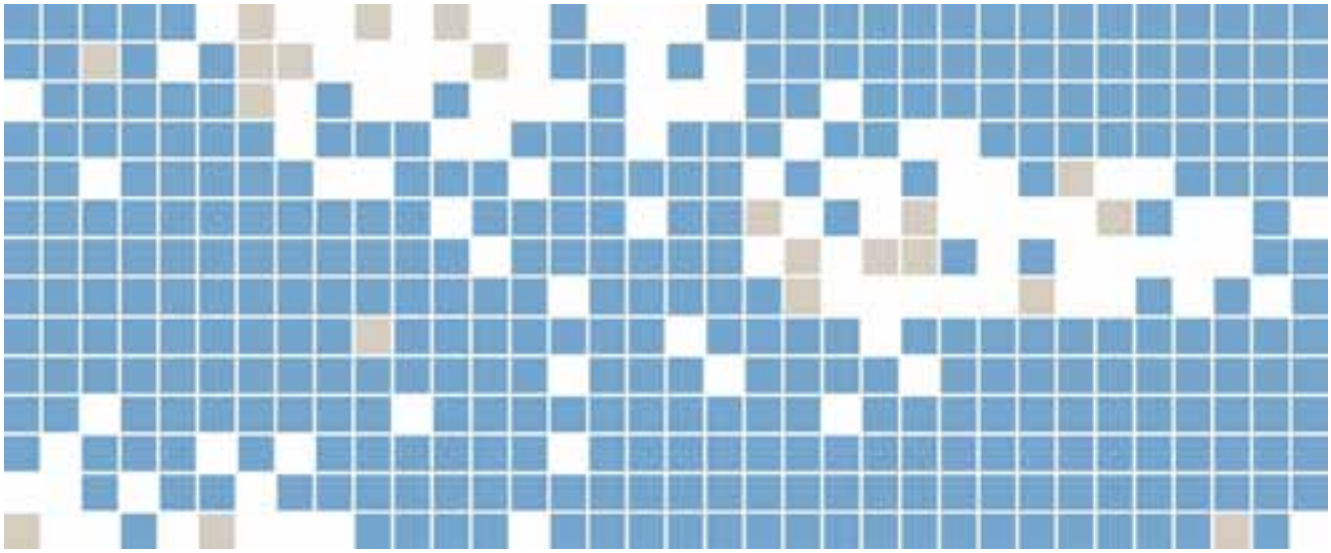

Dover Transport Strategy

FINAL

Dover District Council & Partners

October 2007

WSP

QM

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KEY ELEMENTS OF THE DOVER TRANSPORT STRATEGY

Key Elements of the Dover Transport Strategy

- A strategic and dynamic routeing strategy for Port traffic
- Longer term proposals for diversion of A2
- Downgrade old A2
- Improved access to Dover Priory Station and CTRL services
- A car parking strategy to manage the demand for town centre car trips
- Park and Ride at Whitfield and A20 approach
- Improved one-way system
- Bus only Pencester Road
- New express bus services
- Coordinated traffic signal control
- Improved accessibility for pedestrians and cyclists, including major new Townwall Street crossing
- A strong transport awareness and behavioural change programme

1 Introduction

1.1 BACKGROUND

1.1.1 Dover District Council, in partnership with the Highways Agency (HAg), Kent County Council (KCC), the Dover Harbour Board, English Partnerships, SEEDA, East Kent Coastal PCT, Developers, landowners and others has commissioned a strategic transport study for Dover. The primary purpose of this study is to support the development of the Local Development Framework (LDF) Core Strategy which proposes significant growth for Dover during the period up to 2026. A number of Core Strategy Options have been created by DDC with the largest of these proposing up to 14,000 additional homes for the District with associated retail, employment and other land uses. The District Council views this growth as critical to facilitate the regeneration of the town.

1.1.2 Progress of the draft LDF Core Strategy has been 'paused' following a number of high profile Examinations in Public for other UK District LDF's where the Planning Inspectorate concluded that the Core Strategies were unsound. Key to these decisions was a lack of evidence to support the proposals. At the time of writing, the Ashford Core Strategy EIP was also under close scrutiny as the Inspector expressed concerns about the absence of a clear evidence and decision making trail. Dover District Council and its Partners are seeking to provide sufficient transport evidence to support the LDF via this transport study. However, it should be recognised that the Dover Core Strategy options have been developed following a multi – criteria planning led sifting and comparison of alternative sites. The Dover Transport Study has not, therefore, considered the comparative benefits of one development location over another. Rather it has tested the strategic transport impacts and needs of each cumulative Core Strategy option.

1.1.3 WSP, a development and transportation consultancy has been commissioned to undertake the Dover Transport Study. This work includes an assessment of existing and future (with LDF development) transport conditions, the identification, prioritisation and costing of transport proposals, (please see Supporting Document No. 7 for Phasing and Implementation) consideration of the transport issues associated with the Whitfield Masterplan, the growth of Dover Port and an assessment of Air Quality. To facilitate this analysis, a multi-modal transport model has been constructed. This major model has been developed with the full involvement of the HAg and KCC and has been accepted as 'fit for purpose' by the Highways Authorities. The Dover multi-modal transport model provides a platform to test land use options and to consider future changes to the towns transport system.

1.1.4 The sustainable growth and regeneration of Dover will not be achievable without the support of an integrated transport system that provides for movement and access to a range of employment and services to enable the town to function and grow. This future transport system will need to provide adequate capacity to support growth but, perhaps more importantly, it will also need to encourage non-car modes of transport and contribute to the delivery of a connected and high quality environment. The infrastructure and strategies associated with Dover's regeneration should provide meaningful and lasting solutions which will stimulate investment and foster a sense of place.

1.1.5 Of necessity, in this changing and increasingly congested environment, land use planning must play its part in reducing the distances travelled to work, to school, to health care, to shops and to leisure activities. Where these facilities cannot be provided "on the doorstep" a range of transport options need to be in place so that, depending on

the length of the journey and the mobility of the traveller, accessibility by all modes for all people is catered for.

1.1.6 The car cannot be discounted from the daily lives of Dover residents and visitors, but further consideration will have to be given to how freedom to use the car for all journeys can be managed in the future. In planning for and providing viable transport alternatives to the car, careful consideration needs to be given to the needs of those who do not own or have access to a car (above 40% of households in particularly deprived wards within Dover). The transport solutions for Dover should offer new opportunities for existing as well as new residents and employees; seeking to improve social inclusion and balance the needs of all members of the community.

1.1.7 The economic regeneration and continued success of Dover will require sufficient people to create the critical mass needed to support and feed the economy. The economically active population will of necessity rise. Where these people live and work and how they travel to and from work will be critical to the success of the Vision for Dover.

1.2 LOCAL DEVELOPMENT FRAMEWORK (LDF)

1.2.1 The Planning and Compulsory Purchase Act (2004) introduced a new 'two-tiered' planning system:

- Regional Spatial Strategies – setting out a broad spatial strategy for a region; and
- Local Development Frameworks – to outline the spatial planning strategy for the local area.

1.2.2 The LDF for Dover District Council is a key plan for the District covering the period to 2026 and includes a number of documents, set out below:

- Core Strategy; and
- Site Allocations Document.

CORE STRATEGY

1.2.3 The Core Strategy document sets out the key issues, aims and objectives for the District, in addition to identifying options to address the issues. Three initial options were identified, measured on the number of new homes to be built and an indication of the likely population change. The options, covering the period to 2026, were as follows:

- Option 1: 5,000 homes;
- Option 2: 10,000 homes; and
- Option 3: 14,000 homes.

1.2.4 Since these initial options were identified, it was considered that Option 1 was insufficient to address the issues, particularly as a result of work that emerged from the Kent and Medway Structure Plan, in addition to the South East Plan. The revised options are set out below:

- Option 1: 6,100 homes;
- Option 2: 8,100 homes (to reflect possible growth level raised in the South East Plan);

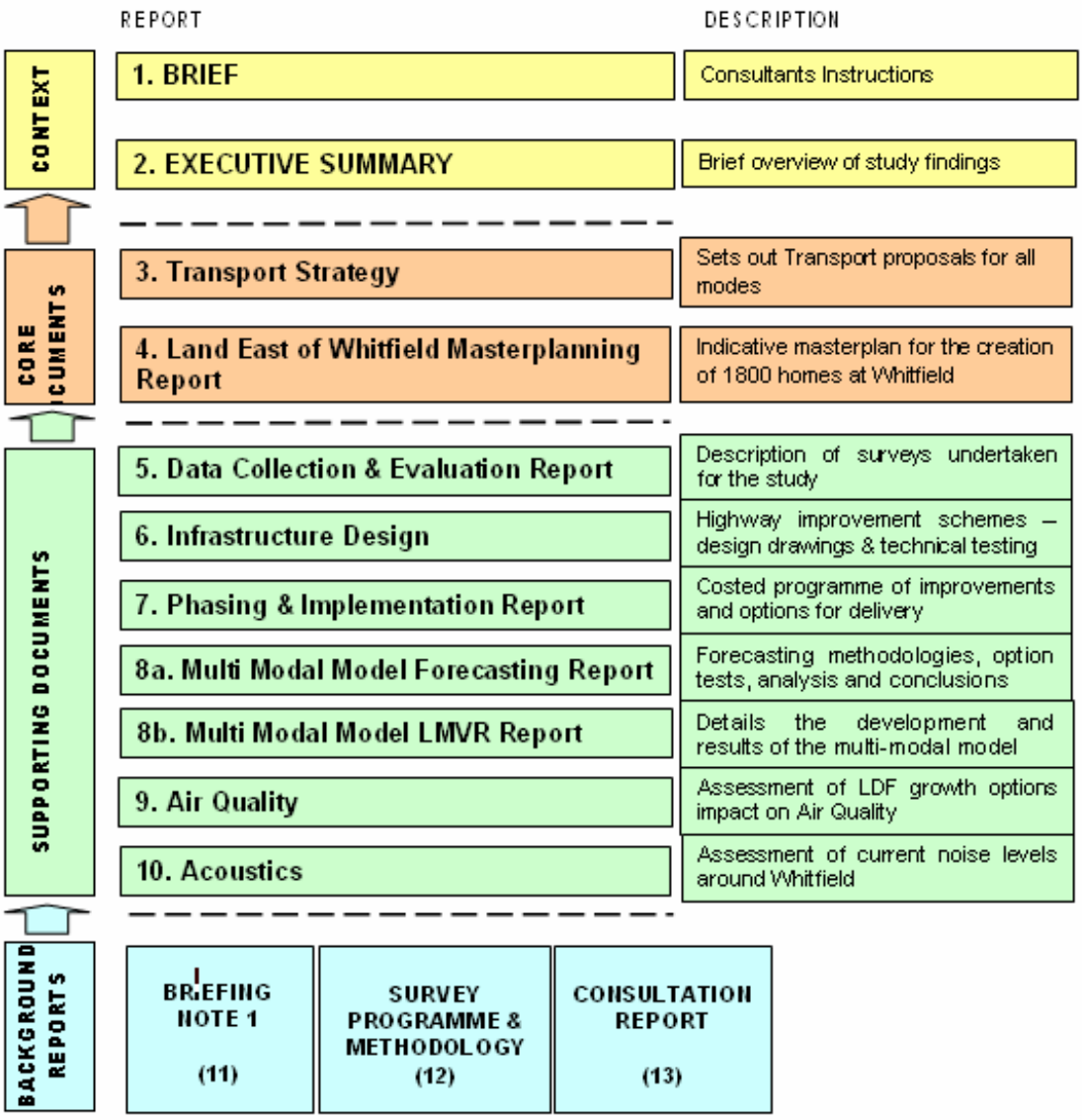
- Option 3: 10,000 homes; and
- Option 4: 14,000 homes.

1.2.5 Following extensive and careful consideration of the options, it was agreed by a meeting of Extraordinary Council on the 20 July 2006 that Option 3 was preferred. It is the remit of this commission to have particular regard to the proposals of Option 3 in preparing the Dover Transport Strategy. However, the transport modelling work, consultation with stakeholders and analysis of policy objectives (described within this and other project reports) has enabled a full and independent review of all LDF options and their opportunities in transport terms.

1.3 DOVER TRANSPORT STRATEGY, SUPPORTING DOCUMENTS

1.3.1 A range of supporting documents has been prepared to inform the progression of the Dover Transport Strategy. These are detailed in Figure 1.1 below.

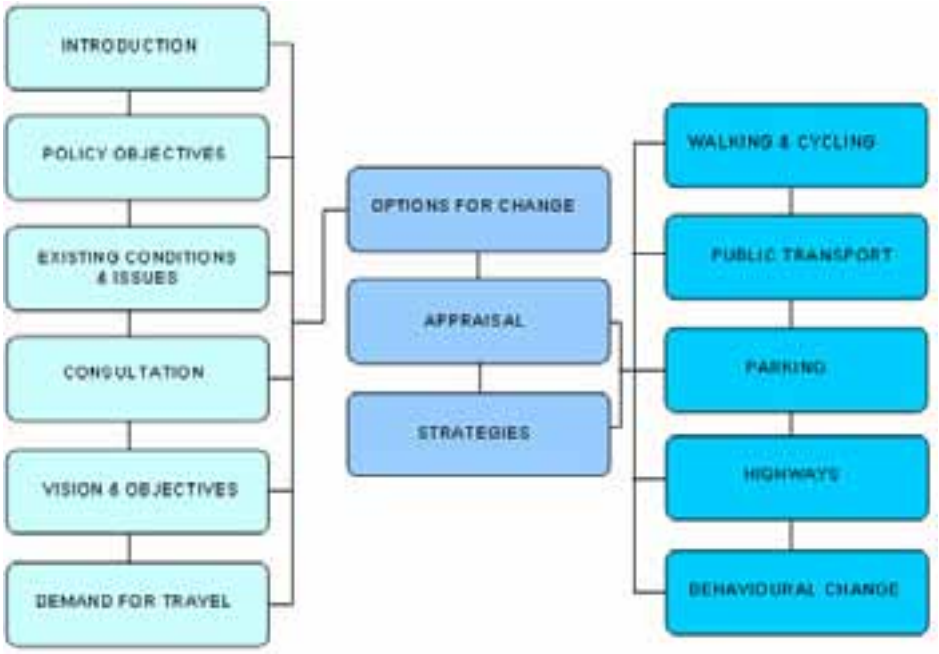
Figure 1.1 Reporting Process for the Dover Transport Strategy


REPORT
DESCRIPTION
CONTEXT
1. BRIEF
Consultants Instructions
2. EXECUTIVE SUMMARY
Brief overview of study findings
CORE DOCUMENTS
3. Transport Strategy
Sets out Transport proposals for all modes
4. Land East of Whitfield Masterplanning Report
Indicative masterplan for the creation of 1800 homes at Whitfield
SUPPORTING DOCUMENTS
5. Data Collection & Evaluation Report
Description of surveys undertaken for the study
6. Infrastructure Design
Highway improvement schemes – design drawings & technical testing
7. Phasing & Implementation Report
Costed programme of improvements and options for delivery
8a. Multi Modal Model Forecasting Report
Forecasting methodologies, option tests, analysis and conclusions
8b. Multi Modal Model LMVR Report
Details the development and results of the multi-modal model
9. Air Quality
Assessment of LDF growth options impact on Air Quality
10. Acoustics
Assessment of current noise levels around Whitfield
BACKGROUND REPORTS
BRIEFING NOTE 1 (11)
SURVEY PROGRAMME & METHODOLOGY (12)
CONSULTATION REPORT (13)

1.4 TRANSPORT STRATEGY STRUCTURE

1.4.1 The following Transport Strategy report has been set out to provide a clear route from policy aspirations, through existing conditions, issues and options, consultation and defining a vision for the Strategy, to appraising the scheme options against the aims and objectives. The resultant strategy proposals are then discussed by mode with a clear indication of their contribution to tackling the key issues that have informed the preparation of this Transport Strategy i.e. Port development, town centre accessibility and LDF growth. This process is illustrated in Figure 1.2 below.

Figure 1.2 Transport Strategy Structure



2 Policy Objectives

2.1 INTRODUCTION

2.1.1 The Dover Transportation Strategy has been prepared having regard to, and in support of, National, Regional and Local transport and land use policies.

2.2 KEY POLICY CONSIDERATIONS

2.2.1 Briefing Note 1 (Background Report No.11) set out in detail the key national, regional and local policy considerations for a transport strategy for Dover. A summary of the key messages that will drive the transport strategy, as identified in Briefing Note 1, are set out in Table 2.1 below.

Table 2.1 Key Regional and Local Policy Messages / Considerations

POLICY	MESSAGE / CONSIDERATION
Regional Transport Strategy (to 2026)	*Improve transport links and access, especially for disadvantaged groups, whilst protecting and improving the natural environment* - *important role of road user charging in reducing number and length of car trips* Supports improvements to infrastructure to enhance the role of Dover Port
PPG13: Transport	The key aim of PPG13 is to ensure that local authorities carry out their land use policies and transport programmes in ways that help to: ■ Promote more sustainable transport choices for people; ■ Promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking, and cycling; and ■ Reduce the need to travel, especially by car.
Highways Agency Draft Circular 2/2007: Planning and the Strategic Network	This new circular replaces DTLR Circular 4/2001 and is intended to bring policy on planning and the Strategic Road Network (SRN) in England into line with recent changes in broader planning and transport policy. As part of this new circular, development proposals will now be expected to include measures to manage transport demand, such as Travel Plans. The presumption will be to prefer, where possible, solutions other than the provision of new road capacity.
Kent & Medway Structure Plan (2006 – 2021)	*'to provide good and safe accessibility to jobs and services for all sections of the community in Kent, and to improve the environment and health of the community by reducing congestion and pollution, widening the choice of transport available and by developing public transport, cycling and walking'* - *provide choice and reduce dependency on the private car* - *improve the A2 to provide better access to Eastern docks.*

Table 2.1 continued

POLICY	MESSAGE / CONSIDERATION
Kent Local Transport Plan (2006 – 2011)	*'manage and maintain the existing road network to preserve the asset and reduce congestion'* *'to provide good and safe accessibility to jobs and services for all sections of the community in Kent, and to improve the environment and health of the community by reducing congestion and pollution, widening the choice of transport available and by developing public transport, cycling and walking'* *Funding for the period 2006-2011: £16.397m* *Kent Access Phase II: complete high grade access of the Sandwich corridor between A2 at Dover and A299/A253 to capitalise on wider and more mobile labour market in East Kent* *- bids could be submitted in the period 2006-2011, but will require further design work and would likely need a mix of developer, ODPM and LTP funding*
Dover District Transport Strategy (2005)	*To improve public transport interchanges; encourage interaction between the town, sea front and the port; and to tackle current air quality issues*
Dover LDF – Core Strategy	*'To encourage use of more sustainable transport modes such as walking and cycling; reduce energy consumption and pollution, and preserve and enhance the natural and built environment'*
Site Allocations Document (LDF Document)	*'improve the economic, social and environmental well being within Dover District and improve quality of life for everyone'*
Dover District Community Strategy 2001 – 2010	*'make Dover a focus for new development over the next 20 years in order to transform the town from an underperforming position to a leading role in the District and East Kent'*

2.2.2 In addition to the policy aspirations as defined, in brief, above, the Dover transport study will draw from the principles set out in three influential reports:

- The Eddington Transport Study: Transport's role in sustaining the UK's productivity and competitiveness (December 2006);
- Barker Review of Land Use Planning (2005); and
- The Stern Review: The economics of climate change.

