methodology for assessment at the Partnership application stage. A full assessment in accordance with the guidance will be undertaken as part of the business case appraisal.

***POINT M—TIF Further Work***

In applying for second round funds, the aim would be to secure the successful delivery of a Full Business Case for submission to Programme Entry. Discussions with DfT, coupled with recent changes to appraisal guidance have led to a significantly enhanced programme of work. The bid for funding would be used to support the development of traditional business case activities as well as additional areas of assessment now required by changes to the appraisal guidance.

To support the development of the business case, discussions with DfT have highlighted the need to upgrade the existing modelling tools. In line with this an essential programme of data collection and model development work has been identified. The benefits of this significant task will serve two purposes; updating the model base year to 2006, and incorporating an enhanced level of functionality of the integrated/ iterative land use transport model as is required to undertake detailed option testing. This would include journey purpose, income and mode choice at earlier stages of the model process. As part of the model upgrade, work will be undertaken to include updated census data and refined zoning. This work is being jointly funded by the Highways Agency. Its interests include the impact of demand management on the A14, M11 and A428 trunk routes and the need for consistent evidence for presentation at the forthcoming Public Inquiry into the A14 (Ellington to Fen Ditton) improvement scheme.

In direct support of the model development work a programme of Roadside Interviews and traffic surveys has been identified. This will be supported by information derived from the proposed socio-economic surveys that, in this context, will primarily be used for model calibration and validation.

Newly published “WEBTAG” guidance has identified significant enhancements to two areas of the traditional appraisal; the detailed assessment of social and distributional impacts of road pricing and the assessment of the wider economic impacts associated with a scheme. A key task associated with this is the need for primary research (in the form of household surveys) to support the socio-economic appraisal and in particular to help identify the impact on “hard to reach groups”.

The standard business case appraisal will also be supported and informed by:

- Earlier research work by ITS Leeds into changing public attitudes over time
- An appraisal of regional competitiveness of Cambridge versus other centres
- Business surveys of the responses to the imposition of fiscal restrictions of access to the city

In order to deliver the business case, a programme of expenditure (forming the bid for second round funding) has been identified and is set out below:

## Funding requirement (£000s) to Full Business Case Stage

	2006/7	2007/8	2008/9	Total
Total	525.1	1674.0	234.6	2,434.0
Remaining 1 <sup>st</sup> Round Funding		90.0		
2 <sup>nd</sup> Round Pump Priming Bid (DfT 50% contribution sought)	262.6	792.2	117.3	1,172.0
CCC/partner match funding contribution				
CCC funding	127.2	163.3	74.4	365.0
Highways Agency	120.0	60.0	50.0	230.0
Cambridgeshire Horizons	50.0			50.0
EEDA	50.0	50.0		100.0
Total match funding identified	347.2	273.3	124.4	745.0
Shortfall in match funding	(-)84.7	518.9	(-)7.1	427.1

This funding is needed to undertake and complete the tasks that are required to fulfil the work necessary to progress the project from TIF Partnership stage to Full Business Case.

For this expenditure, the County Council with its partners appears able to find £745,000 in match funding. However, the estimated cost of taking forward the scheme to Full Business Case is likely to require a further £427,000 in match funding which the County Council cannot promise to find, as the matched funding already promised through this and the previous bid amounts to some £1,030,000 (£385k +£745K) out of a total of £ 3,114,000— which is a very significant amount for a small authority such as Cambridgeshire. It is noted that the “*TIF Pump Priming Round 2 Criteria –May 2006*” document does not preclude DfT’s contribution being greater than 50% in such cases as this. Special consideration is requested in this situation.

However, the prospect of further third party contributions is being actively explored.

A task based breakdown of the total funding requirement for the business case preparation is set out in Appendix 5.

The need for an additional £262,000 in the current financial year to complete the survey work should be noted.

#### Uncertainty

There are several areas of uncertainty in the scale of the workload. The business case work is likely to have to take 2 or 3 options through a detailed appraisal process using the new modelling structure, and as yet we don't know what those options will be. The establishment of a TIF Partnership will mean that the development of the

business case is likely to be closely driven by evolving DfT requirements which, could lead to extensive appraisal and testing.

Also, the standard appraisal, i.e. the economic and the environmental assessment will be significantly enhanced over and above that required for a traditional major scheme business case, because of the complexity of the packages and the range of responses of the travelling public.

Similarly, the work which will be required to develop the actual road pricing component is likely to be substantial covering – infrastructure design, capital costs and operating costs (for both infrastructure and support systems), enforcement, back office systems, and revenue collection. However, system design will obviously be closely linked to the type of technology chosen, and as this in itself is a factor that will be determined through the business case appraisal, this adds an additional element of uncertainty.

Another uncertainty is the potential for inflationary affects on consultancy costs over the period of the work.

