

## 2 Policy Objectives



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## 2.1 Introduction

The enhancement of public transport services throughout the eastern corridor is, in part, a requirement arising from the proposed developments, the Devon Structure Plan and the existing network conditions. This section provides an overview of the policy objectives for the area, and the context within which to consider and assess public transport modal options. Further information on previous studies and the existing situation is provided in the PECS Baselines Conditions Report.

## 2.2 Policy Objectives

The Plymouth City policy objectives have been reviewed in the process of developing the Local Transport Plan 2, produced as a provisional plan in July 2005. The opening statement of this document outlined the strategic priorities for the city:

*'The challenge of this second Local Transport Plan for Plymouth is to devise a strategy that will deliver government targets and shared priorities, incorporate the visionary growth for the City, and support planned development in the City Centre and in the eastern and northern corridors. It will link in with neighbours in surrounding authorities and deliver safe sustainable transport solutions to take Plymouth into the next decade and beyond.'*

The central government's shared priorities of reducing congestion, improving accessibility, producing safer roads and enhancing air quality are therefore central to the city's future transport objectives. These objectives themselves sit within seven overarching shared priorities for economic and social development:

- (i) Safer and stronger communities;
- (ii) Improving the quality of life for the old and the young as well as families at risk;
- (iii) Meeting transport needs more effectively;
- (iv) Promoting healthier communities and narrowing health inequalities;
- (v) Promoting economic vitality of localities;
- (vi) Raising standards across schools; and
- (vii) Transforming local environments.

However, it is recognised that investment in transport and land use schemes alone will not overcome the issues of social exclusion and deprivation, which require community partnering and consultation. The south west region is also developing strategic priorities for the future, with the ongoing preparation of a revised Regional Transport Strategy. Within this, major investment in transportation will be prioritised to promote regeneration, reduce peripherality and enhance accessibility.

With regard to the development of Plymouth, and in particular the construction of additional housing in the area, the Council has agreed to develop 18,500 new houses within the city by 2026. The Sherford and Plymstock areas of the eastern corridor are highlighted as key development locations, with the caveat that significant transport enhancements will be required. The sub-regional transport strategy recognises the impacts of such developments, with the following objectives of:

- Providing viable transport choices by enabling interchange between transport networks and by maximising integration;
- Improving accessibility to work, facilities and services, such as education and healthcare, for everyone, especially for those without access to a car;

- Supporting the continuing growth of a sustainable, strong, prosperous and competitive economy;
- Ensuring that travel can be undertaken safely by all forms of transport and to promote forms of transport that lead to healthier lifestyles;
- Protecting and enhancing the distinct built and natural environments of Devon, Cornwall and Plymouth;
- Providing access to the area's cultural, historical, and leisure attractions by a variety of forms of transport; and
- Optimising the use of existing transport infrastructure and services.

The development of the eastern corridor therefore has the opportunity to establish sustainable travel patterns to major new developments, alongside enhancing public transport services and options for existing residential areas.

Investment in public transport, walking and cycling modes are considered central to achieving medium to long term objectives, and accommodating increased housing development in a sustainable and equitable way. However, it is also recognised that future policies must seek to balance investment in new infrastructure, with the management of the existing network. In summary, the Plymouth LTP2 outlines the main objectives to be achieved in developing the eastern corridor, which have been considered throughout this study:

- Increasing the use of public transport within the urban areas;
- Providing a step change in public transport service provision;
- Meeting network performance standards set for each main urban area;
- Reducing the rate of growth of car traffic within urban areas;
- Reducing accident levels, especially in areas of social deprivation and needing regeneration;
- Maintaining/improving the reliability of urban journey times;
- Reducing pollution 'hot spots' within the urban network and improving air quality; and
- Facilitating future development without increasing the use of the strategic (Trunk) network for local trips.

Plymouth's final LTP2 document will be published in March 2006.

## 2.3

### Previous Studies

A number of studies have been undertaken in the Plymouth area which have some relevance to the eastern corridor, and have been reviewed as part of this study. They have included:

- The Eastern Gateway Study;
- Sub-Regional Growth Distribution Study;
- Sherford New Community Public Transport Strategy;
- Local Development Framework documents;
- Mackay Vision; and
- A38 Route Management Strategy.