2.2.3 This will ensure that the resultant transport proposals, to support growth and economic regeneration in Dover, accord with recent and emerging national policy

2.2.4 The key principles of these reports are set out below.

2.3 THE EDDINGTON TRANSPORT STUDY: TRANSPORT'S ROLE IN SUSTAINING THE UK'S PRODUCTIVITY AND COMPETITIVENESS

2.3.1 The Eddington Transport Study (December 2006) examines the long-term links between transport and the UK's economic productivity, growth and stability, within the context of the Governments broader commitment to sustainable development.

2.3.2 Eddington's recommendations are listed below:

- *Focus policy and sustained investment on improving the performance of existing transport networks, in those places that are important for the UK's economic success;*
- *Over the next 20 years, the three strategic economic priorities for transport policy should be: congested and growing city catchments; and the key interurban corridors and the key international gateways that are showing signs of increasing congestion and unreliability;*
- *Government should adopt a sophisticated policy mix to meet both economic and environmental goals. Policy should get the prices right (especially congestion pricing on the roads and environmental pricing across all modes) and make the best use of existing networks. Reflecting high returns available from some transport investment, based on full appraisal of environmental and social costs and benefits, the Government, together with the private sector should deliver sustained and targeted infrastructure investment, in those schemes which demonstrate high returns, including smaller schemes tackling pinch points;*
- *The policy process needs to be rigorous and systematic: start with the three strategic economic priorities, define the problems, consider the full range of modal options using appraisal techniques that include full environmental and social costs and benefits, and ensure that spending is focused on the best polices and;*
- *Government needs to ensure the delivery system is ready to meet future challenges, including through reform of sub-national governance arrangements and reforming the planning process for major transport projects by introducing a new Independent Planning Commission to take decisions on projects of strategic importance.*

2.3.3 The report also indicated that ministers should consider implementing capacity enhancements such as hard shoulder running rather than road widening to reduce the risk of making unnecessary investment in infrastructure given that road pricing might be introduced in a decade.

2.3.4 For Dover, the Eddington report is of great significance. Dover is an international gateway of major importance to the UK economy. As such, the sustainable growth of the town and the confirmed expansion of the Port are of national importance, making transport investment a priority.

2.4 BARKER REVIEW OF LAND USE PLANNING (2005)

2.4.1 The recurrent themes of the review aim to build on recent planning reforms, taking into account the need to create a planning system that appropriately weights economic benefits, is more responsive to changing circumstances and delivers planning decisions in a more transparent and timely manner.

2.4.2 The proposed reforms are also made in the context of increasing public participation and democratic accountability; ensuring that economic benefits are not pursued at the expense of environmental and sustainability needs; and appreciating the various changes made to the system in recent years.

2.4.3 Recommendations are made under three broad headings – flexibility & responsiveness of the system to economic factors; efficiency of planning processes to reduce costs associated with delivering desired outcomes; and more efficient use of land.

Efficient Use of Land

2.4.4 Increased demand for space needs to be managed effectively. Suggestions for reform that could be adopted within Dover include an increase in densification of developments; the use of land uses with the least likely environmental, landscape value or with limited public access (usually low value agricultural land on the outskirts of urban areas). In addition, local planning authorities should adopt a more positive approach to applications provided they include measures to enhance surrounding areas e.g. through creation of open access woodland. Related to this, government should review other models for green space provision as adopted in other countries.

2.5 SUMMARY OF THE STERN REVIEW - THE ECONOMICS OF CLIMATE CHANGE

2.5.1 The review assessed varying evidence on the impacts of climate change and its economic costs. It is a fact that this process is starting to happen as evidenced by the increase in ferocious / extreme weather conditions in both rich and poor countries.

2.5.2 The Stern report states that climate change is happening at a rapid rate especially fuelled by the increase in carbon emissions. Stabilising the current emissions level (430ppm CO_{2e}) requires 25% reduction in emissions by 2050 and stabilisation at this rate requires over 80% reduction in the longer term. Contrary to popular belief the costs of taking action now are lower than not doing anything, calculated at 1% of GDP per year compared to 5% per year if left ignored. The poorer countries of the world will experience the consequences of climate change earlier and will no doubt suffer the most. Effective global response thus requires 3 main polices namely: carbon pricing through tax, trading or regulation; support for innovation and R&D for new technologies; and; remove barriers to energy efficiency by educating the public about what role it can play in meeting this aim.

2.5.3 The review reiterates the need to act now rather than later and gives assurance that whatever action is taken need not be at the expense of economic growth, either in rich or poor countries. In fact, it emphasises that action against climate change is a longer term strategy for economic growth for all countries.

2.6 SOUTH EAST PLAN (SEP) & PANEL REPORT

2.6.1 The South East Plan was submitted in draft to Central Government in March 2006 by the South East England Regional Assembly (SEERA), setting out changes needed to improve the quality of life in the South East region over the next 20 years (2006 – 2026). In particular, the South East Plan sets out the housing requirement that is needed to support growth and economy.

2.6.2 The SEP was subject to an Examination in Public (EiP) between November 2006 and March 2007 and the resultant draft SEP Panel Report was published in August 2007. This report provides a review of the findings of the EiP and provides recommendations for alterations to the draft SEP. In particular, the Panel recommends an increase in the overall levels of housing from 28,900 to 32,000 per annum (640,160 over the Plan period), an increase of around 10%, or 62,000, new homes.

2.6.3 The direct implication that this recommendation has for Dover District is an increase from the SEP recommendation of 6,100 homes over the Plan period (305 homes per annum) to 8,100 homes. This is an increase of an additional 100 homes per annum. It is recommended that the majority of this housing should be located in Dover town on the basis that:

- It would help to maintain labour supply, which under the draft Plan is likely to fall due to ageing population;
- Investor confidence has increased recently, partly due to the prospect of Channel Tunnel Rail Link (CTRL) Domestic services; and
- It would increase the customer base for the forthcoming town centre developments.

2.6.4 The Panel considers that improvements to the A2 and A20 for port traffic and lorry parking facilities should be named in the SEP to indicate the Sub-regional Transport Strategy to support sustainable growth and regeneration in East Kent.

2.6.5 The commissioning of the Dover Transport Study was welcomed by the Panel to aid clarity on the influence of transport on the spatial strategy. The findings of this report and the model outputs will assist in informing progress of the South East Plan.

2.7 HIGHWAYS AGENCY'S REQUIREMENTS OF THE LDF PROCESS

2.7.1 On 11 May 2007, the Highways Agency wrote to all Planning Authorities in the South East region to explain the role of the Agency in the emerging Core Strategies of the area and their expectations of the transport evidence base behind the LDF. The Agency stressed the importance of technical assessment of transport impacts on the Motorway and Trunk Road network and the benefits that transport modelling can bring to the assessment process. In addition, the importance of travel demand management and the promotion of non-car modes were also highlighted. Subsequently, it was acknowledged that the full involvement of the Agency in the steering and auditing of the Dover transport study will ensure that their need for an evidence based approach to transport and land use planning will be met.

2.8 PREVIOUS TECHNICAL STUDIES

2.8.1 A number of key technical studies have been undertaken to address transport issues and future development within Dover. The findings of these reports and the proposed recommendations that have come out of these reports have been considered throughout in the preparation of this Transport Strategy for Dover. In many cases, the myriad of existing studies provide a sound analysis of current problems, opportunities and aspirations. Many of the ideas and proposals generated by these reports are directly relevant to the Dover Transport Strategy. Some of them have, therefore, been carried forward as key components of the Integrated Transport Strategy for the town.

2.8.2 To ignore the conclusions of extensive previous work on Planning, Economic and Transport related studies would be wasteful of knowledge and resources. Indeed, an important role of the Dover Transport Study is to review, test and integrate previous proposals within a holistic strategy.

2.8.3 The relevant technical reports that have been previously prepared and consulted upon are set out below:

- Domestic Rail Services on the CTRL in East Kent: The Economic Case (August 2002) – Steer Davies Gleave
- Dover Pride Regeneration Strategy and Action Plan: Final report to Dover Pride Task Force (December 2004) – SQW Ltd, BBP Regeneration, David Lock Associates, Integrated Transport Planning and The Tourism Company
- The Need for Transport Investment in East Kent: Final Report (December 2005) – Jacobs Babtie
- Planning for the Next Generation (March 2006) – Dover Harbour Board
- Dover Masterplan: Final Report (May 2006)
- Dover Transport Study: Draft Review of Existing Data (August 2006) – Kent County Council
- Dover Harbour Board – Terminal 2: Access Options Feasibility Study (October 2006) – Halcrow Group Limited
- Dover Public Realm Strategy: Market Square (October 2006)
- Dover Public Realm Strategy: Pencester Gardens (October 2006)
- Dover Public Realm Strategy: Castle Square (October 2006)
- A Review of Bus Services in the Dover District Council Area (October 2006) - DDC
- Port of Dover Economic Impact Assessment (November 2006) – Arup
- Dover LDF Potential Housing Sites – Whitfield (September 2006) – EDAW
- Port of Dover Masterplan Assessment (January 2007) – Arup
- Dover Strategic Signage Study: Final Report (February 2007) Faber Maunsell
- Draft Dover Parking Strategy (June 2007) - Peter Brett Associates for DDC
- Dover Midtown Feasibility Study (August 2007) – GVA Grimley
- Dover: A vision for regeneration and delivery – Rummey Design

2.9 SUMMARY

2.9.1 It is very clear that in order to comply with, and contribute to, key policy objectives, the Dover Transport Strategy will therefore need to *manage* traffic growth associated with the regeneration and economic growth of Dover. This will include considering travel demand management measures in addition to improvements to the existing infrastructure that allows increased accessibility to and throughout Dover, especially by foot, cycle and public transport. Facilitating Dover's growth needs to be balanced with the need to make a positive contribution to local quality of life, minimise

the impact on energy consumption and pollution. As an International Gateway, maintaining good strategic access routes to Dover is a matter of national importance.

2.10 KEY ISSUES / CONSIDERATIONS

- The Dover Transport Strategy will sit within a clear national and local policy framework which aims to:
  - Manage the demand for travel rather than simply accommodate it
  - Provide new and improved infrastructure to facilitate growth
  - Improve local accessibility and travel choice to join up the town
  - Support economic development and quality of life objectives

3 Existing Conditions and Key Issues

3.1 INTRODUCTION

3.1.1 Understanding the existing needs and requirements for travel in and around Dover, in addition to the existing level of service provision that is available for travel by all modes, is the first stepping stone to an appropriate Transport Strategy that caters for all.

3.1.2 This chapter details the existing situation, key issues and opportunities in relation to bus, rail, car parking, the highway network including the one-way system, the Port, health services, town centre pedestrian and cycle access and LDF development sites.

3.2 DOVER TODAY

3.2.1 An assessment of local demographics, economic indicators, journey to work mode shares and a full assessment of the existing bus and rail services was undertaken as part of Briefing Note 1 (Background Report No.11). A summary of the key findings is presented here.

LOCAL DEMOGRAPHICS

3.2.2 Analysing local demographics is useful in understanding existing trip making patterns and in determining the need to enhance public transport services to assist with social inclusion where necessary. Dover District has a relatively low IMD (Index of Multiple Deprivation) rank (154). The higher the rank, the less deprived an area is. The highest rank is 354. Within the sub-regions identified within the South East Plan, Woking has the lowest levels of deprivation (335) and Hastings has the highest level of deprivation (38). Dover is in the bottom quarter of districts within the South East region in terms of deprivation indicators.

3.2.3 Full details of the IMD process are provided within Briefing Note 1 (Background Document No.11). The IMD score is derived using seven key indicators: Income deprivation; Employment deprivation; Health deprivation and disability; Educational skills and training deprivation; Barriers to housing and services; Living environment deprivation; and Crime.'

3.2.4 The car ownership rate within Dover District is 1.13 cars per household. Compared with the rest of the district, the data shows that within Dover town, there is considerably less access to a vehicle, particularly as in some pockets only 26% to 50% of households have access to one or more car. This is reflected in higher than average levels of walking, cycling and car sharing within the town.

3.2.5 Data from the Office of National Statistics, Neighbourhood Statistics survey, confirms that 59.4% of the population within Dover District is employed, compared to an average of 59.2% for the East Kent and Ashford sub-region and 62.5% for Kent (SEP Districts). This illustrates higher levels of unemployment within Dover when compared with the region.

3.2.6 Specific areas of the town with particularly low levels of car ownership and higher levels of unemployment are found within the Wards of St Radigunds, Buckland, Town and Pier, Castle and Tower Hamlets.

3.2.7 Table 3.1 below sets out the mode shares for journeys to work within Dover, as identified from the 2001 Census database (mode shares for trips by metro have been included within the overall mode share for rail). When compared with Kent as a whole, as well as the average mode shares for the South East and England, the table shows:

- Much lower mode share for journeys to work by train (5.7% less compared with Kent)
  - It is expected that this is due to the current journey times to London;
- High mode share for car sharing (1.2% higher than Kent)
  - Linked to low car ownership and unemployment; and
- High mode share for walking and cycling (1.2% and 1.9% higher than Kent, respectively)
  - Linked to low car ownership and unemployment

Table 3.1 Census 2001 Journey to Work Mode Shares

MODE / REGION	DOVER	KENT	SOUTH EAST	ENGLAND
Rail	2.7%	8.5%	6.6%	8.0%
Bus	3.9%	4.2%	4.8%	8.2%
Motorbike	1.4%	1.3%	1.3%	1.2%
Car/Van Driver	65.3%	64.1%	65.7%	60.7%
Car/Van Passenger	8.2%	7.0%	6.3%	6.8%
Taxi	1.1%	0.6%	0.5%	0.6%
Bike	3.0%	2.2%	3.4%	3.1%
Foot	13.6%	11.7%	11.0%	11.0%

BUS BASED PUBLIC TRANSPORT SERVICES

3.2.8 The network is operated by Stagecoach in East Kent and Hastings and is largely commercial. Mainly as a product of the topography, the network is radial in nature with services operating from the central area along radial corridors to the outlying residential areas. These radial patterns serve to provide a doubling of services along corridors closer to the central area. In the central one-way loop where all services converge, bus service frequencies are at their greatest.

3.2.9 The network is largely operated using midi-vehicles (Optair Solo's), but smaller vehicles are used for some parts of the network where streets are particularly narrow, and gradients acute. The vehicles have recently been upgraded, a sign of a strong network with good supporting levels of patronage.

3.2.10 Whilst the use of midi and mini vehicles suits the constrained operating characteristics of Dover, this may be creating a suppressed demand. However, the level of service provided in comparison to other towns of a similar size is high to perhaps compensate for the size of vehicles used, in order to support demand. Many internal

trips can be made on the current network but since there is no circular route linking residential areas, cross town trips require an interchange within the town centre.

3.2.11 It is also clear that there are strong linkages between Dover and other surrounding settlements, which contributes to the provision of access for employment, health and leisure trips. An inter-urban network, consisting of 6 services, serves destinations including Canterbury, Deal, Sandwich, Ramsgate, Folkestone and Hastings. Services to these surrounding towns are broadly hourly, which is an acceptable level of service for these types of trips. However, services (Dover Diamond) to Deal and Canterbury run every 15 minutes providing an excellent level of provision. This service is provided as part of a kick-start initiative in July 2006.

3.2.12 A comprehensive review of the Dover bus network was commissioned by DDC ("A Review of Bus Services in the Dover District Council Area", October 2006), providing a thorough assessment of all aspects of the bus services, the current levels of infrastructure and the constraints within the network. The document also put forward recommendations for those areas where opportunities to improve the network have been identified and the financial mechanisms to deliver these improvements have been outlined. This will form the foundation of the strategy which needs to accommodate proposed future growth as part of the LDF process.

3.2.13 The recommendations put forward in the "Review of Bus Services in the Dover District Council Area" (October 2006) included:

- KCC and DDC to ensure that Pencester Road is upgraded, primarily funded through developments and LTP credits;
- KCC and DDC to carry out a full review of the traffic system in Dover town centre;
  - The requirements for Public Transport must be fully taken in to account
- KCC to carry out an audit of the remaining bus stops: first priority – Dover town centre;
- KCC to review the funds available for infrastructure in the context of the need to improve public transport in the Dover area and the commitment of the bus company and DDC to this process;
- DDC to re-negotiate contract with JC Decaux to obtain additional shelters – to be linked with new developments;
  - All parties to explore alternative sources of funding for infrastructure
  - All parties to agree a programme for the introduction of real time information to key stops
- DDC to review car parking pricing policies in the context of future Dover town centre regeneration;
- DDC to consider development of a Park and Ride site or sites; and
- Regular forums to be organised between the parties, other transport operators, key employers and representative organisations including Parish and Town Councils and people with disabilities, young people and older people.

3.2.14 Key considerations for bus based public transport improvements are:

- Local network congestion generated by the A20 and M20;
- The one-way system in the central area; and
- Topography.

3.3 RAIL BASED PUBLIC TRANSPORT SERVICES

3.3.1 Dover Priory Rail Station is located approximately 500 metres west of the town centre. Southeastern provide all train services for Dover with direct services to/from London Victoria, London Charing Cross, Canterbury, Folkestone, Ramsgate, Margate, and Ashford and onward journeys are made via connections from London.

3.3.2 London Charing Cross and Victoria are the main London stations served from Dover but the regularity in terms of timing and directness to these destinations varies throughout the day. Where a service is direct, the journey time to London is approximately 120 minutes. Services to Canterbury, Ashford Folkestone, Ramsgate and Margate are more consistent and are relatively convenient for employment trips.

3.3.3 Within Dover District, Dover Priory rail station is the busiest. However, in comparison with other stations in Kent it is lightly used. This is likely to be a result of the journey time to London, not being conducive to commuter trips.

3.3.4 Dover Priory is a relatively small station with three platforms. The rail station has a very small car park for a town of this size with only 35 spaces, 2 of which are designated for disabled users. Secure cycle parking for 15 bicycles is provided and additional conventional racks. The rail station is fully staffed and a ticket office is open all day. The station is accessible with many features including lift and set down and pick up points.

3.3.5 The current image of the rail station as a key Gateway into Dover is perceived to be poor. This is due to a number of factors including lack of integration with the town centre and port, information and signage for public transport, pedestrians and cyclists and the general quality of facilities. Tackling these issues is a key consideration for the Transport Strategy. At the time of writing, improvement works are currently underway to provide enhanced passenger facilities. This is part of a series of Public Realm improvements funded via Dover Pride and the East Kent Partnership.

PARKING

3.3.6 Peter Brett Associate's (PBA) were commissioned by DDC to develop a parking strategy for Dover. The resulting parking strategy has been informed by a review of the current location, occupancy level and fare structure of the existing parking stock in Dover, and takes a view on whether this is the appropriate land use for each particular parking site. The future development options for Dover are also considered within the strategy.

3.3.7 Essentially, the review of the current parking stock within Dover showed that there are no existing capacity issues. However, a key issue was highlighted as being the lack of variable message signing, which can lead to increased journey times in searching for spaces, queuing and subsequent effects on local air quality.