**POINT N—Name of Authority**

Cambridgeshire County Council is the authority submitting this bid for further TiF pump priming funding. Three partner stakeholders who recognise the importance of the TiF study to their immediate interests, namely the Highways Agency, EEDA and Cambridgeshire Horizons are allocating some funding as base funding into the study. That money is being used as part of the basis for seeking additional pump priming support through this second round bid.

**POINT O—Amount of Funding by Year**

The additional expenditure profile and future timescale is :-

Year	Cost	Funding	Principle Activities
2006/7	£525.100	£262.600	pilot and full travel surveys, model upgrade. Early 2007“TiF Partnership” to begin the preparation of the provisional business case-
2007/8-	£1,584,000	£792,200	household surveys, analysis, determination of technologies project initial design. “Programme Entry”, with Full Business case scheme preparatory work
2008/9	£234,600	£117,300	Complete Full Business Case
Late 2009?	Yet to be determined		Public Inquiry leading to Conditional Approval
Late 2010?	Yet to be determined		“Full Approval” and implementation.

These sums are being allocated to the above tasks, which have become apparent from the early work on the Study and in discussions with DfT Officials.

**POINT P—Name of the Signing Officers or Members**

This bid is being made on behalf of Cambridgeshire County Council, under the signature of Brian Smith, Deputy Chief Executive and in consultation with Cllr. J. Reynolds, Deputy Leader and Lead Member for Environment and Community Services.

**POINT Q.—Governance Arrangements**

The existing governance arrangements used for the first round award of TiF funding, would continue for the remainder of the study. The conduct of the project is the ultimate responsibility of Cambridgeshire County Council's Cabinet Members. A project steering group advises the work that is led from within the Environment and Community Services Department. This comprises representatives of the GO-East Office, Cambridgeshire's District Councils, the Highways Agency, EEDA, and Cambridgeshire Horizons.

The Study professional work is being mainly undertaken by Messrs Atkins and with Messrs Steer Davies Gleave acting as the "challenge consultant" and leader for some of the stakeholder workshops.

Additional technical liaison is being undertaken with staff from a number of Universities that have experience in relevant fields associated with this study. These include Cambridge, Leeds and Newcastle Universities. Appropriate and timely advice is being sought from these bodies. Elements upon which advice is and will continue to be sought include:

- social surveys
- changing public perceptions
- technologies and charging systems
- the future traffic and environmental monitoring as a potential means to determine time related variations in charging
- optimisation of charging areas
- business response surveys

The research record of these institutions on these topics, often based on work from within Cambridge is seen as most opportune to the success of this study. A diagram showing these governance arrangements is shown in Appendix 7

**POINT R. Policy and Communications Contacts**

Contacts for liaison by DfT are:-

Policy Contact - Paul Cook, Head of Service, Transport Policy & Strategy, Tel 01223 717501, ET1041. [Paul.Cook@Cambridgeshire.gov.uk](mailto:Paul.Cook@Cambridgeshire.gov.uk)

Communications Contact -Kara Hill. Communications and Media Manager, Tel. 01223 718510, RES1504, [Kara.Hill@Cambridgeshire.gov.uk](mailto:Kara.Hill@Cambridgeshire.gov.uk)

**POINT S — Assessment of Transport Modelling Capability, plus Contact**

Cambridgeshire County Council has available, with copyright held jointly with the Highways Agency, inter-active land use economic transport / four stage models, (based the MEMTOR / SATURN suites). These cover the Cambridge Sub-Region and have been used to under pin many policy decisions, eg

- the Long Term Transport Strategy
- the Sub-Regional Development (Growth) Strategy,
- the A14 Multi-modal Study,
- the Cambridgeshire Guided Busway,
- the initial design and justification of the A14 Ellington to Fen Ditton Improvement scheme.

The models are in need of up dating and some increase of functionality at the mode choice stage and greater segmentation on income levels to make the detailed forecasts to fully explore TIF schemes in Cambridge. Extensive travel surveys are

proposed for autumn 2006, with a programme of household surveys undertaken in early 2007.

The home interview surveys will seek to assess reactions to demand management measures and identify vulnerable groups who would be particularly disadvantaged by them. Additionally business response surveys will need to be conducted towards the end of this phase of the study work.

Any impact on the regional competitiveness of Cambridge under a road user charging system will be explored through some limited tests using the Highways Agency's South Midlands and Eastern Region Saturn Highway Model. Here the attractiveness of Cambridge for off peak (retail and tourist) journeys will be explored.

*Contact Bob Tuckwell. Tel 01223 717724. ET1041  
[Bob.Tuckwell@cambridgeshire.gov.uk](mailto:Bob.Tuckwell@cambridgeshire.gov.uk)*

***POINT T — Publicity***

Cambridgeshire County Council is content for this bid to be put into the public domain following the award of additional funding for the project.

July 2006.