The studies highlighted the substantial development that is proposed for the eastern corridor, and that commensurate investment in public transport modes will be required to accommodate travel demand. The Eastern Gateway Study recommended a number of network enhancements, including a new road link between Laira Bridge Road and Embankment Road, community transport initiatives, modifications to local access arrangements, rationalisation of HGV Movements and pedestrian crossing improvements to Embankment Road. Further details of the study outputs are reported within the Baseline Conditions Report.

## 2.4

### Consultation

Within the course of the study, consultation with stakeholders and interested parties is required, and has been accommodated as a two part activity. First, a stakeholder workshop was held during the early weeks of Stage One, to introduce the project objectives, remit and intended outputs, and to receive contributions to identify the key issues in the corridor. This was

undertaken in July 2005, with an attendance of over 20 key stakeholders. This activity has not been coordinated with other consultation activities, such as the LTP2 processes, as it is considered important to ensure that the Eastern Corridor Study is not unduly influenced by other stakeholder involvements. Secondly, a series of ongoing meetings have been held with representatives from the developers and highways authorities.

## 2.5 LTP2 Joint Statement

Plymouth City Council and Devon County Council produced a joint statement in the draft LTP2, concerning the eastern corridor and dealing with cross boundary issues. The text of this statement has been re-produced herein for consistency:

*'The Eastern approaches to Plymouth are identified for substantial growth including significant residential and employment development. A new community of over 4,000 homes is being progressed to the east of the City boundary between the A38 and A379, with a strategic employment site located just to the north, and a development of 1,500 homes is planned inside the City boundary north of the A379.*

*Securing appropriate cross-boundary transport infrastructure, to link the new community and the City, is essential to ensure that travel demand can be accommodated sustainably. The City Council has commissioned a study to assess how increased travel demand can be met sustainably along the whole corridor, with the steering group comprising all the relevant highway authorities. In accordance with the Joint Structure Plan and the emerging Plymouth and South Hams Area Action Plans, the following strategic objectives are being pursued:*

- *A high quality, unimpeded public transport link between the new community, the strategic employment site at Langage and major centres within Plymouth, such as the City Centre and Derriford at a 10-minute headway.*
- *High containment of trips by quality local facilities and walkable home zone style neighbourhoods including appropriate controls on parking at local centres.*
- *Strategic Park and Ride/interchanges, both at Deep Lane junction with the A38 and a smaller site on the A379.*
- *Major improvement to A38 Deep Lane.*
- *Enhancement of local public transport facilities.*
- *Unimpeded access onto A379 from the new community for public transport.*
- *Links to National Cycle Network and public rights of way network.*
- *Sustainable travel measures, including School and Employer Travel Plans, personalised travel planning and a Community Travel Plan Coordinator.*
- *Appropriate traffic management measures to avoid unwanted traffic in the surrounding villages and communities.*
- *Appropriate car parking management and control in Plymouth city centre to encourage maximum transfer to public transport for movement to and from city from periphery.'*

## 2.6

### Eastern Gateway Study

#### Objectives and Recommendations

A requirement of the study brief was to undertake a critique of the Eastern Gateway Study, which considered the main eastern approaches into the city centre. This included Embankment Road from Marsh Mills to Heles Terrace, and the A379 from Laira Bridge to Cattedown Roundabout. The key objective of the study was to identify potential transport measures or combinations of measures to enable future travel demand from developments impacting on the study area to be met, within the context of the need for a high quality built and natural environment. The study identified four levels of intervention, which have been critically reviewed as part of the Eastern Corridor Study.

- **Do-Minimum:** Included bus priority measures to promote modal shift away from the private car;
- **Do Something:** As do-minimum with charging at Laira Bridge, traffic priority measures, bus priority measures, ;
- **Do-Something More:** Dedicated public transport routes, park and ride facilities, re-routing Embankment Road onto existing routes, changing the access point at Laira Bridge, construction of new road to relieve Embankment Road, new bridge over the Plym for public transport or providing bus priority; and
- **Do-Everything:** New public transport routes from Plymstock and Plympton, new River Plym crossing, park and ride facilities at Marsh Mills, new local bypass and promoted use of railway, linking with new urban avenue along the rail line to Friary Yard, new road providing access to the Cattedown port area from Embankment Road, through traffic deterred from using Embankment Road (west), rationalising HGV movements and removing them from Heles Terrace, community transport initiatives, modifications to local access arrangements, and pedestrian crossing improvements at Embankment Road.

The do-everything option was considered to be the only viable approach and further investigation was recommended. The associated cost was identified as being significant, especially when the need to safeguard future routes and options was included.