3.3.8 The key review findings of the Dover Parking Strategy (June 2007) are set out below:

Strategic

- No Variable Message Signing (VMS) currently being used
- Parking structures are competitive with other retail locations
- There is a range of parking structures employed within the car parks identified in the study. Typically, 1 hour is 0.70p and all day is £4.00
- Shorter charging periods compared with other retail locations
  - Dover: 0900 – 1700 Monday to Saturday
- Less parking stock per m^2 of retail space than other retail locations
  - Dover: 1 space per $74m^2$
  - Bluewater: 1 space per $11m^2$
  - Canterbury: 1 space per $25m^2$
- Dover also not able to compete on quality of retail provision compared with other retail destinations

Off-Street Parking

- 819 Public spaces and 1,248 Private spaces
- No major capacity problems with current off-street parking stock
- Town centre off-street car parks have higher occupancy levels than larger private off-street car parks away from the town centre
- Stembrook and Russell Street car parks generate the greatest revenue for DDC
- No significant seasonal variation (although analysis does not take into account variations in duration of stay)
- PBA's 'In Focus' strategic appraisal method was used to assess the existing off-street parking provision.
  - The tool uses three KPI's; Accessibility, Internal Environment and Cost of Parking to assess each car park and to provide a score. The higher the score, the more attractive the site is likely to be for users. The appraisal tool is also able to incorporate the impact of future changes, such as potential or committed development, upon parking conditions in the town centre.
  - The overall average score for car parks within Dover was 74% i.e. 'Good'. Although on closer inspection of the individual results, some car parks scored very highly that were noted to have very low average occupancy levels, which appears to be contradictory.
  - Further analysis showed that there was a slightly stronger relationship between accessibility and occupancy, although this was still relatively weak.

On-Street Parking

- 2,510 on-street spaces
- No capacity problem – average occupancy in the town centre buffer is 68%

Residential Parking

- Residential parking in Dover is organised into 7 zones; A, B, C, D, E, F and K
- Permits are purchased from DDC
- Majority of residential parking is on-street, however residents in Zones B and E are entitled to park in the off-street car parks at Albany Place and Camden Crescent, respectively
- Non-permit holders are allowed to use designated spaces for a maximum of 1 hour – survey noted low demand for these users

3.3.9 Having reviewed the PBA report, it may be helpful to reconsider the findings to ensure consistency with the proposed Dover Transport Strategy. The PBA review has shown that there are currently no capacity issues for parking within Dover. The proposed Dover Parking Strategy has been informed by a number of factors including the LDF development proposals and growth in traffic, population and car ownership. The level of growth in the assessment has been constrained to take account of demand management strategies put forward as part of this Transport Strategy. The resultant strategy maintains a buffer of 15% capacity over demand and recommends the provision of an additional multi-storey car park, within the town centre, to accommodate displaced parking from existing sites with development potential.

3.3.10 Parking has the potential to play a key role in the transport strategy proposals for Dover. Investment in infrastructure, CTRL and high quality bus services are all very positive strategy measures, however, other supporting policies need to be in place to ensure the viability and success of these proposals. The use of demand management techniques, such as parking restraint, will be a key driver to this success.

3.3.11 The proposals put forward in the report could go further to assist this aim. Maintaining a 15% capacity over demand, plus a recommendation for a multi-storey car park close to the town centre will not serve to suppress parking, nor will they support the proposals for Park and Ride and express bus services (see Chapter 11). The 2001 Census for Dover suggested that the population was 104,566 at this time. This is only slightly higher than the population for Ashford, stated to be 102,661 in the 2001 Census. When development within Dover is complete, the two towns will have an international train station in common, yet the Parking Strategy for Ashford, in support of the Greater Ashford Development Framework and Transport Strategy, makes a much stronger statement in its recommendations.

3.3.12 The Ashford report recognises the need to introduce a parking strategy that is in support of a high quality bus service, but that remains sensitive to competition with other competing towns. Furthermore, the strategy for Ashford recommends parking standards for new development at half the current PPG13 levels immediately, reducing to a quarter by 2031, and which relies on the implementation of a high quality bus service and Park and Ride.

3.3.13 The Parking Strategy for Dover needs to be similarly bold in its recommendations to meet HAg and KCC policy aspirations and to encourage more sustainable travel patterns.

3.4 HIGHWAY NETWORK

3.4.1 The 2005 Dover District Transport Strategy clearly sets out the existing highway provision to and within Dover:

The A2(T) and A20(T) Trunk Roads both terminate at the entrance to Dover Eastern Docks. The A2(T)/M2 and A20(T)/M20 routes across Kent are both part of the Trans-European road network. They facilitate regional travel by motor vehicle, linking to the M25 with around a 1 hour 10 minute journey time, and providing access to the rest of the UK motorway and trunk road network.

The A2(T) bypasses the town to the north-east via Jubilee Way, but the service level provided on the approach from Canterbury to Dover is inferior to that on the remainder of the route corridor, with sections of single rather than dual carriageway and at-grade rather than grade separated junctions. The A20(T) is now the sign posted route from Dover to London, but it travels through the town causing a significant environmental impact from noise, pollution and severance between the town centre and the sea front and harbour. Due to the docks, a high percentage of vehicles on the two trunk roads are lorries and foreign drivers.

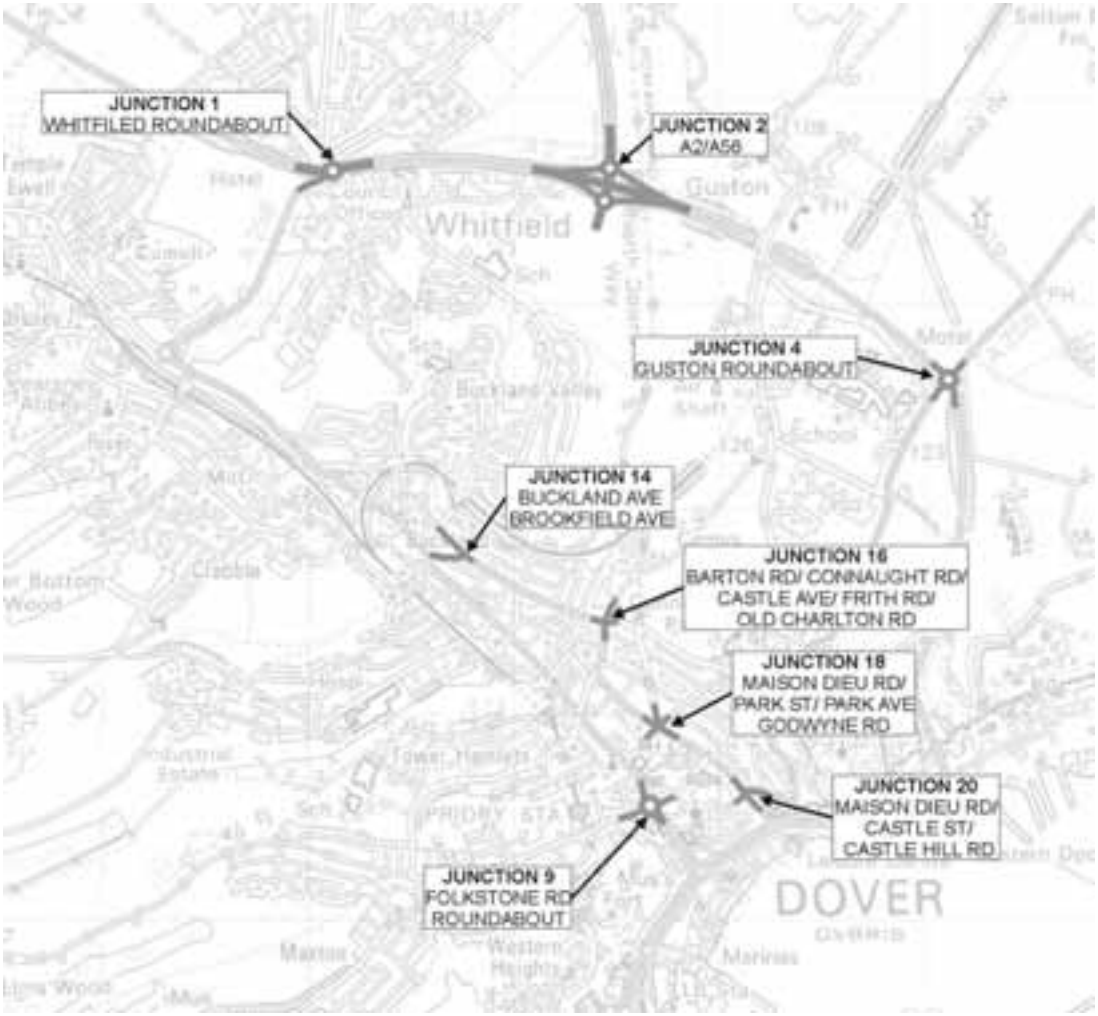
In addition to these key strategic elements of the district road network, there is an extensive road provision for local movement. The A256, as a designated primary route, links the A2(T) at Whitfield to Sandwich then onto Thanet and also forms a secondary route from Whitfield to the A20(T) through Dover town centre. Other secondary routes feed-off and between these three major road links:

- *The A257 connects Sandwich to Canterbury through Wingham and around Ash;*
- *The A258 connects Deal to the A2(T) and Dover and to Sandwich; and*

3.4.2 *The A260 connects Folkestone to the A2(T) north of Denton.*

3.4.3 A critical component of the Dover Transport Study is the creation of a multi-modal transport model. The scope, functionality and performance of the model is described in the Multi Modal Model and Options Testing Report (Supporting Document No.8). From initial modelling work, the key local junctions which either currently experience problems or could potentially in the future, were identified. These went forward for further detailed analysis. The key junctions are shown in Figure 3.1 below.

Figure 3.1 Key Junctions



3.4.4 The existing performance of these junctions is summarised in Table 3.2 below. A 'tick' denotes that the junction is performing well with no issues and a 'cross' highlights those junctions that are already failing without the impact of growth and LDF development options. The testing of these junctions and the identification of appropriate infrastructure design to accommodate growth is a crucial component of the Transport Strategy.

3.4.5 Table 3.2 illustrates that Whitfield Roundabout, Guston Roundabout, Brookfield Avenue/Buckland Avenue Junction, Maison Dieu Road/Castle Street Junction and Folkestone Road Roundabout all currently require improvement to provide an acceptable level of performance.

Table 3.2 Baseline Performance of Junctions

JUNCTIONS	BASE
Whitfield Roundabout	×
A256/ A2	✓
Guston Roundabout	×
Brookfield Avenue / Buckland Avenue	×
Old Charlton Road/ Connaught Road	✓
Maison Dieu Road / Park Street	✓
Maison Dieu Road/ Castle Street	×
Folkestone Road Roundabout	×

3.4.6 These, and other, junctions have been modelled to test the LDF options:

- Option 1: 6,100 dwellings
- Option 2: 8,100 dwellings
- Option 3: 10,000 dwellings
- Option 4: 14,000 dwellings

3.4.7 Figures 3.2 and 3.3 below show the existing performance of the highway network i.e. the baseline situation, in the AM and PM Peak. The letters denote junction performance and are scaled from A to F, where A denotes no problems and F denotes the worst level of junction performance. Only those junctions where there are concerns over performance are noted on the figures below i.e. from D to F.

3.4.8 Figure 3.3 shows that there are no junctions in Dover that are subjected to serious levels of delay in the base year PM peak hour. In the PM peak the majority of trips are leaving Dover so the road system is acting as a distributor of trips away from the town, whereas in the AM peak, trips are converging on the town. Note that these conditions are representative of the PM peak hour during an average weekday. Extreme Port influences on traffic conditions in Dover, while not uncommon, are not representative of an average weekday.

3.4.9 The Multi Modal Model and Options Testing Report (Supporting Document No. 8) discusses the effect of the LDF options on the highway network.

3.4.10 The construction and development of the transport model has been guided by a Technical Working Group of experts. Both the HAg and KCC are represented on this group. Full details of the modelling process are contained within the Multi Modal Model and Options Testing Report (Supporting Document No.8). The outputs from the model identified that a range of infrastructure requirements are necessary to address current and future network deficiencies. Infrastructure improvement concepts were subsequently designed and tested in detail. The Infrastructure Design Report (Supporting Document No.6) sets out the detail of all highway infrastructure proposals.

Figure 3.2 Base AM Peak Network and Junction Performance

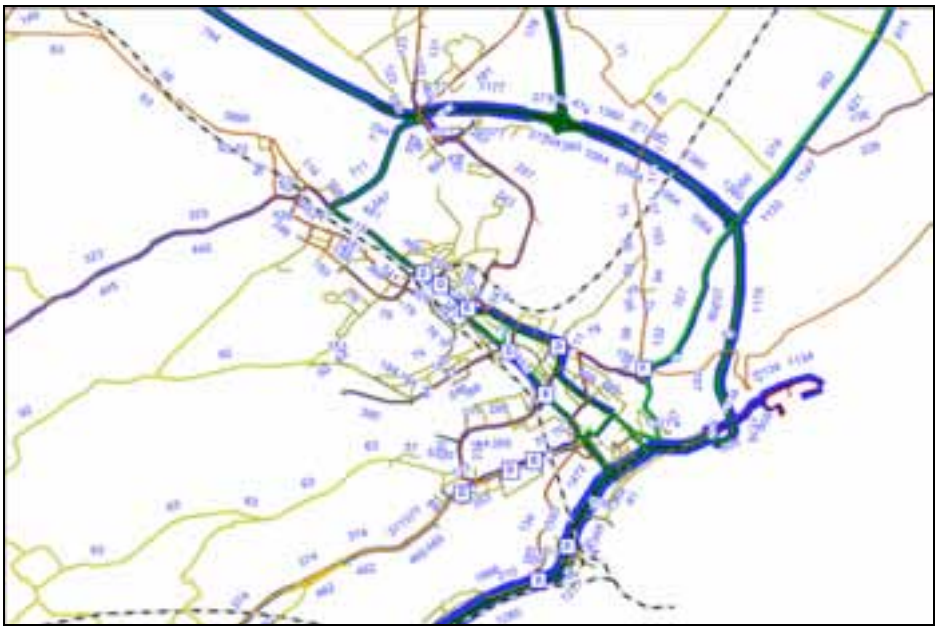
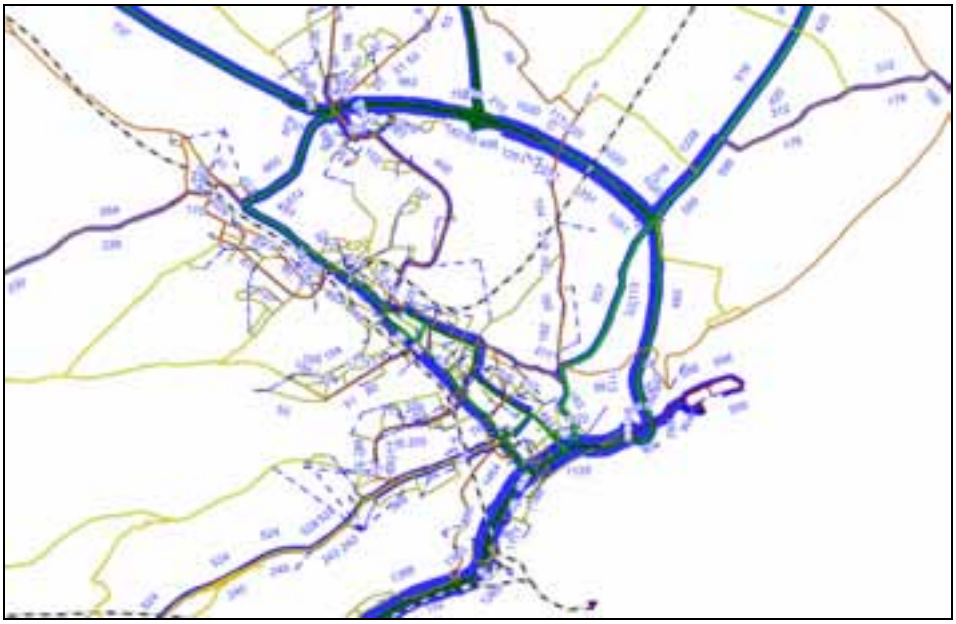


Figure 3.3 Base PM Peak Network and Junction Performance



3.5 PORT ECONOMIC ASSESSMENT

3.5.1 ARUP prepared a report in November 2006 to assess the economic impact of the Port of Dover. The assessment provides a review of the significance of the Port in terms of employment, income, tourism, investment and regeneration. In 2005, the Port carried 13.3 million ferry passengers, 2 million goods vehicles and 2.7 million tourist vehicles.

3.5.2 The current main activities of the port include;

- Ferry activities;
- Cruise operations;
- General cargo;
- Marina.

3.5.3 Investment to diversify the current port activities has pushed for growth in the cruise, fresh produce and marina sectors. To accommodate the projected overall growth of Port related traffic, predominantly freight, expansion of the Western dock forms the key component of the Port Masterplan. This will ensure that Dover continues to rank as a key port within the UK.

3.5.4 Based on current port activities and the forecasts for growth, the Port is set to continue to be a key economic generator within Dover. Directly and indirectly the Port is estimated to support up to 22,000 jobs. In summary the key economic points are;

- 6,700 direct jobs are generated by the Port
- 66% of the total supported (direct and indirect) jobs are based within Dover;
- 67% of these positions are filled by residents of Dover;
- The Port is estimated to contribute £190 million to GDP This is estimated to be 14% of Gross Value Added for Dover;

- The Port contributes approximately £237 million to the economy in the form of, employee and visitor spending.
- The total Port employment spending is estimated at £112 million, 71% of which are paid to staff resident in Dover District. This represents 9% of household income for the district.
- Of the £112 million of Port employment spending, 61% of this is accounted for by ferry operator staff and 14% by the port authority and regulatory authorities. The remaining 25% is attributed to port operators, agents and brokers.
- The Port of Dover and associated activities is estimated to contribute £557million to GDP, in the form of purchases, employees and visitor spending.

3.5.5 Beyond direct and indirect employment the port generates further economic impacts in the form of tourism spending. The key points are as follows;

- In 2003, approximately 423,000 overnight tourism trips were made to Dover. This is estimated to have contributed £64 million to Dover.
- In addition, some 3.4 million day trips were made to Dover, contributing a further £155 million.
- This level of spend supports approximately 2,960 FTE jobs.

3.5.6 The anticipated growth in the cruise sector and expansion of the marina are also forecast to benefit the Dover economy. These sectors are currently small in terms of the overall Port impact and forecasts of spend are therefore based on information from other ports. Based on experiences elsewhere, the Marina is assumed to contribute £0.5 million per annum. The cruise sector is assumed to contribute £1.2 million per annum.

3.5.7 As identified earlier, the primary route for HGV traffic to and from the Port is the M20/A20 (85% of all port traffic take this route). At Townwall Street, the A20 dissects the town and the seafront. Forecast Port related traffic growth is likely to exacerbate this situation. Different stakeholders involved in the development of the Dover Transport Study have very different priorities for Townwall Street (see Consultation results in Chapter 4). Existing conditions on Townwall Street are seen as a hindrance to the Port's operational efficiency, a significant barrier for pedestrians and cyclists and an unpredictable congestion problem for local motorists. The need to manage the flow of arriving HGV's, and to deal with 'Operation Stack' (caused by weather, industrial action in France or operational problems) is the subject of ongoing national debate. The South East Plan Panel Report encouraged the HAg and KCC to conclude coordination work on Operation Stack and access to the Port as a matter of regional importance.

3.5.8 In summary the Port has a critical role within the Dover local economy. Its efficient operation is also of national importance. It therefore has a major part to play in the regeneration of the town. With the traffic growth forecasts associated with the Port Masterplan, the Port will continue to support the local economy of Dover. However, it is vital that the local benefits of the Port's growth are captured and maximised for the future success of the Dover area. The physical impacts the Port has on the lives of Dover residents and visitors cannot be underplayed. This means that the better integration of the Port, the seafront, the town centre and Dover Priory Station should form an essential part of the Dover Transport Strategy if economic benefits are to be realised.

3.6 LOCATION OF HEALTH SERVICES

3.6.1 Buckland Hospital is located on Coombe Valley Road to the north west of the town centre. A range of bus services provide access to the hospital from Pencester Road within a journey time of 9 minutes. Excluding Whitfield, the majority of residential areas with Dover are within a 30 minute journey time to the hospital by bus. The hospital currently provides a range of outpatient services and some inpatient services. However, there are proposals to remove the inpatient wards from the hospital, which have been confirmed for closure by the end of October 2007.

3.6.2 The GVA Midtown Feasibility Study discusses the possibility of including a large PCT health facility (plus Police, age-concern and CAB) into the development proposals. The current development proposal incorporates some 7,000m^2 of floor space. The GVA report suggests that Buckland Hospital's space need, following closure, is in the region of 6,000m^2.

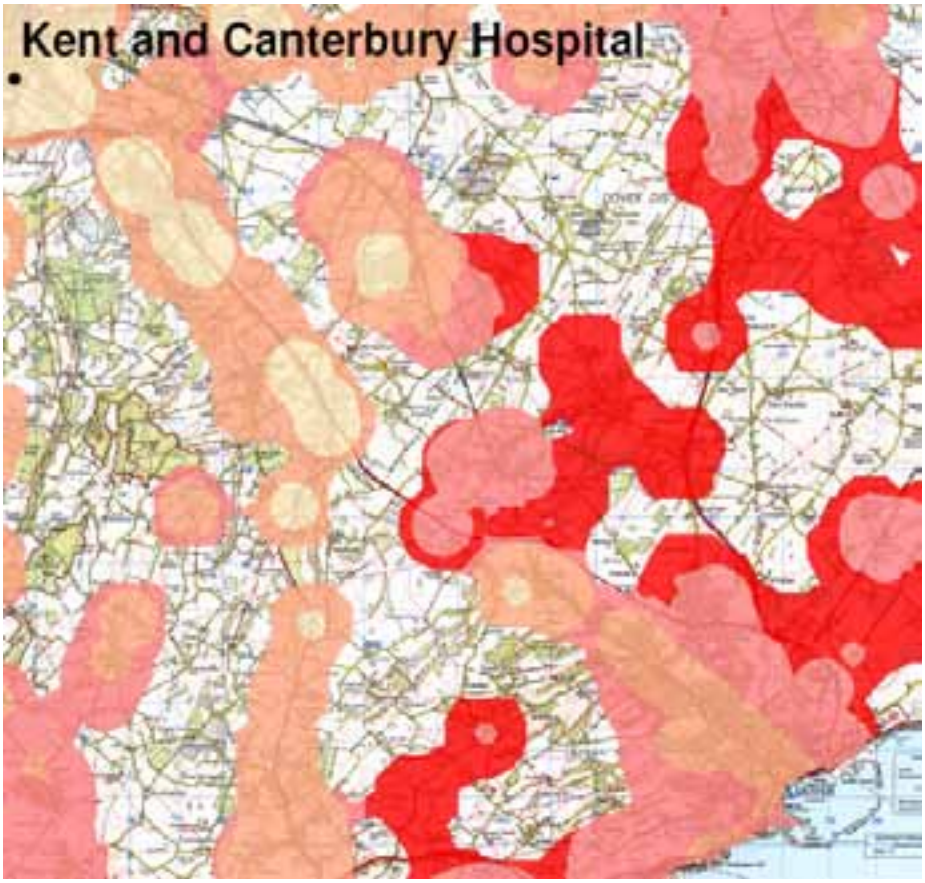
3.6.3 An important consideration for accessibility to health facilities is set down in the Kent Local Transport Plan (2006-2011) which identifies a target for improving accessibility to health facilities in Dover and the wider Kent area:

- To increase household accessibility to hospitals within 30 minutes by 10% between 2005/6 and 2010/11, and increase access to GP surgeries within 15minutes in the same period.

3.6.4 Figure 3.4 below illustrates the current level of accessibility, by public transport, to existing Kent hospitals. This figure has been provided by Kent County Council (KCC). It would appear from the figure that Buckland Hospital is not included, as it has not been annotated. It is understood from discussions with KCC that the Department for Transport prescribed list of major hospitals, for inclusion within Accession work, did not include Buckland Hospital and that this is likely to be due to the lack of an A&E facility at this hospital.

3.6.5 For residential communities located in close proximity to the London Road, the figure shows that Kent and Canterbury hospital can be reached within 40 minutes. For communities beyond this catchment, including Whitfield, the journey time by public transport to a major Kent hospital increases to 60 minutes. Dover therefore does not currently meet the LTP target for access to hospitals. The proposals for new healthcare facilities within Dover will need to ensure that the current levels of accessibility to Buckland Hospital are maintained, or improved upon.

Figure 3.4 Public Transport Accessibility to Kent Hospitals



3.7 TOWN CENTRE PEDESTRIAN AND CYCLE ACCESS

3.7.1 Appendix D: Figure 1 identifies the LDF development sites and key local facilities for community, health, education, leisure, retail and employment. In addition, the figure identifies the important relationship from key origins and destinations to the town centre as 'desire lines', including:

- Dover Priory rail station;
- Western and Eastern Docks;
- Pencester Road (bus station);
- White Cliffs Business Park at Whitfield; and
- Proposed Whitfield development area.

3.7.2 Consideration of the relationship between these origins and destinations and the town centre, and having regard for new development proposals, is key to the preparation of the Transport Strategy for Dover.

3.7.3 The development proposals for Dover town centre have been considered with the intention to create a place where people will want to shop, live, work, study and visit, to encourage inward investment and urban regeneration. This provides a significant opportunity to create a place that is highly accessible to pedestrians and cyclists and to create a real town centre, providing a focal point for residents and visitors. Currently, the

town centre has a very linear feel and there are a number of key issues, as identified in a range of documents, which need to be addressed. These include:

- Severance of the town centre from the seafront caused by the Townwall Street section of the A20 Trunk Road serving the Port;
- Severance of Whitfield by the A2 which will worsen due to increased traffic flows including rising Port traffic demand;
- Topography of the town and subsequent impact on journey times;
- Whitfield – beyond acceptable walking distance; and
- Importance of providing for pedestrians.

3.7.4 Measures aimed at tackling accessibility issues between Whitfield and the town centre are discussed in Paragraphs 3.7.19 and 3.7.20. In relation to Townwall Street, there are presently two main options that are being considered in tackling the severance issues at this location. The options are:

- The provision of a pedestrian bridge over Townwall Street, creating a land mark feature for the area; or
- The provision of at-grade, high quality signalised 'super' crossing points over key desire lines.

3.7.5 The use of 'super' crossings has been favoured in a report to the Dover Pride Task Force due to 'the high costs and difficulties associated with designing a user friendly bridge into the constrained urban fabric'. The design of these 'super' crossings and of Townwall Street would need to be appropriate to and within the design regulations for Trunk Roads. This might limit the options for treatment of this area to enhance the appearance and desirability of Townwall Street for pedestrians as a connection between the seafront and the town centre.

3.7.6 However, The A27 in Worthing and the A3 in Hindhead are examples of heavily trafficked Trunk Roads in built up urban areas where speed limits of 30mph are enforced and pedestrian crossings are designed to enhance priority for pedestrians and cyclists. The design of these zones includes coloured anti-skid surfacing, at grade crossings and white line hatchings.

3.7.7 The concept of a landmark feature, including a pedestrian bridge spanning Townwall Street, has been put forward in the 'Dover: A vision for regeneration and delivery' design report. The proposals show the bridge crossing over Townwall Street between the current De Bradelei Wharf car park, east of York Street roundabout, to Chapel Lane for stepped access, and Mill Lane for ramped access. The idea is that the bridge is wide enough and designed in a way that gives the pedestrian the feeling that they are in a landscape rather than on a bridge. This will also serve to provide continuation of route from the pedestrian zone in Bench Street directly to the proposed leisure and residential facilities at the Western Docks.

3.7.8 A town centre zone along Townwall Street with appropriate design solutions would act to provide a sense of place, not only for pedestrians and cyclists, but also for local and Port traffic. Combining the pedestrian over bridge at the western end of Townwall Street with urban design improvements to existing pedestrian crossing facilities at the junctions with Russell Street and Maison Dieu Road, will assist in creating

this ‘place’. Appropriate design/architectural features to the east of Woolcomber Street/Townwall Street Junction would define the end of the zone and re-enforce the statement of the bridge.

3.7.9 The development at Gunwharf Quay in Portsmouth is an excellent example of a redeveloped waterfront area where a landmark feature, Spinnaker Tower (Figure 3.5 below), has been used to create a statement about the redevelopment of this area. This has proved to be extremely popular for existing residents and visitors to Portsmouth. Figure 3.6 below provides an example of a design solution for a pedestrian overbridge for a development in Reading.

Figure 3.5 Spinnaker Tower, Portsmouth

Figure 3.6 Example Landmark Pedestrian Bridge, Reading

3.7.10 The GVA Grimley Midtown Feasibility Report has identified that the general consensus for Dover town centre is that it is 'uninspiring, not pedestrian friendly and a missed opportunity for providing a hub for Dover town centre'. The report highlights a number of further opportunities for enhancing the pedestrian and cycle environment within the town centre, as part of the midtown development proposals. These have been identified as being:

- Promote the use of the River Dour as a key feature for pedestrian and cyclists;
- Enhance access between Dover Priory rail station and the town centre – particularly in providing information on access to Dover i.e. signage and maps;
- Promote a connection between Midtown and the Western Docks;
- Improvement of links between Midtown, Dover Priory, Western Docks and St James' and Buckland Mill development areas; and
- Upgrading of river side walk which runs parallel to the high street.

3.7.11 The regeneration of Dover Midtown, in addition to the Public Realm Framework proposals of the Dover Pride Regeneration Partnership (DPRP), will be key to the pedestrian and cycle access strategy for town centre access. The DPRP Public Realm Framework seeks to ensure high quality design in all new and existing areas of the public realm and it comprises nine key projects, all of which will have a positive impact for pedestrian and cycle access to the town centre. The projects are:

- Western Heights;
- River Dour;
- Townwall Street;
- The Promenade;
- York Street;
- Castle Square;
- Pencester Gardens;
- Market Square; and
- Station Approach.

3.7.12 The Dover District Transport Strategy (DDTS) states that 'the starting point to encouraging greater pedestrian activity is to rationalise and improve the available network of suitable routes for walking by ensuring and providing:

- Clear signing;
- Adequate or improved street lighting;
- Formal road crossing facilities;
- Street seating; and
- Adequate provision of public conveniences at key locations'.

3.7.13 Of key priority is to improve pedestrian access to public transport interchanges, mirroring the findings of the Midtown Feasibility Study and key themes arising from

stakeholder consultation events, discussed further within Chapter 4. Dover Priory Station Approach is planned to be one of the first major projects to emerge from the Public Realm Strategy and which, it is considered, will set the benchmark for success. In addition to the proposals to create an improved public realm on the approach to Dover Priory, the rail station provides an excellent opportunity to promote the use of bicycles for car free tourism.

3.7.14 Creating a Town Centre Access Strategy is essential to support the development and regeneration vision for the town, to reverse the negative perceptions of the town centre, to raise the town's profile as a visitor destination and to assist in repositioning Dover at the heart of the East Kent – Pas de Calais sub-region.

3.7.15 One of the key priorities of the Steering Group guiding the development of the Dover Transport Study (and of economic and regeneration policy) is to add value and lasting quality as a result of investment in transport infrastructure.

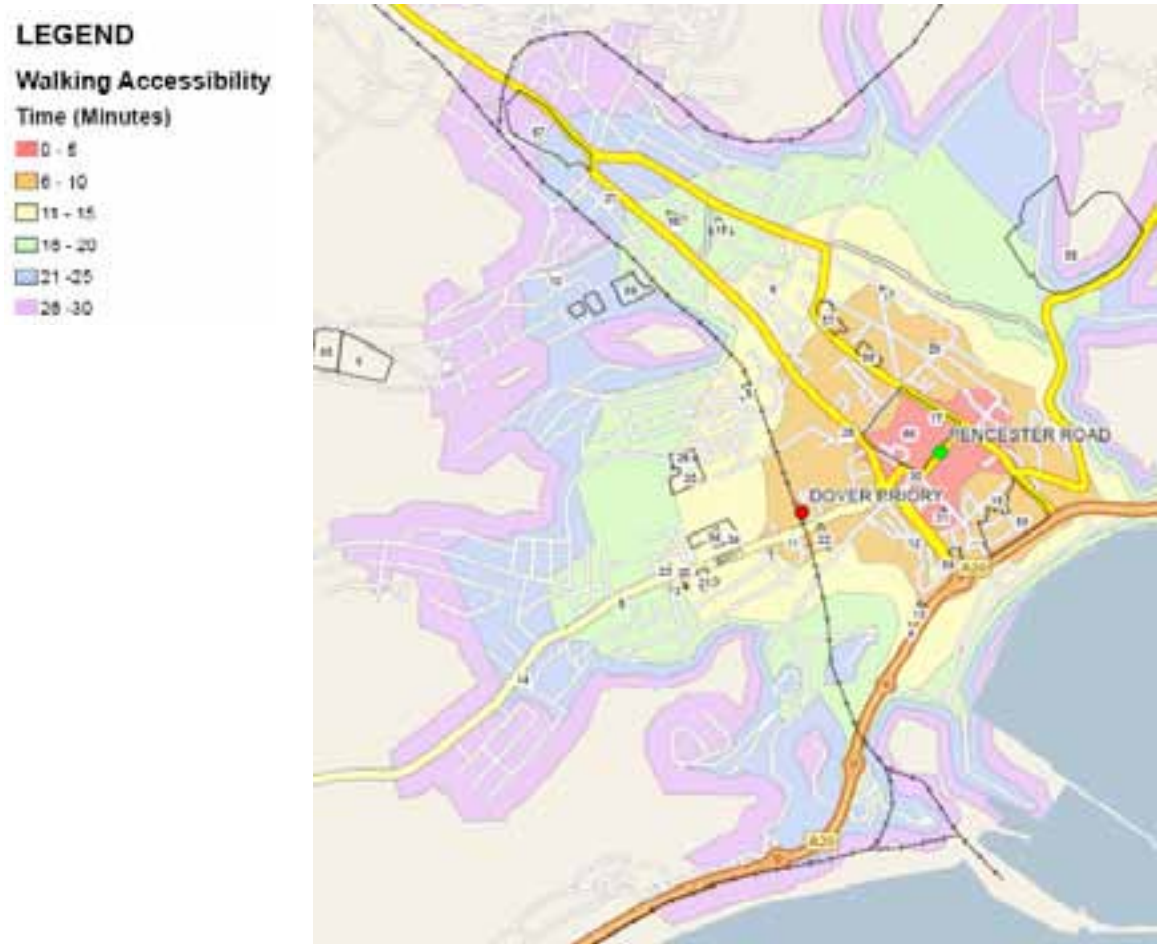
WALKING & CYCLING ISOCHRONES

3.7.16 Figures 3.7 and 3.8 below illustrate walking and cycle times from Pencester Road. Pencester Road has been chosen as the central point for measuring walking and cycle times as it is considered to be a focal point within the town centre. The figures also show the location of the proposed LDF development sites, enabling an immediate picture to be developed of the levels of accessibility by foot and by bicycle to the town centre. The LDF sites are numbered on the Figures below and a full breakdown of these sites is provided in Appendix B.

3.7.17 It is not possible to take into account the topography of the local area in producing walking and cycling isochrone outputs. The walking and cycling times are therefore likely to be underestimated, particularly for return journeys out of the town centre.

3.7.18 Figure 3.7 shows that the town centre can be reached within a 10 minute walk from Dover Priory rail station, highlighting the importance of improving priority and quality of environment for pedestrians between the rail station and the centre of Dover. The severance issue along Townwall Street is illustrated clearly in Figure 3.7. Walk times rise to between 15 and 20 minutes for access to the town centre to the south of Townwall Street. This suggests that the consideration of new crossing points across Townwall Street, with improved priority for pedestrians, will be an important component of the Strategy.

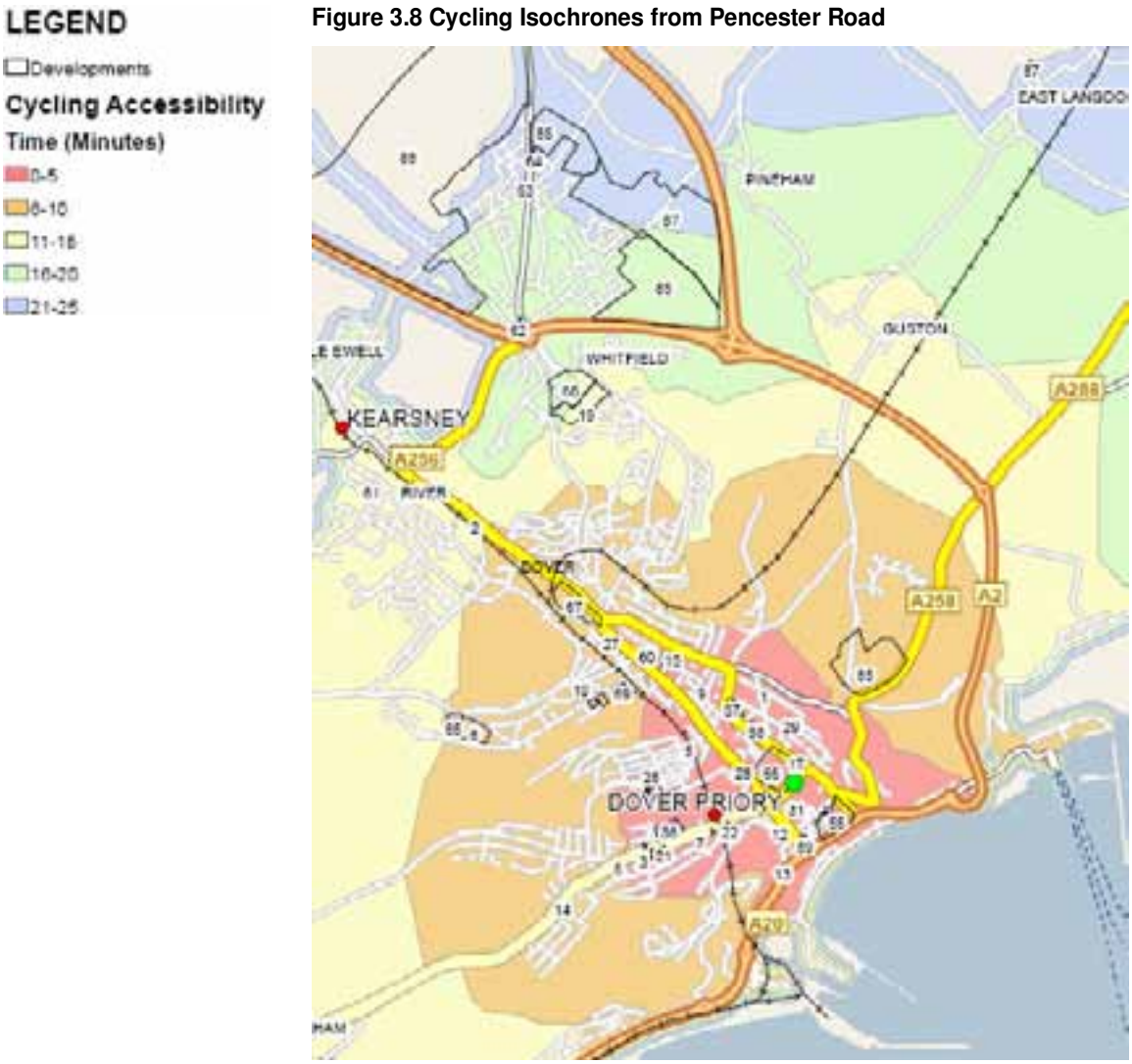
Figure 3.7 Walking Isochrones from Pencester Road



3.7.19 There are a number of development sites, namely, Farthingloe Farm, Barwick Road, Connaught Barracks and development at Whitfield that are beyond a desirable walking distance from the town centre. However, Figure 3.8 shows that these development sites are within a 15 minute cycle from the town centre. Whilst it is unlikely that a return trip to Whitfield by bike can be undertaken in 15 minutes, the use of bicycles for employment or leisure purposes from this location cannot be ruled out.