The long term aspiration identified for public transport is the introduction of an LRT system. However, it states in section 2.3.2 of the Options Development Report that this would not impact on current traffic and highway operations, as it is likely to be developed to accommodate new growth areas. As a consequence, although enhancements in public transport journey times were generated through priority measures and investment, this was not considered to generate modal shift from car to public transport. This is a simplistic assessment of the potential impacts of bus priority, and was reflective of a largely highway focused study. Although the report correctly states that road construction to provide for increases in traffic flows would not be acceptable, it identifies that new roads can be supported on the back of regeneration and economic development.

#### Traffic Modelling

A critical failing of the study was the modelling approach to assessing the impacts of public transport and highway options, as outlined below.

#### Future Year Demand

The Paramics model used for the study was a cordoned version of the wider Plymouth TTWA model. Whilst we would agree that cordoning the larger model was the correct approach, and we have adopted a similar approach for the Plymouth Eastern Corridor study, the cordoned network omitted key junctions which act as capacity restraint locations in the network. In particular Marsh Mills was not included in the assessment which acts as a 'pinch point' into the Eastern Gateway study area. The Paramics modelling report for the Plymouth Gateway Study indicates that in the 2016 forecast year, the traffic flow on Embankment Road south of Marsh Mills was assumed to have increased by 24%, on the basis therefore that this additional capacity is available at Marsh Mills. On a similar issue, the flow entering the network across Laira Bridge was assumed to increase by 37.9% in the 2016 forecast year.

We would argue that the levels of forecast travel demand incorporated within the future year Paramics modelling are not achievable, given capacity restraints 'upstream' from the small

cordoned model area. It is therefore not surprising that the future year assessment predicts large increases in travel times and congestion in the do-minimum model. (Average vehicle speeds reducing from 32mph 2002 Base to 26mph 2016 do nothing)

### **Option Testing Methodology**

All options have been assessed in terms of changes in vehicle journey times, average speeds and bus journey times. The core recommendations from the study appear to be based around which option results in the fastest vehicle journey times and therefore the ability to cater for the increased highway demand.

However, government guidance on the assessment of transport schemes has moved a long way from the times when simply indicating the impact on the highway network was acceptable. All Major Transport investment projects, which are seeking government funding, need to conform to government guidelines on transport modelling techniques. This requires schemes to incorporate Variable Demand modelling techniques, which enable the assessment of factors such as:

- Modal transfer;
- Peak spreading;
- Trip re-distribution; and
- Trip suppression.

Although the modelling work for the Eastern Gateway Study presented changes in bus journey times and car journey times, these should have been fed into Variable Demand modelling framework, where these factors would have been accounted for. The potential demand for public transport would therefore be higher than simply new development traffic, and congestion in the city centre and eastern gateway network lower than that identified in the study. The core conclusion emanating from the study that road construction represents the only appropriate approach is therefore questioned, and the potential role of other modes and re-distribution of trips under-represented.

### **Lack of full scheme appraisal**

It is not possible for us to comment on the overall evaluation of the proposals put forward by the Eastern Gateway Study as the options have not been appraised against the Governments criteria. The report states that the 'Do-Everything' option cost was going to be significant. However, there has been no attempt to quantify the financial benefits of the proposals, in terms of journey time savings etc.

### **Overview**

The modelling approach adopted for the Eastern Gateway Study was always going to lead to a solution where increasing the highway capacity was the only viable option, as transfer to public transport and trip suppression were not explicitly included in the assessment. For the Plymouth Eastern Corridor Study we have taken the view that the assessment should be based on assessing whether there is a viable public transport option, which is capable of resulting in sufficient modal transfer to cater for the additional development demand. Only when these options are exhausted, do we feel that it is appropriate to again start looking at options which result in increasing highway capacity. This reflects the danger in solving the problem in one area and simply shifting the problem to locations 'downstream' of where the highway capacity is enhanced.

It may be possible that there are social / environmental reasons to incorporate some of the highway proposals which form part of the Eastern Gateway Study. However, at this stage we do not feel that there is necessarily a transport reason for the proposals. Furthermore, the next stage of the Plymouth Eastern Corridor study is potentially the development of a major scheme or TIF submission to DfT for Major Public Transport schemes. As part of this work, further engineering assessment of individual bus priority measures will be progressed, which may entail reassessing some of the detailed proposals outlined by the Eastern Gateway Study.