3.7.20 The proposals for a continuous cycle route, as shown in Figure 3.9, connecting Whitfield to the town centre and Western Docks, and that passes a number of other development sites on route, will assist in accommodating these journeys. The ability to store bicycles on buses should be considered. This will assist a return journey for those people wishing to cycle in to the town.

Figure 3.8 Cycling Isochrones from Pencester Road



3.7.21 The proposed cycle route, as shown in Figure 3.9 below, has been taken from the Dover District Local Plan (adopted 2002). The Dover District Cycling Plan (draft consultation, 2007) details a proposed cycle route that will be implemented as part of Kent County Council's LTP programme 2007-09 which mirrors this proposal, with the exception of the route stretching from Crabble Hill to Whitfield, via Old Park Hill. Allocated funds for the implementation of the LTP route has been confirmed at £353,000

with additional funds being sought from development at Buckland Mill, which will benefit from the proposals.

3.7.22 Longer term proposals within the town centre rely on the regeneration proposals as at present, it is not possible to provide a cycle route along the desired orientation. It is considered that an extension of the LTP route to Whitfield will be an important addition to the cycling strategy for Dover, connecting new development with the town centre and Port, and which will also require contributions from developers.

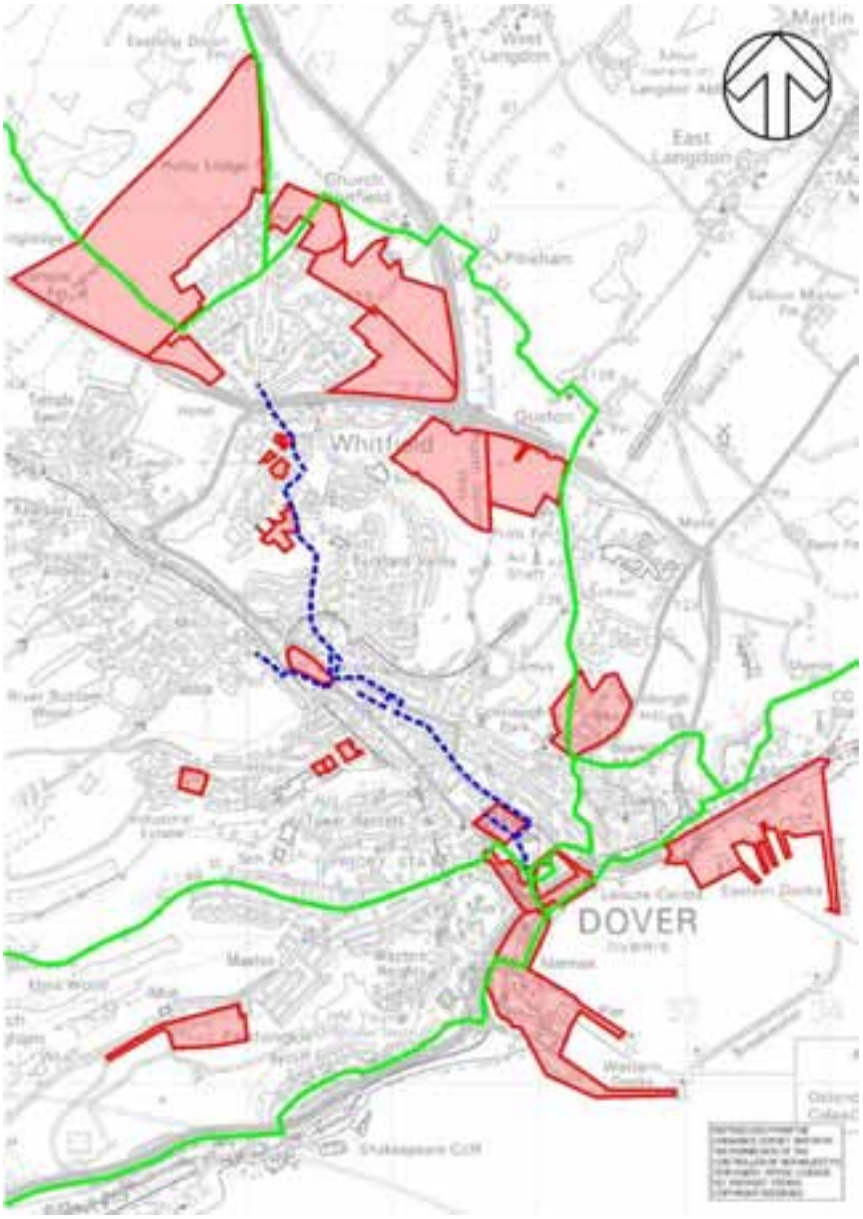
KEY

Proposed Cycle Route

Existing Cycle Routes

LDF Options

Figure 3.9 Proposed Dover Local Plan Cycle Route and Initial LDF Site Options



CONSTRAINTS

3.7.23 In addition to the topography of the town and generally poorly perceived pedestrian and cycle environments, a number of focussed constraints have been identified within the town centre for which solutions should be considered. Appendix D: Figure 2 illustrates the identified pedestrian and cycle movement constraints within the town centre and a brief discussion of these is provided below (the letters below refer to letters on Appendix D: Figure 2).

A: Connection to Pencester Gardens

3.7.24 Heavily trafficked pedestrian route connecting the pedestrianised town centre area with Pencester Gardens. Existing route is narrow and there are no noticeable signs to assist pedestrians and cyclists.

B: High Street Pedestrianised Zone

3.7.25 Bicycles are not allowed to use the pedestrianised zones of the town centre, however bicycle parking was not noted to be present at entrances to these zones.

C & D: South Kent College to Priory Road

3.7.26 The town centre pedestrian zone can be accessed from the college utilising a route which passes through the telephone exchange buildings and the bowling green. These routes were noted to be well used. However, 90 degree blind corners and tall office buildings do not provide adequate levels of natural surveillance that would be required to alleviate fears of personal security.

E & G: NCN Route 1

3.7.27 The on-road sections of National Route 1 is, in general, considered to be of a reasonable standard. However, signage for cyclists using this route was noted to be poor, either in that it did not exist or that the directions were not clear.

F: Maison Dieu Road

3.7.28 Residential on-street parking to the north of Park Street is considered to impede continuation of route for cyclists beyond this point. South of Park Street, this is not considered to be a problem. However, the footways along Maison Dieu Road are not wide enough to incorporate a shared pedestrian and cycle facility.

H: Townwall Street

3.7.29 The constraints associated with Townwall Street are well documented and include air quality, port traffic, lack of pedestrian and cycle crossing points and design and appearance. Previously suggested solutions to reduce the barrier of Townwall Street for movement between the town centre and port facilities include a landbridge, providing a continuous route for pedestrians and cyclists over the existing highway, and a series of 'super' crossings that will provide a high level of priority to pedestrians and, or cyclists.

I: Dover Priory Rail Station

3.7.30 As with Townwall Street, the constraints associated with the approach to the station, and the station itself, are well documented. In particular is the inadequate level of signage and information that is provided along this route and on departing the train station. Proposals to enhance this route are set out within the DPRP Public Realm Strategy. The proposals are important as the rail station plays a key role within Dover as a gateway for commuters and visitors.

3.8 DOVER STRATEGIC SIGNAGE STRATEGY

3.8.1 Faber Maunsell has undertaken a study for the Highways Agency (February 2007) to investigate the potential to make better use of the A2 / M2 corridor for international road freight vehicles using the Port of Dover. This study was undertaken to asses the potential to reduce the number of heavy goods vehicles using Townwall Street for accessing the Port. This will also aid in addressing air quality issues associated with this location.

3.8.2 The key findings of the study are that:

- 95% of drivers make the cross-channel journey via the Port of Dover on a monthly, or more regular, basis;
- Drivers currently rely on radio travel alerts for route information;
- Route choice is often known at the start and is based on knowledge, but it is flexible depending on route conditions;
- Freight operators prefer their drivers to use the M20/A20 route due to shallower gradients and fewer difficult junctions, which results in increased fuel efficiency;
- 35% of drivers would divert their planned route (to the M2/A2) in response to strategic signage. However, 82% of these would divert back to their original route if efficiency was no better; and
- Only 5.8%, or 567 trucks per day, would remain on the signed route (M2/A2) regardless of efficiency.

3.8.3 The report concludes that the use of strategic signage in isolation would not significantly contribute to a reduction in traffic along the M20/A20 corridor. A package approach, using a number of complementary or additional lorry control measures, is suggested for consideration. The results of the survey work did show that there is the potential to divert up to 35% of existing HGV's from this corridor, supporting the need for this package approach.

3.8.4 The report recommended that Dover Harbour Board should produce a staff travel plan and Freight Quality Partnership to address this package approach to strategic routeing issues. A scale of measures will need to be introduced ranging from the dissemination of generic transport and travel information, to more draconian measures such as pricing to support the implementation of Variable Message Signing (VMS).

3.9 LDF DEVELOPMENT SITES - ACCESSIBILITY

3.9.1 A detailed summary of the access options and issues associated with the proposed LDF development sites for Dover was presented in Briefing Note 1 (Background Document No.11). At the time of writing, these sites were provided by Dover District Council as sites under investigation for potential inclusion in the preferred LDF growth option. Further consideration has also been made with regard to the walking and cycling accessibility of these development sites. Appendix D: Figures 3 to 16 illustrate the findings of this assessment and Table 3.3 below provides a summary.

Table 3.3 Summary of Pedestrian and Cycle Accessibility – LDF Development Sites

DEVELOPMENT SITE	OPPORTUNITY	CONSTRAINT
Farthingloe Farm, Folkestone Road, Dover	Close proximity to an existing bus service for town centre access	
St James's Area	Located within the town centre, close to the pedestrianised retail zone	Townwall Street severance and AQMA
Buckland Paper Mill	Close proximity to range of frequent bus services Proximity to town centre and proposed cycle route	Topography Rail line severance
White Cliffs Business Park, Phase II		
Land at Port Zone, Whitfield	Pedestrian and cycle links to the north Proximity to proposed cycle route	No links to the south Informal parking to both sides of Menzies Road is an obstruction to cyclists
Dover Eastern and Western Docks	Proximity to town centre	Connectivity to Dover Priory rail station Severance of Townwall Street

Table 3.3 continued

DEVELOPMENT SITE	OPPORTUNITY	CONSTRAINT
White Cliffs Business Park, Phase III	Proximity to proposed residential development at Whitfield 2.7km from town centre	A2 barrier for northbound pedestrian and cycle movement Lack of bus services
South Town	Pedestrianised retail zone Good public transport links with Pencester Road bus station Crossings at perceived desire lines	No observed cycle parking Linear town– no real 'centre' Townwall Street severance
Mid Town Area	Proximity to bus station and South Kent College	Connectivity with Dover Priory rail station
Sites at Coombe Valley Road	Close proximity to local bus services	No pedestrian and cycle crossings Visibility issues for cyclists at the railway bridge to the east of the site
Land between Barwick Road and Poulton Close	Close proximity to local bus services	Steep topography surrounding the site Visibility issues for site access
Land to the east of Whitfield	Access to supermarket and business park – provided adequate provision is made for pedestrians and cyclists Proximity to proposed cycle route with direct access to town centre and Western Docks	Possible A2 severance if pedestrians and cyclists are not catered for
Land to the west of the Ramada Hotel, Whitfield		Perceived safety issues with A2 – high vehicle speeds on approach to Whitfield roundabout
Connaught Barracks and Fort Burgoyne	Close proximity to local bus service	Topography – Castle Hill Road

3.10 SUMMARY – PROBLEMS & OPPORTUNITIES

3.10.1 Table 1, provided as an attached to this report, sets out the key deliverables of the Dover Transport Strategy (as identified within the brief for this study and guidance from the Steering Group) and describes the current problems and opportunities associated with each in relation to highways, bus and rail access and accessibility. This table provides a summary of the discussions put forward within this Chapter.

3.10.2 The potential solutions that have been identified to assist in alleviating these current issues are also set out in Table 3.4 below. These issues and solutions were debated at Steering Group meetings.

Table 3.4 Dover Transport Strategy Potential Solutions

DELIVERABLE	POTENTIAL SOLUTIONS	
	STRATEGY SPECIFIC	OVERARCHING
Expansion of Dover Port	▪ Bus linkages between Dover Priory and Port	▪ Freight Buffer Zone / Management ▪ Demand Management ▪ Parking Strategy ▪ A2 Diversion ▪ Planning for CTRL ▪ "Horseshoe" Access Strategy ▪ Revised Freight routing strategy ▪ Variable Message Signing – Port Traffic and Parking ▪ Whitfield Roundabout ▪ Park and Ride ▪ Cycle Route connecting Whitfield, the town centre and the Port
Regeneration of Dover: Town Centre and Seafront Strategy	▪ Improved access to Dover Priory ▪ Cycle Tourism at Dover Priory ▪ Upgraded pedestrian and cycle connection between Townwall Street and seafront – bridge or 'super' at-grade crossings, or both ▪ Upgrade River Dour for pedestrians and cyclists ▪ Mid-town regeneration ▪ Signage Strategy for pedestrians and cyclists ▪ Review of town-centre one-way system ▪ Cycle Parking ▪ Information Strategy for commuters and visitors	
Development (LDF) Strategy	▪ Travel Planning ▪ Safe Routes to Schools ▪ Public Transport Strategies	

3.11 KEY ISSUES

- Social Exclusion due to cost and availability of transport
- Existing highway junction performance problems
- Dover Priory rail station – integration with the Ports and town centre
- Parking restraint – required to influence demand
- Access to health facilities
- Severance issues for pedestrians and cyclists – Townwall Street & Whitfield
- Restricted bus network penetration due to town centre one-way system
- Port Expansion and routeing of HGV's

4 Demand for Travel

4.1 INTRODUCTION

4.1.1 One of the LDF options being tested (see Section 1.2.3) is for the development of an additional 14,000 homes in Dover. This has the potential to change travel patterns and attitudes significantly. However, it is important to understand existing travel data as this provides a base on which decisions and future year scenario forecasts can be made.

4.2 EXISTING SITUATION

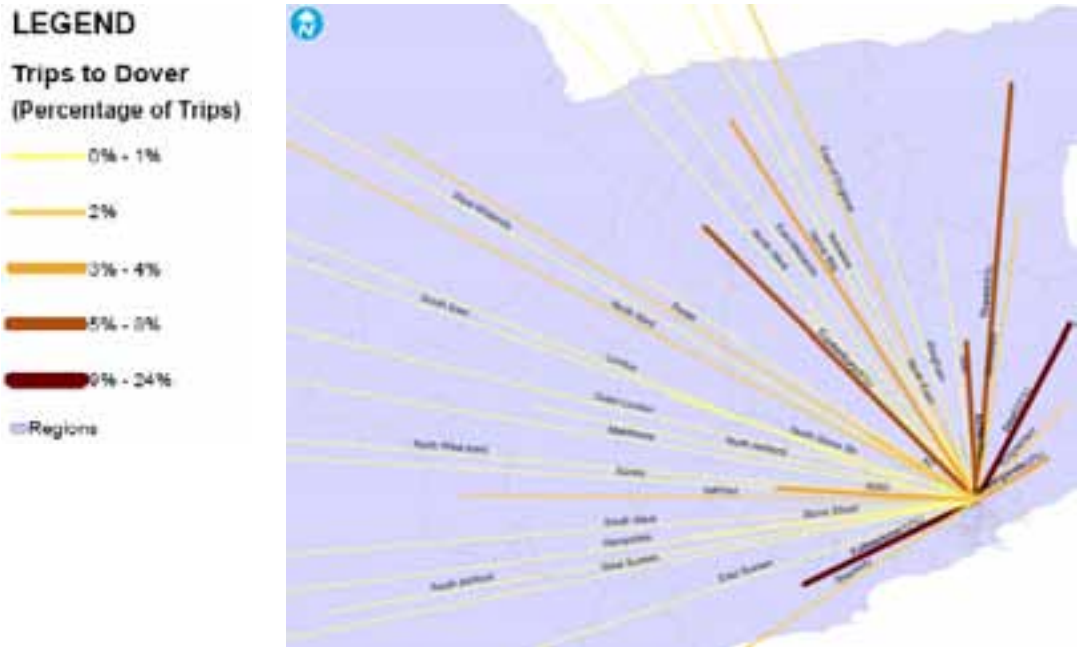
4.2.1 An analysis of the Census 2001 journey to work data was undertaken and presented in Briefing Note 1 (Background Report No.11). Section 3 provides a summary of this analysis. In particular, it is noted that:

- The mode share for rail within Dover is very low compared with the average for Kent; nad
- There is a higher than average proportion of the working population within Dover travelling to work by foot, bicycle and as a car sharer.

4.2.2 An assessment of the local demographics within Dover town, detailed within Briefing Note 1, revealed that compared with the rest of the district, there is considerably less access to a vehicle. This is particularly the case, in some pockets of the town; within the wards of St. Radigunds, Buckland, Town and Pier, Castle and Tower Hamlets, only 26% to 50% of households have access to a car.

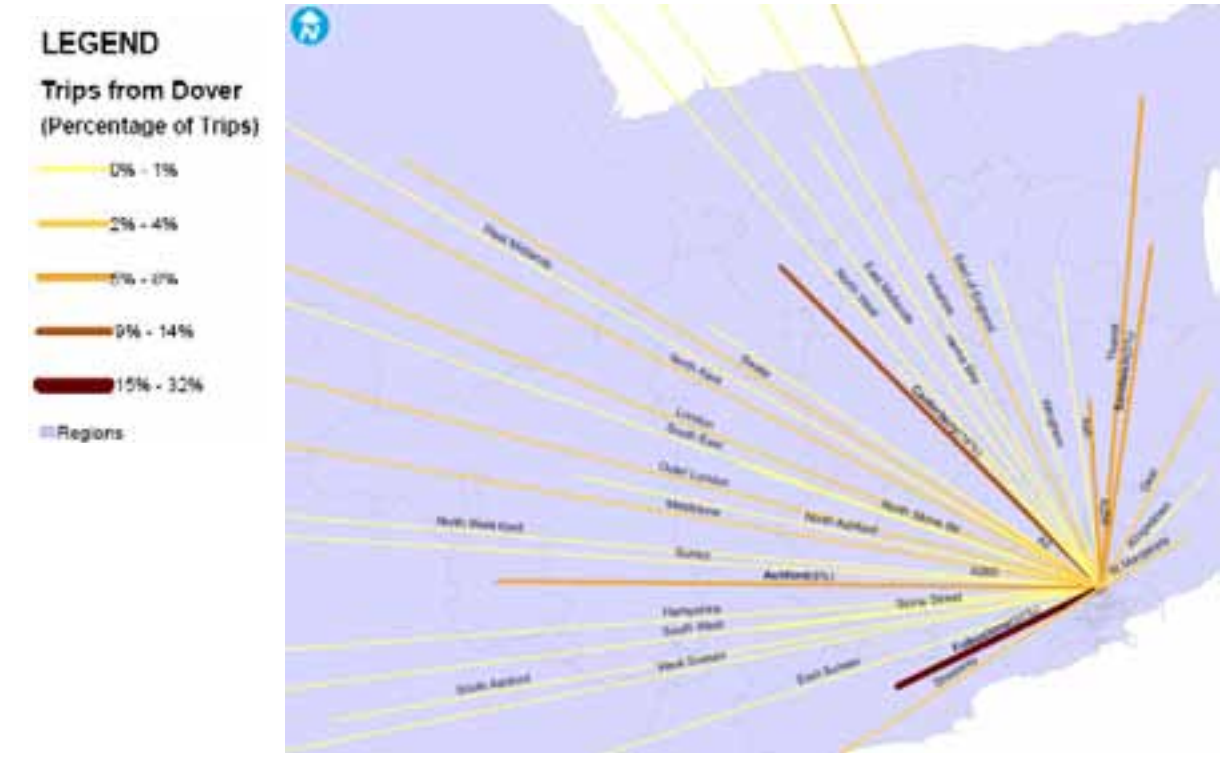
4.2.3 The employed population within Dover accounts for 59.4%, illustrating high levels of unemployment. An assessment of the commuter patterns to and from Dover has shown that 67% (9838 trips) of all commuter trips are made to Dover, with 33% (5321 trips) made from Dover. This net inbound commuting, with high levels of local unemployment, suggests a mismatch of skills. The origin that attracts the most amount of commuting trips to Dover is Deal (23%), as shown in Figure 4.1 below.

Figure 4.1 Journey to Work (Census 2001) – Trips to Dover



4.2.4 Of those work trips that are made outside of Dover, Figure 4.2 below shows that the key commuter corridors are towards Folkestone and Canterbury. Commuter trips from Dover to Folkestone account for almost a third (31%) of all external trips. Canterbury is another major destination for work trips.

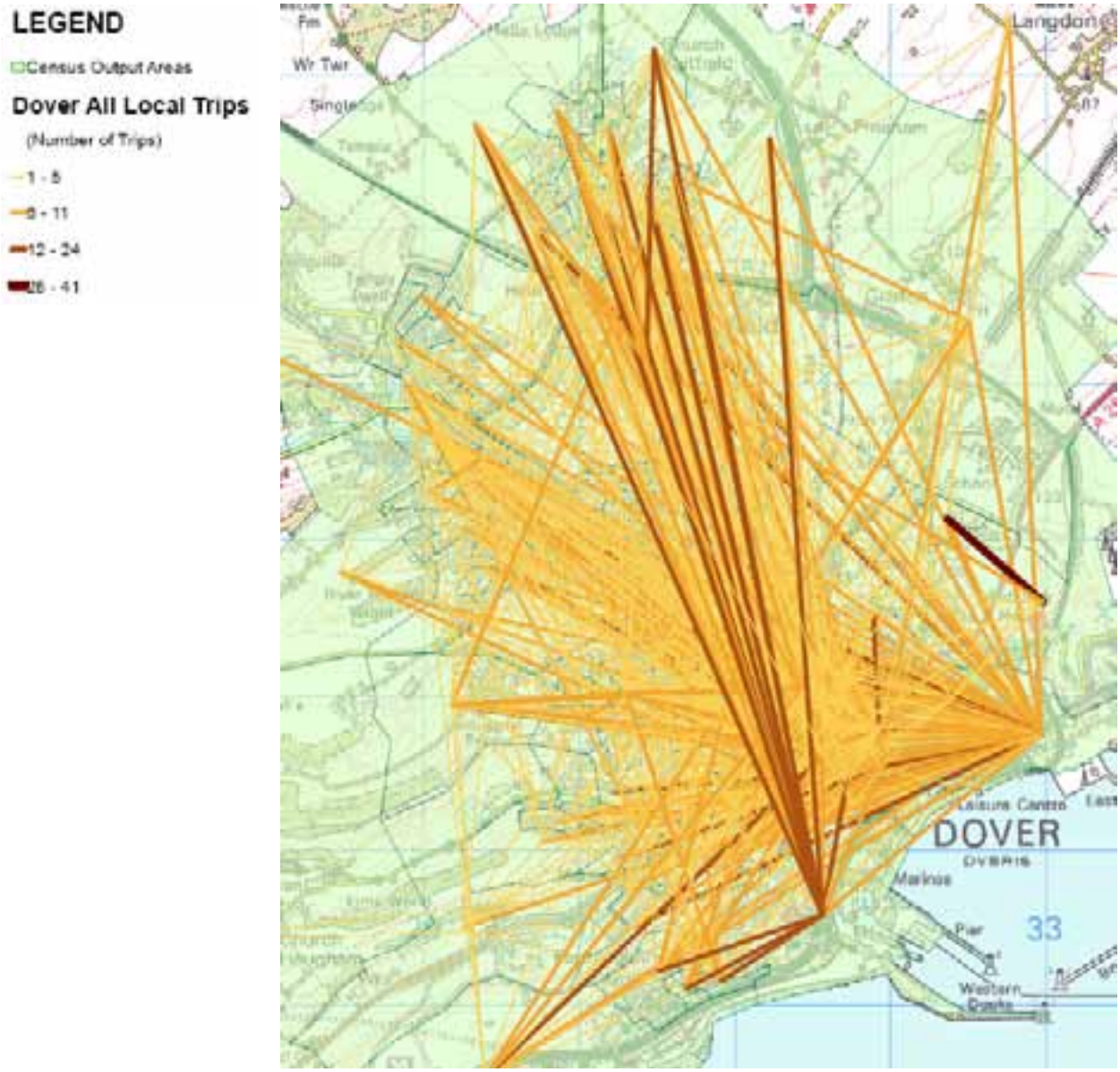
Figure 4.2 Journey to Work (Census 2001) – Trips from Dover



4.2.5 Trip internalisation for journeys to work within Dover is high at around 67%, with the key trip attractors being the Eastern and Western Docks, particularly from locations such as Whitfield, as shown in Figure 4.3 below. This figure illustrates the very strong desire line between Whitfield and the town centre / Port for work trips.

4.2.6 Within the South East region, 50 primary and secondary towns were identified for the purpose of the South East Plan. An assessment of the commuting patterns of these towns has shown that only 13 have net outbound commuting, including Ashford, Canterbury and Folkestone. Of the remaining 37, only nine have a higher proportion of net inbound commuter trips than Dover, the highest of which is Newbury with inbound trips commuter trips accounting for 73.99%.

Figure 4.3 Commuter Trip Patterns within Dover



4.2.7 The findings are of considerable importance in determining a Transport Strategy for Dover. The higher than average levels of walking and cycling, restricted access to vehicles in certain localities, high unemployment, net inbound commuting, and a commercial bus service confirms that social inclusion will be an important part of the Transport Strategy.

4.3 GROWTH

4.3.1 The existing demand for travel, described in Chapter 3, needs to be considered against the national trend of growth in motorised travel. A detailed assessment of growth is provided in the Model Forecasting Report. The basic principles for deriving traffic growth stem from the Department for Transport (DfT) TEMPRO guidelines. However, TEMPRO only predicts demand for non HGV modes. HGV growth is predicted using the National Road Traffic Forecasts (NRTF) and adjusted locally using local adjustment factors derived from TEMPRO.

4.3.2 TEMPRO forecasts 'Trend' growth and 'Policy' growth, where:

- Trend follows historical patterns and data
- Policy follows growth that is more likely to be accommodated in the future

4.3.3 Policy growth is adopted for the Dover Transport models and is based upon origins and destinations.

BACKGROUND GROWTH

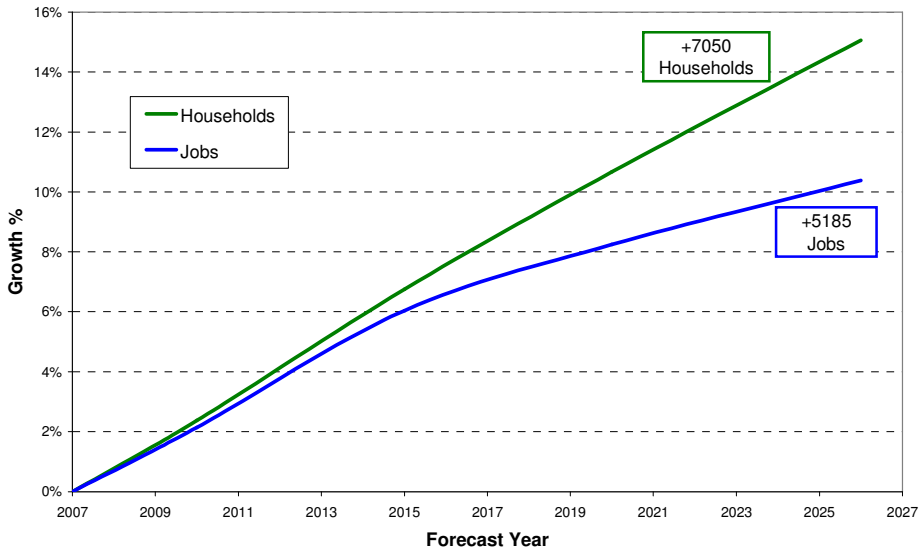
4.3.4 The planning data in TEMPRO gives the change in jobs and households which are a proxy to an increase in employment and number of dwellings. Table 4.1 below details the forecast planning data changes from 2007 to 2026 for the Dover Authority zone. The growth is illustrated in Figure 4.4.

Table 4.1 – Dover Authority TEMPRO Planning Data, 2007 to 2026

Year	Households	Jobs
2007	46,800	49,900
2026	53,800	55,100
Growth %		
to 2026	15.0%	10.4%
Growth (Absolute)		
to 2026	7,000	5,200

Note – Figures rounded to nearest 100

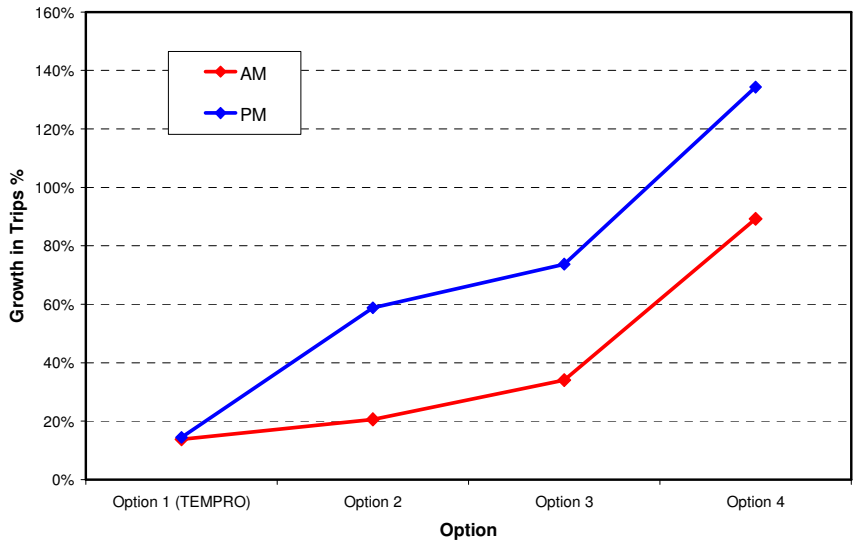
Figure 4.4 Dover Authority Planning Data Growth Forecasts



TRAFFIC GROWTH

4.3.5 To put into context the growth in trips that the development options will create over and above the TEMPRO forecasts (Option 1), the growth is presented in Figure 4.5.

Figure 4.5 Trip Demand Growth Relative to Base Year



4.3.6 It is assumed that only developments associated with Option 1 are included within TEMPRO, therefore all trips associated with Option 2 through to Option 4 are additional. The percentage increases are based upon existing base year trips related to Dover; i.e. either have an origin or a destination (or both) in Dover during the peak hours.

4.3.7 Figure 4.6 below illustrates the increase in traffic flows, in the Option 1 scenario, compared to existing conditions.

Figure 4.6 Option 1 2026 – Difference from Base: Network Performance

4.4 POTENTIAL DOVER PARK AND RIDE SITES

4.4.1 The concept of Park and Ride was raised by a number of stakeholders and consultees through the study process. However, for Park and Ride to succeed, the correct conditions need to exist to encourage its use. These conditions relate to origins and destinations, highway conditions, bus network coverage and parking.

4.4.2 There are currently no Park and Ride sites within Dover, despite a high level of commuting into the town centre from areas outside of the Dover District boundary. An overview assessment of the potential demand for Park and Ride serving Dover Town Centre is provided here.

Potential Demand

4.4.3 This section reviews the likely level of demand there would be for potential sites on the highway approaches to Dover. Based on Census 2001 Journey to Work Statistics an assessment of potential demand has been undertaken. The assessment identified commuter trips with destinations in central Dover wards. These wards are as follows:

- Town and Pier;
- Castle;
- Tower Hamlets;
- Maxton, Elms Vale and Priory.

4.4.4 Table 4.2 below details the assessment of demand for travel by car to the central Dover wards from outside of central Dover. The Census 2001 data has been amalgamated at varying levels from individual wards to County level and wider.

Table 4.2 - Central Dover Commuter trips

ORIGIN	BOUNDARY LEVEL	CENTRAL DOVER DESTINATION WARD			
		Town and Pier	Castle	Tower Hamlets	Maxton, Elms Vale and Priory
Eythorne and Sheperdswell	Ward	139	119	45	64
Lydden and Temple Ewell	Ward	96	83	37	60
Aylesham	Ward	52	24	14	9
Buckland	Ward	300	198	137	127
Whitfield	Ward	194	175	86	101
Capel-le-Ferne	Ward	37	32	26	32
Eastry	Ward	84	67	24	34
Sandwich	Ward	63	130	23	27
Little Stour and Ashtone	Ward	38	27	11	9
Middle Deal and Shoulden	Ward	213	104	49	56
Mill Hill	Ward	231	131	34	76
North Deal	Ward	165	120	34	42
Ringwould	Ward	39	42	15	27
St Margarets-at-Cliffe	Ward	167	42	52	54
Walmer	Ward	164	110	40	71
River	Ward	182	213	92	114
St Radigunds	Ward	148	126	42	57
Canterbury	Authority	261	147	64	85
Swale	Authority	48	20	12	17

ORIGIN	BOUNDARY LEVEL	CENTRAL DOVER DESTINATION WARD			
		Town and Pier	Castle	Tower Hamlets	Maxton, Elms Vale and Priory
Shepway	Authority	706	427	140	262
Maidstone	Authority	26	12	0	0
Rother	Authority	12	9	0	0
Hastings	Authority	0	0	0	0
Ashford	Authority	121	83	27	35
Thanet	Authority	408	154	50	52
Rest of Country	National	232	369	9	21
Total		**4207**	**3415**	**1087**	**1466**

4.4.5 Table 4.2 above shows that Town and Pier and Castle wards show the greatest levels of demand. These wards cover large parts of Dover town centre.

4.4.6 As an initial assessment, and outside of the main transport modelling process, commuter trips identified within these wards have then been assigned to the highway network. This is based on the likely route these commuters would take to access the destination ward from their origin. Table 4.3 below details this assignment, identifying the quantum of daily commuter trips assigned to each route.

Table 4.3 - Commuter Assignment

APPROACH ROUTE	AREA ASSIGNED	COMMUTER TRIPS
A2	■ Eythorne and Sheperdswell ■ Lydden and Temple Ewell ■ Canterbury ■ Swale ■ Aylesham ■ Buckland ■ Whitfield	2757
A20	■ Capel-le-Ferne ■ Shepway ■ Maidstone ■ Rother ■ Hastings	2618

	■ Ashford ■ Rest of country	

Table 4.3 continued

APPROACH ROUTE	AREA ASSIGNED	COMMUTER TRIPS
A256	■ Thanet ■ Eastry ■ Sandwich	1159
A258	■ Middle Deal and Shoulden ■ Mill Hill ■ North Deal ■ Ringwould ■ St Margarets-at-Cliffe ■ Walmer	2078

4.4.7 Table 4.3 shows the greatest quantum of commuter flows to central Dover occur along the A2 and the A20 corridors although there are also similar levels of demand for the A258.

Potential Park and Ride Sites

4.4.8 Based on these levels of demand, potential Park and Ride sites should be focussed on the A2 and the A20, as shown in Figure 4.7 below, as these offer the greatest opportunity to capture existing traffic accessing the town centre.

4.4.9 Since the A256 links to the A2 southeast of Whitfield it may be pertinent to locate a Park and Ride site that could capture traffic from both parts of the highway network.

4.4.10 At this early stage a site off the A20 at the junction with New Dover Road and Folkestone Road, in proximity to Capel-le-Ferne should be explored. This site is approximately 7km from Dover town centre.

4.4.11 In addition a site at the junction of the A2 and A256, based on its current alignment, offers the best potential to capture traffic off both of these sections of highways. This site is approximately 6km from Dover town centre via a route along the A2.

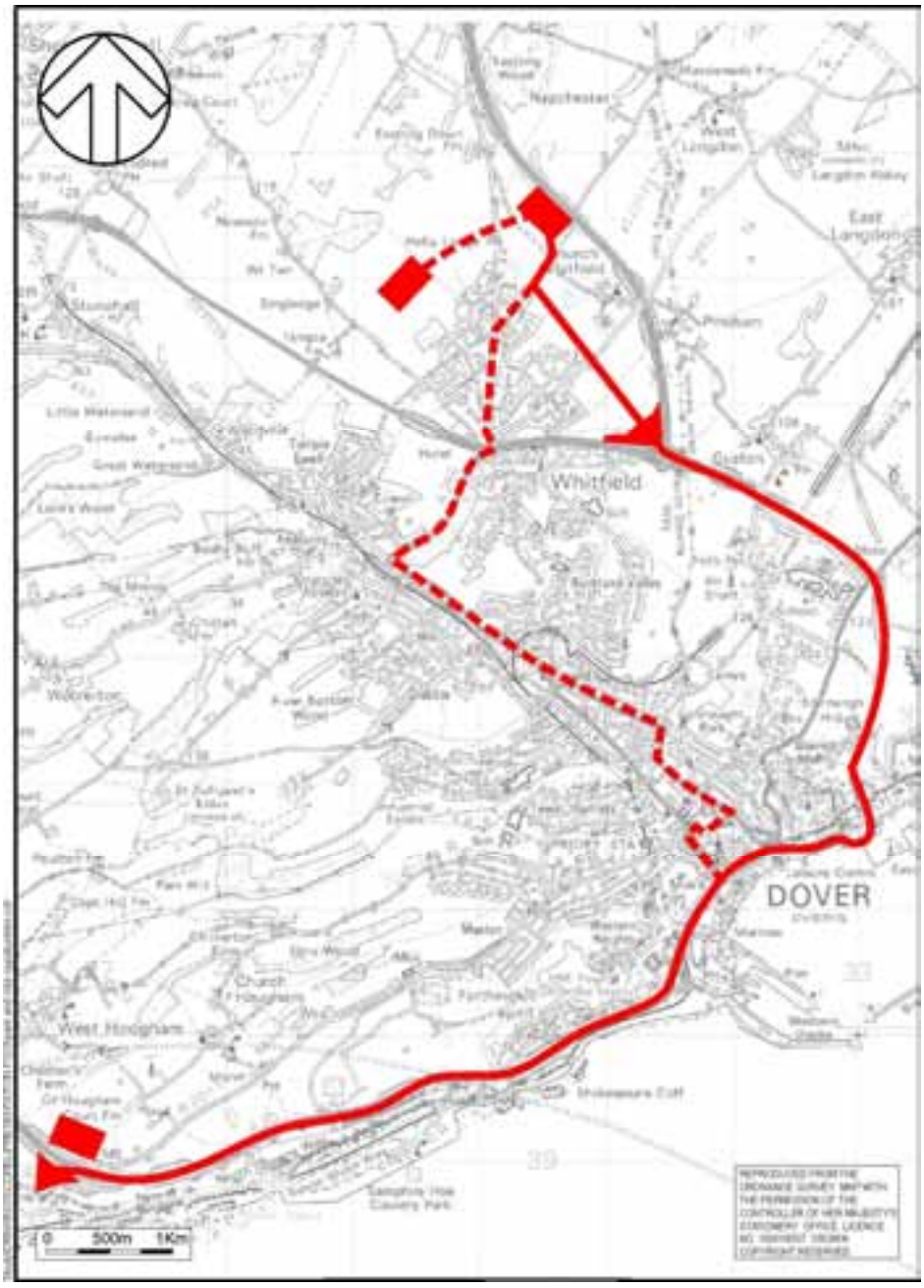
KEY

Potential Park and Ride Sites

Proposed Route

Alternative Route

Figure 4.7 Potential Park and Ride Sites



Potential Patronage

4.4.12 The above initial forecast of Park and Ride patronage indicates that around 2,700 commuter trips use both the A2 and A20 routes to access destinations in the town centre.

4.4.13 Historical monitoring data indicates that, of those trips passing by the site with a relevant destination, between 10% and 20% will choose to 'turn-in'. This would indicate that between 270 and 540 trips could be attracted to use each of the potential sites on the A2 and A20.

4.4.14 It should be remembered that this initial analysis is based on relatively crude Ward level data and as such, some of the destinations included will be beyond attractive walk distances from the Park and Ride bus service route through the town. In addition, this demand assessment is based on all day trips. Therefore, peak hour improvements to highway performance will be restricted to just a proportion of this all day demand. These issues combined would suggest that the lower (10%) of the 'turn-in' rates is more likely to be achieved. With patronage of less than 300 per day, national evidence suggests that this, in isolation, will not make a commercially viable proposition. However, proposals to integrate Park and Ride with other parking and Express bus services could, in combination, provide a strong business case.

5 Consultation

5.1 INTRODUCTION

5.1.1 The purpose of this Chapter is to detail the key themes that have arisen from a series of consultation events. These have been used to help inform the options for a Transport Strategy for Dover with specific focus on the town centre, Port, public transport and accessibility. Consultation has also been undertaken for development at Whitfield to inform the masterplan, and an overview of the key themes arising from this are provided.

5.2 BACKGROUND

5.2.1 To ensure that all key stakeholders and third parties were fully involved throughout the development of a Transport Strategy for Dover and masterplanning exercise for land east of Whitfield, consultation was undertaken at three levels:

- Project Steering Group, including client group;
- Wider Stakeholders; and
- Public Consultation.

5.2.2 A timetable for consultation events was devised with consideration of the timescales for delivering the overall transport study. The resultant timetable is provided below in Table 5.1.

Table 5.1 Consultation Events - Timetable

CONSULTEES	TIMING	DATE
Steering Group	Inception meeting	14th Dec 2006
	Meeting to discuss overarching transport strategy	End Jan and then monthly
	Modelling Working Group meeting	Mid Feb and then monthly
	Final Steering Group discussion of Strategy Proposals	End October 2007
Stakeholder Consultation	Briefing Pack	Early Jan 2007
	Workshop 1	Early Feb
	Masterplanning advice (draft)	May
	Workshop 2	July / August
Public Consultation (Whitfield)	Masterplanning event	May 2007

5.2.3 The stakeholder consultation and masterplanning events have been undertaken and subsequent analysis of findings have been presented to the Steering Group. In particular, findings of the stakeholder consultation event are provided as Background Document 13, a summary of which is provided below.

5.3 STAKEHOLDER CONSULTATION – FEBRUARY 2007

5.3.1 A stakeholder workshop was held in Dover on Wednesday 21st February, to which representatives from 65 organisations representing business and community interests in the Dover area were invited. In total, 35 stakeholders and members of the steering group (including several DDC and KCC officers) attended the event. The aims of the workshop were to gain an understanding of the transport problems and issues in Dover from those with first hand experience of living and/or working in Dover, and for local stakeholders to propose and discuss potential solutions to the transport problems, to help inform the development of the Dover Transport Study.

5.3.2 Attendees were asked to identify positive and negative comments about transport in Dover; these were subsequently grouped into four sub-themes:

- Dover Town Centre;
- Port and Major Roads;
- Public Transport; and
- Accessibility.

5.3.3 The attendees were randomly divided into four discussion groups, with each group being assigned one of the above themes to discuss. The key findings from these discussion groups are set out in Table 5.2 below.

Table 5.2 Consultation sub-themes, issues and potential solutions

THEME	KEY ISSUES	POTENTIAL SOLUTIONS
Town Centre	**Townwall Street** - Traffic / Capacity at junctions / Queuing / Air quality / Severance **Public Transport** - One way system not conducive to effective bus services	Re-routing Port related traffic Increase capacity for bus services i.e. bus lane Improvement to pedestrian and cycle environment
Port & Major Roads	**Impact of Port Traffic** - Rat running on local roads - Operation Stack on wider network	Removal of Port related traffic from town centre Re-routing traffic between A2 and M20
Public Transport	Poor integration between rail station and Port Poor quality / lack of pedestrian and highway signage	CTRL Improved access to rail station Better quality bus services and information Signage strategy for all users

Table 5.2 continued

THEME	KEY ISSUES	POTENTIAL SOLUTIONS
Accessibility	Lack of connectivity between Port, town centre and residential areas	Improved pedestrian and cycle environment Regeneration Strategy

Emerging Themes

5.3.4 The stakeholder workshop highlighted a number of key 'themes' for the Dover Transport Study. These are presented below in three categories:

- Improving access to key local facilities;
- Managing the need to travel; and
- Major growth and investment in Dover.

Improving access to key local facilities

5.3.5 There is a strong perception that important facilities such as health services, shops and leisure facilities are difficult to get to. These difficulties are particularly relevant for people who do not travel by car. Consultees have highlighted that pedestrians, cyclists and users of public transport incur significant barriers to travel. Improvements to pedestrian routes and crossings, improved coverage of the local bus network and a better quality environment around the rail station were priorities for consultees.

Managing the need to travel

A number of participants at the workshop stressed the need to try and reduce the volume of car and HGV traffic within Dover. Consultees were particularly concerned about the rising number of HGV's accessing the port. The need to manage port traffic (in terms of routes, parking, signage and times of arrival/departure) was a high priority. In parallel, encouraging people to use alternatives to the car was also a key consideration for consultees. In particular, participants recognised the need to make bus journeys quicker by creating bus lanes, give pedestrians and cyclists more priority on Dover's roads and consider reducing town centre parking in favour of Park and Ride. It was also thought that major employers and schools could play their part by encouraging staff and students to walk, cycle and use public transport.

Major growth and investment in Dover

5.3.6 Workshop participants recognised the numerous development pressures on Dover. It was felt that if significant development occurs, strategic changes to Dover's transport network would be required. Consultees put forward a number of potential ideas including changes to HGV routeing via the A2, M2, as well as the A20 and M20, introducing a major new public transport service, and creating a more accessible town centre and seafront by downgrading Townwall Street to give pedestrians and buses more space.

5.4 WHITFIELD MASTERPLANNING CONSULTATION

5.4.1 A number of issues arose from the Whitfield Masterplanning consultation relating to how the development should be implemented if it is to go ahead. The key issues were:

- Overall objection in principle to the scale of development as currently proposed;
- Concerns about current and future rat running;
- Concerns about congestion at Whitfield roundabout;
- The phasing of the new development;
- The integration of the new community into the existing community; and
- The need for services such as water, health and education to be in place when the development commences.

5.5 WHITFIELD MASTERPLAN

5.5.1 The Whitfield consultation event has enabled the development of a masterplanning hypothesis, which has also built on the concepts and issues within the 2006 EDAW report. This has been further refined to form the proposed Whitfield Masterplan, full details of which are reported within Core Document number 4.

5.5.2 The Whitfield Masterplan and the Dover Transport Strategy will form key aspects of the evidence base for the LDF.

5.6 WIDER STAKEHOLDERS

5.6.1 To enable the strategy to be fully informed, it has been essential to undertake consultation with other key stakeholders relating to issues including public transport, highways and parking. Stakeholders consulted were:

- Kent County Council (Transport Policy Team);
- Stagecoach (predominant local bus operator); and
- Southeastern Trains (Train Operating Company).

KENT COUNTY COUNCIL

5.6.2 A meeting was held in February 2007 with senior Kent County Council Officers to discuss the major strategic issues and opportunities associated with transport and transport infrastructure for Dover. The main outcomes of this meeting are detailed below:

- KCC acknowledged the previous HA assessment of the potential improvement (dualling) of the A2. This 'on-line' improvement was previously estimated at £80m.
- Significant congestion is caused on occasions by ad-hoc operational problems at the Port. However, there are no major highway capacity issues during average conditions.
- One of the problems is a lack of HGV storage within the Docks.
- Operation Stack is the subject of National debate.
- The A2 diversion (in principle) will have wider, long term benefits for Dover.

- Whitfield Roundabout is in need of improvement.
- KCC have a Planning 'in principle' objection to major growth at Dover. In part, this is due to insufficient employment to support additional housing.

STAGECOACH

5.6.3 The provision of high quality bus services is a key element of the Transport Strategy for Dover. A discussion was held with Stagecoach in East Kent and Hastings in the very early phases of the Transport Study. The aim was to identify any existing operational issues, particularly in relation to the highway network and on-street parking within Dover town centre and to establish their aspirations for future bus services and the potential for growth.

5.6.4 In particular, the meeting sought to identify:

- Points of congestion impacting on service delivery;
- Areas where bus priority is needed and can be reasonably implemented;
- General trends in patronage and spare capacity particularly on Service 61;
- Levels of service between Dover and surrounding settlements;
- The success of the QBP's and potential corridors for improvement;
- Any problems with rail interchange or the bus station;
- Any future plans they have for service routeing, vehicle upgrades, smartcard ticketing; and
- Potential for P&R.

5.6.5 The key issues raised by Stagecoach are as follows:

- Operation of the one-way system restricts the scope for increasing the coverage and frequency of bus services,
- The Dover timetable was comprehensively reviewed in 2005. No further changes are currently planned.
- Individual comments on particular routes:
  - Service to Tesco particularly well used
  - Sunday service recently converted to a commercial service
  - Buses generally not well used between 5pm and 7pm
  - Service 68 (to Maxton) is a KCC contract
  - Service 63 to Dover Priory Rail Station is subsidised in the mornings
  - Kickstart funding being used for 88, 89 and 14
- Pencester Road – happy with location of bus interchange, but needs improvement
- Relative attractiveness of bus versus other options to access Canterbury may be a problem for the Whitfield development,
- Need for Signalised Vehicle Detection (SVD) to aid bus movements through the town,

- Parking problems in residential areas restricting access
- Potential services include:
  - Second route between Deal and Dover via Whitfield
  - Whitfield to Canterbury (version of Service 15)

SOUTHEASTERN TRAINS

5.6.6 A meeting was held between WSP and Southeastern Trains in February 2007. The purpose of this meeting was to discuss the future proposals for train service provision for Dover.

5.6.7 The 'Integrated Kent Franchise' (IKF) combines the classic network in Kent, parts of East Sussex and South East London with the new high speed commuter service on the Channel Tunnel Rail Link (CTRL) from December 2009. The new service will be referred to as HS1.

5.6.8 The purpose of the new High Speed service is threefold:

- To support growth in the Thames Gateway and the rest of Kent;
- To reduce travel times, significantly in some cases; and
- To provide more passenger choice for travel via HS1 or classic routes and improving connections to the rest of the UK.

5.6.9 A key aspiration of the new service is that it will provide a real alternative to the car. The journey time between Dover Priory and central London (St Pancras rail station) will be 74 minutes. This is a journey time saving of 38 minutes on the current level of service.

5.7 KEY ISSUES / CONSIDERATIONS

- A Steering Group has guided the development of the Dover Transport Study
- Stakeholders identified town centre operations, impact of port traffic, public transport, integration and pedestrian access as key issues
- A2 diversion has policy benefits (reducing severance, improving Port access and improving air quality on Townwall Street)
- Integration, Whitfield Roundabout and construction phasing are key issues for growth at Whitfield.

6 Transport Strategy Vision and Objectives

6.1 INTRODUCTION

6.1.1 The Transport Strategy for Dover needs to contribute to the overall aspirations for the town. As such, the Regeneration Strategy 'vision' should also be adopted to guide transport decision making.

6.1.2 This section sets out the vision, aims and objectives that should steer the development of the Transport Strategy to ensure that it accords with the requirements of the study brief and the aspirations of national, regional and local policy.

6.2 VISION

By 2035 Dover will be one of the most prosperous towns on the South Coast, characterised by a highly skilled and enterprising community that is proud of its town, its port and its heritage

6.3 AIMS

- To deliver a balanced, comprehensive and lasting transport strategy for Dover that considers LDF growth and Port development
- To support the creation of high quality environments for people rather than cars, establishing a sense of place for Dover and stimulating investment
- To create a connected town, capitalising on iconic waterfront development and major urban growth

6.4 OBJECTIVES

- To facilitate the delivery of the LDF including development of an integrated urban expansion at Whitfield
- To manage the demand for travel
- To maximise the attractiveness of travel by public transport
- To maximise cycling and walking
- To optimise the town centre one-way system
- To contribute to sustainable port expansion
- To deliver infrastructure to support development

7 Options for Change

7.1 INTRODUCTION

7.1.1 A key component of the transport study has been consultation with stakeholders. This, in combination with views expressed by the Steering Group in response to assessing baseline data on existing conditions, has led to a series of 'themes' being created. These themes have been summarised in this Chapter. They represent a series of alternative, and in some cases, complimentary approaches to tackling transport problems in Dover. It should be noted that this summary does not represent study proposals. Rather, they are a structured record of the main threads of discussion with interested parties.

7.2 KEY THEMES

7.2.1 The themes, which correspond well to the review of policy and existing conditions provided in Briefing Note 1, are grouped together in three different, incremental, categories of intervention. As a minimum, the LDF preferred growth option is taken as a 'given' within each theme. Likewise, it is assumed that highway capacity and safety works are provided to access each development site.

- **Theme 1: Accessibility Strategy**
  - Pedestrian and Cycling Improvements
    - 'Legible' Town signage and information strategy
    - More and improved pedestrian crossing facilities
    - Secure cycle parking and key facilities
    - Improved links between Whitfield and town
    - Pedestrian and cycle priority within new developments
    - Removal / enforcement of on-street parking
    - Environmental (public realm) treatments for the town centre
    - Improved maintenance regime for footways / paths in town centre
  - Local Bus Improvements
    - Rural (Demand Responsive) bus service strategy
    - Increase services to Dover Priory Station to serve commuters
    - Improve information, security and passenger facilities at Pencester Road interchange
    - More / better bus shelters
    - Free bus travel for under 16's (trial?)
    - Improved hospital transport schemes

- Rail improvements
  - HSTI
  - Improved pedestrian access to Dover Priory
  - Limited additional parking
  - Improved interchange (bus / rail / taxi / walk) at station
  - Integrated bus / rail ticketing

- **Theme 2: Demand Management Strategy**
  - Travel Demand Management Plans
    - Schools (Education and Inspections Act)
    - Hospitals / Health Care
    - Major employers (District Council)
    - New development
    - Port
  - Reallocation of Road Space
    - Pedestrian priority in town centre
    - Pedestrian priority across Townwall Street
    - Contra-flow bus lane on one-way system
    - Bus priority (SVD) at signalised junctions
    - Pedestrian priority across Whitfield Junction and A2
  - Parking
    - Reduction of town centre parking
    - Reduction of long stay parking
    - Relocation of parking to edge of town sites
    - Park and Ride?
  - Port Traffic
    - Intelligent Transport System for balancing flows on M2 / A2 and M20 / A20
    - Freight Quality Partnership
    - HGV queue relocation (buffer zone)

- Reducing the need to travel
  - Health service strategy
  - Retail home deliveries
  - E-Government (reducing the need to travel to Government/Local Government offices by providing internet based services)
  - Access to District Council administrative services
- Road User Charging
  - HGV 'environmental' charge based on emissions and periods of peak network demand with hypothecated funds

- **Theme 3: Major Growth and Investment**
  - Post – LDF development quantum
    - 5000 dwelling urban extension at Whitfield
    - Intensify town centre development – relocate car parking
  - Change Strategic Routeing
    - Localised improvements to A2
    - Divert A2 to the north of Whitfield
    - Downgrade or close old A2
    - Sign eastern and western docks separately via M2 and M20
  - Improve town centre conditions
    - Reallocate space on Townwall Street to buses and pedestrians
    - Major town centre public realm works
    - Improve access to sea front, port, Dover Priory Station and town centre
  - New Public Transport Mode
    - Create prioritised or segregated bus based transit 'spine'. Whitfield (Park and Ride?) to town centre and rail station
  - Car Parking
    - Short stay only in town centre
    - Remote parking and Park and Ride
  - Management
    - Hypothecation of parking and Road User Charge fund to support socially necessary transport and pump-prime QBP initiatives

7.2.2 The suggestions within these 'themes' have been subject to further debate and consideration. They have helped to inform the proposals taken forward for appraisal against policy and deliverability criteria and for model testing (See Chapter 8).

8 Appraisal

8.1 INTRODUCTION

8.1.1 Appraisal of the Dover Transport Strategy scheme options is essential to determine the merits of the proposals being put forward against the aims and objectives of the Strategy and against national, regional and local policies. This process aids in identifying those that contribute most to achieving the strategy objectives.

8.1.2 In line with the study brief, this Transport Strategy has been prepared with a focus on trying to deliver quality schemes in support of economic growth in Dover. As highlighted in the Brief and subsequent Steering Groups, these schemes fall under three main categories which are all fundamentally interlinked:

- Expansion of Dover Port;
- Regeneration of Dover: Town Centre and Sea Front Strategy; and
- LDF Development Strategy.

EXPANSION OF DOVER PORT

8.1.3 The proposals for expansion and growth at the Port, as discussed within Section 3.5, will facilitate increased international freight movement, and it is recognised that this will place increased pressure on the local and strategic highway network. In particular, increased Port traffic is likely to exacerbate the existing level of severance created along Townwall Street.

8.1.4 The consideration of highway and transport schemes is required to provide better access to the Port of Dover and to support coastal regeneration and development. Furthermore, this will assist in the management of international traffic to Dover via A2 and the M20.

REGENERATION OF DOVER: TOWN CENTRE AND SEA FRONT STRATEGY

8.1.5 The Dover Pride vision for the regeneration of Dover is discussed in detail within Briefing Note 1 (Background Report No.11). The sustainable growth and regeneration of Dover will not be achievable without the support of an integrated transport system that provides for movement and access to a range of employment and services to enable the town to function and grow.

LDF DEVELOPMENT STRATEGY

8.1.6 Land use planning must play its part in reducing the distances travelled to work, to school, to health care, to shops and to leisure activities. Where these facilities cannot be provided “on the doorstep” a range of transport options need to be in place so that, depending on the length of the journey and the mobility of the traveller, accessibility by all modes for all people is catered for.

8.1.7 The economic regeneration and continued success of Dover will require sufficient people to create the critical mass needed to support and feed the economy. The economically active population will of necessity rise. Where these people live and work and how they travel to and from work will be critical to the success of the Vision for Dover.

8.2 APPRAISAL

8.2.1 The assembled options have been individually tested against the prioritised objectives, as set out in Chapter 6. WSP has developed a spreadsheet based Appraisal Tool specifically to provide a structured means of assessing packages of measures against up to ten study objectives, and the criteria for implementation of technical, operational and financial feasibility. The packages are also judged against public acceptability and the Governments requirements for transport appraisal procedures of Environment, Safety, Economy, Integration and Accessibility and Social Inclusion.

8.2.2 The tool requires the user to specify a number of inputs against each scheme in order to derive an overall qualitative appraisal score. This includes the need for a cost indicator as well as a qualitative appraisal of the scheme against the above criteria using the seven-point appraisal scale as described in the Scottish Transport Appraisal Guidance (STAG) and Department for Transport Major Scheme Appraisal. The definitions of this seven-point appraisal scale are detailed in Table 8.1 below.

Table 8.1 Seven-point Appraisal Definitions

APPRAISAL SCORE	DEFINITION
+3	**Major benefit** — these are benefits or positive impacts which, depending on the scale of benefit or severity of impact, the planner feels should be a principal consideration when assessing a proposal's eligibility for funding
+2	**Moderate benefit** — the proposal is anticipated to have only a moderate benefit or positive impact. Moderate benefits and impacts are those which taken in isolation may not determine a proposal's eligibility for funding, but taken together could do so
+1	**Minor benefit** — the proposal is anticipated to have only a small benefit or positive impact. Small benefits or impacts are those which are worth noting, but the planner believes are not likely to contribute materially to determining whether a proposal is funded or otherwise
0	**No benefit or impact** — the proposal is anticipated to have no or negligible benefit or negative impact
-1	**Small minor cost or negative impact** — the proposal is anticipated to have only a small cost or negative impact. Small costs or impacts are those which are worth noting, but the planner believes are not likely to contribute materially to determining whether a proposal is funded or otherwise
-2	**Moderate cost or negative impact** — the proposal is anticipated to have only a moderate cost or negative impact. Moderate costs /negative impacts are those which taken in isolation may not determine a proposal's eligibility for funding, but taken together could do so
-3	**Major cost or negative impacts** — these are costs or negative impacts which, depending on the scale of cost or severity of impact, the planner should take into consideration when assessing a proposal's eligibility for

	funding

8.2.3 Cost is an important element in the appraisal as this provides an indication of overall value for money of the projects. However, at this stage in a scheme's development it is often difficult to specify with any degree of certainty, the cost of a scheme. Therefore in the appraisal tool the cost indicator parameter is used to provide an indication of the likely scale of a schemes cost. A definition of the cost indicators is shown below in Table 8.2.

Table 8.2 Appraisal Tool Cost Indicator

INDICATOR	COST DEFINITION
1	Under £50K
2	£50k to £100K
3	£100K to £200K
4	£200K to £400K
5	£400K to £800K
6	£800K to £1.5M
7	£1.5M to £3M
8	£3M to £10M
9	£10M to £30M
10	Over £30M

8.2.4 The output from the appraisal spreadsheet tool is an overall appraisal score. This score provides a useful indicator of the scale of impact of each of the schemes, and provides a vital comparator for benchmarking against other schemes.

8.2.5 In line with current national guidance, the approach is to use qualitative techniques to help inform our assessment of the ability for the options to address the identified and prioritised objectives.

8.3 APPRAISAL SUMMARY TABLE (AST)

8.3.1 From an early stage in the transport study process, significant emphasis has been placed on consultation, close working with the Steering Group and study work. This has led to the consideration of schemes from the outset that conform closely to aspirations and policy requirements and therefore nearly all of the schemes, on the whole, have some merit. The purpose of the appraisal has therefore focussed more on assessing the relative merits of each of the schemes against each other, and against overarching strategy aims and objectives, rather than to identify and eliminate schemes that do not conform to the objectives. Table 8.3 below sets out the appraisal summary, which provides the priority for each of the schemes by mode and the strategies that they fall within (e.g. LDF, Town Centre and Port). The detailed appraisal results are provided as Appendix B.

8.3.2 The priority of each scheme is based on the overall appraisal score i.e. the higher the appraisal score, the higher the priority.

Table 8.3 Appraisal Summary Table

CODE	SCHEME	PRIORITY	STRATEGY PRIORITY		
			LDF	TOWN CENTRE	PORT
WALKING AND CYCLING SCHEMES					
WC1	Pedestrians and Cyclists - Multi-lingual Signage Strategy	HIGH		✓	
WC2	Pedestrians and Cyclists - Townwall Street Landbridge			✓	✓
WC3	Dover Priory rail station - Public Realm Improvements			✓	
WC4	Improve access to Dover Priory station - pedestrians			✓	✓
WC5	Pedestrians and Cyclists - Cycle Parking			✓	
WC6	Pedestrians and Cyclists - ASLs	MED		✓	
WC7	Pedestrians and Cyclists - reallocation of road space at Station Approach junction			✓	
WC8	Pedestrians and Cyclists - Whitfield to Town centre cycle route		✓	✓	
WC9	Pedestrians and Cyclists - Cycle Tourism at Dover Priory			✓	
WC10	Pedestrians and Cyclists - River Dour footpath improvement			✓	
WC11	Pedestrians and Cyclists - Environmental Treatment		✓	✓	
WC12	Pedestrians and Cyclists - Super crossings over Townwall Street	LOW		✓	✓
WC13	Pedestrians and Cyclists - Bikes on Buses			✓	

Table 8.3 continued – Public Transport and Car Parking

CODE	SCHEME	PRIORITY	STRATEGY		
			LDF	TOWN CENTRE	PORT
PUBLIC TRANSPORT SCHEMES					
PT1	Improved Bus Interchange on Pencester Road	HIGH	✓	✓	
PT2	Improve access to Dover Priory station - bus			✓	✓
PT3	Bus only Pencester Road			✓	
PT4	New Bus Services - Extension of Buckland Valley bus service		✓	✓	
PT5	New Bus Services - Port to Dover Priory	MED			✓
PT6	Park and Ride – Whitfield & A20		✓		
PT7	New Bus Services - Whitfield to Town Centre Express		✓	✓	
PT8	Contraflow bus lane on Maison Dieu Road from Pencester Road	LOW		✓	
PT9	Coordinated Traffic Signal Control - Selective vehicle detection (bus priority)		✓		
CAR PARKING SCHEMES					
CP1	Car Parking Strategy to manage demand - price	MED		✓	✓
CP2	Car Parking Strategy to manage demand - supply			✓	✓
CP3	Car Parking Strategy to manage demand - Development Parking Standards	LOW		✓	✓

Table 8.3 continued – Highway Schemes and Smarter Choices

CODE	SCHEME	PRIORITY	STRATEGY		
			LDF	TOWN CENTRE	PORT
HIGHWAY SCHEMES					
H1	Downgrade old A2	HIGH	✓		
H2	A strategic and dynamic routeing strategy for Port traffic - Motorway VMS System				✓
H3	A strategic and dynamic routeing strategy for Port traffic				✓
H4	A strategic and dynamic routeing strategy for Port traffic - Freight Quality Partnership				✓
H5	Diversion of A2 around Whitfield	MED	✓		
H6	Coordinated Traffic Signal Control - SCOOT UTMC System	LOW	✓		
H7	Improved one-way system - two-way Pencester Road			✓	
H8	Improved one-way system - two-way western arm			✓	
H8	Improved one-way system - two-way on Maison Dieu Road			✓	
SMARTER CHOICES					
SC1	Transport Awareness and Behavioural Change Programme	MED	✓	✓	✓

9 Walking & Cycling

9.1 INTRODUCTION

9.1.1 Chapter 3 provided a detailed discussion on the current issues associated with walking and cycling accessibility to the town centre, Port and railway station. These key issues:

- Importance of providing for pedestrians and cyclists due to high unemployment and that in some wards, over 45% of households do not have access to a car; Severance caused by priority given to Dover Port traffic;
  - Townwall Street
  - Whitfield to town centre
- Topography of the town and subsequent impact on journey times;
- Whitfield – beyond acceptable walking distance;
- Poorly signed and narrow route between the town centre pedestrian zone and Pencester Gardens (heavily trafficked pedestrian route);
- Lack of cycle parking at approach to the town centre pedestrian zone;
- Low perception of safety and lack of natural surveillance due to concentration of tall office buildings on route to the South Kent College;
- Poor signage for pedestrians and cyclists; and
- On-street parking impeding continuation of route for cyclists, particularly along Townwall Street.

9.1.2 A review of key documents highlighted a range of schemes that have previously been considered in tackling the pedestrian and cycle issues associated with Dover. These have also been discussed within Chapter 3. Through the consultation process and development of the overall strategy, a preferred list of schemes for pedestrians and cyclists was drawn up and subsequently tested against the transport aims and objectives, and deliverability criteria. Chapter 8 has provided a summary of this appraisal process.

9.1.3 The remainder of this chapter discusses the schemes that have been identified as most applicable in addressing the aims and objectives.

9.2 SCHEMES

9.2.1 Table 8.1 set out, in priority order, those schemes which are considered important to enhance current levels of accessibility to key facilities for pedestrians and cyclists within Dover. When delivered, these schemes will provide a high quality pedestrian and cycle environment that supports and provides priority to existing users as well as encourages additional trips on foot and by bicycle.

9.3 WC1: MULTI-LINGUAL SIGNAGE STRATEGY

9.3.1 The review of existing infrastructure for pedestrians and cyclists has shown that the town of Dover is poorly signed for these users. The regeneration of the town centre, the expansion of the Port and the introduction of CTRL services is likely to attract an increased number of visitors that will need to navigate the town on foot or by bicycle. Providing a legible town is considered to be a high priority in addressing the overarching strategy objective of town centre accessibility.

9.3.2 As a major Gateway in to Europe and from Europe into England, Dover affords an excellent opportunity not only to provide a comprehensive network of pedestrian and cycle signage, but to provide this signage in more than one language. This will not only assist foreign visitors, but will help to create a sense of place and act as a reminder of the important connection between the town, the Port and Continental Europe.

9.3.3 The signage should be consistent, comprehensive, to the highest standard and be positioned at strategic locations including:

- Dover Priory rail station and station approach;
- At intervals within the town centre pedestrian zone to direct to locations including South Kent College, Pencester Gardens, Pencester Road, the Seafront and Police Station etc.
- At the seafront to aid access on to the National Cycle Network and to the town centre; and
- At strategic locations along the proposed cycle routes.

9.3.4 An example of pedestrian signage which is currently used in Bristol is provided in Figure 9.1 below. In accordance with the Dover District Cycling Plan (draft for consultation), signs should also contain approximate walk or cycle times to aid the expectations of the pedestrian or cyclist and simple location plans.

Figure 9.1 Legible City style signage

9.4 WC2: TOWNWALL STREET LANDBRIDGE

9.4.1 The provision of a landbridge over Townwall Street will significantly aid town centre accessibility for residents and visitors to and from the seafront. In addition, the landbridge will improve general and pedestrian and cycle movement across town.

9.4.2 As described earlier, the landbridge has been promoted previously as part of a regeneration strategy and masterplan for Dover. Subsequent studies and analysis of deliverability and cost challenges have suggested that smaller scale improvements to existing pedestrian crossing points ('Super Crossings') would be more effective. However, this conclusion is not accepted within the context of this Transport Strategy.

9.4.3 The very high score awarded to this scheme as part of the appraisal process, reflects the scale of policy contributions the landbridge scheme can make. The extent of anecdotal evidence, from stakeholders and members of the public, which suggests Townwall Street is a real barrier to pedestrians and cyclists is significant. The physical severance and highway environment also demonstrate that this is a hostile environment for people wishing to access the seafront area from the town. As Port traffic increases, this severance will escalate. An effective resolution to this problem is critical for the success of the iconic waterfront development envisaged as part of the Masterplan.

9.4.4 The stakeholder demands on Townwall Street differ hugely depending on their specific area of interest. Diverse requests highlighted through consultation include:

- Widen Townwall Street with an additional lane in both directions;
- Reallocate one lane in each direction for use by buses only;
- Introduce on-road cycle lanes; and
- Provide a number of additional at-grade pedestrian crossings.

9.4.5 The transport modelling results discussed in the Multi Modal Model and Options Testing Report (Supporting Document No.8), site observations and forecasts of future Port traffic growth all indicate that reducing highway capacity on Townwall Street would have a significantly negative impact on Port operations, the local economy and the UK International Freight market. However, the dominance and severance effect of this road needs to be addressed to support Masterplan objectives and deal with current integration problems within the town.

9.4.6 The landbridge concept will provide a seamless link for pedestrians and cyclists and in addition, will be a clear statement signalling the quality and priority that is afforded to people (rather than traffic) in Dover. This major investment is therefore considered to be a critical element of the Dover Transport Strategy and ideally should be a pre-requisite of further development of the town centre and Wellington Dock..

9.5 WC3, WC4 AND WC7: DOVER PRIORY – PUBLIC REALM, PEDESTRIAN AND CYCLE IMPROVEMENTS

9.5.1 As previously discussed, the Public Realm works currently underway at Dover Priory station will make a positive contribution to encouraging greater rail use and prepare for the arrival of CTRL services. This, and the subsequent phases of work to pedestrian and parking facilities scores highly in the appraisal.

9.5.2 The connections between the rail station and the town centre have been the subject of previous masterplanning exercises. This process led to a series of Public Realm proposals including the creation of a more attractive pedestrian space around the Folkestone Road roundabout. To interpret these masterplanning objectives into practical solutions, two junction improvement schemes have been designed for this location (see the Infrastructure Design Report, Supporting Document No.6). Both options significantly reduce the dominance of vehicular traffic for pedestrians travelling between the station and town centre. Whilst the Infrastructure Design Report (Supporting Document No.6) identifies a signalised gyratory as the preferred solution in pure traffic engineering terms, the solution which provides maximum space and time for pedestrians is a signalised crossroads junction. However, this later proposal does provide pedestrian space at the cost of some increased queuing at the junction. In policy and strategy terms, the crossroads solution is recommended.

9.6 WC5, WC6, WC8, WC9 AND WC13: CYCLE SCHEMES

9.6.1 The assessment of journey to work mode shares within Dover has shown that a higher than average proportion of the population within Dover cycle to work. It has been discussed that the reasons for this include high levels of low car ownership, noted in some pockets of the town. Making provision for cyclists is a major requirement in development design. The need to provide for cyclists in Dover is therefore a requirement of the LDF development and Port growth proposals, but which is made more acute by the local demographics. A number of schemes have been formulated and appraised based on general good practice and informed by the recommendations of previous studies. The schemes include:

- Cycle parking;
- Advanced Stop Lines (ASL's);
- A new cycle route connecting Whitfield, the town centre and the Port;
- The promotion of cycle tourism; and
- The provision for bikes on buses.

WC5: CYCLE PARKING

9.6.2 Cycle parking should be provided at all key destinations throughout the town, including at Dover Priory rail station, Pencester Road and at the entrances to the town centre pedestrianised zone. The cycle parking infrastructure should be to the highest standard and in appropriate locations to provide the highest level of natural surveillance to encourage use.

9.6.3 New development, including residential LDF proposals, regeneration in the town centre and growth at the Port will provide cycle parking in accordance with the

standards. Due to the higher than average use of bicycles within Dover, supply will need to be regularly reviewed to ensure that it meets demand.

WC6: ADVANCED STOP LINES

9.6.4 The creation of more signalised highway junctions within Dover (see the Infrastructure Design Report, Supporting Document No.6) generates the opportunity to provide Advanced Stop Lines (ASL's) to improve safety and convenience to cyclists. This also makes a clear statement that the needs of cyclists within Dover are prioritised.

WC8: NEW CYCLE ROUTE – WHITFIELD TO DOVER TOWN CENTRE AND PORT

9.6.5 Existing cycle routes within Dover have been discussed in Chapter 3. Within this assessment, the proposals for new cycle routes which are the aspirations of Dover District Council and Kent County Council, were identified. A new cycle route that connects Whitfield to the town centre and the Port has a number of advantages:

- Reducing the severance of Whitfield from the town centre;
- Providing a direct route for cyclists to the Port for employment and leisure purposes;
- Encouraging an increase in cycle trips to aid with congestion and air quality issues;
- Providing a cycle connection between the town centre and Port for a number of proposed residential LDF sites; and
- The regeneration of links along the River Dour.

9.6.6 It is understood from discussions with Kent County Council that a full review of Public Rights of Way is being undertaken within Dover. It is likely that this review will have an impact on some parts of the identified route between the town centre and Whitfield. However, the desirability of this route, evidenced in the advantages detailed above, should not be undermined by this review and DDC should seek to work with Developers that would benefit from this cycle route to ensure its implementation.

WC9: PROMOTION OF CYCLE TOURISM

9.6.7 The Public Realm proposals for Dover Priory rail station and the introduction of CTRL services will ensure that Dover Priory becomes a real driver for encouraging an increase in trips both into and out of Dover. This provides the opportunity to encourage car free tourism using Dover Priory as a base for the scheme. The scheme will be supported by the signage strategy and enhanced cycle parking facilities and will help to reduce congestion issues associated with visitors into the town. The introduction of such a scheme at Brockenhurst rail station, Hampshire, as shown in Figure 9.2 below, has proved to be very successful.

Figure 9.2 Car Free Tourism – Brockenhurst Rail Station

WC13: BIKES ON BUSES

9.6.8 It has been previously discussed, within Section 3.7 that the outlying residential areas of the town, including Whitfield to the north, are within a 10 to 20 minute cycle journey time from the town centre. However, the programme used to determine this can not take into account the topography of the town, which will always remain as the key deterrent for encouraging bicycle trips within Dover.

9.6.9 The trip into the town centre is, for the most part, downhill and it is therefore the return trip that would deter potential cyclists. It is considered that if the return journey could be assisted by public transport (on occasion), the deterrent of the natural topography of the town can be removed and it may be possible to encourage more cycle trips. The provision for bikes on buses is already employed in cities in America, and in more rural locations in England, for example, in Wales. Figure 9.3 below provides an example of such a facility.

Figure 9.3 Example of Provision for Bikes on Buses

9.6.10 These facilities should be considered in conjunction with the Public Transport proposals discussed in Chapter 10.

9.7 WC10, WC11 AND WC12: PEDESTRIAN SCHEMES

9.7.1 The Public Realm strategies and the proposals for a landmark pedestrian and cycle landbridge will greatly assist in enhancing the current level of provision and connectivity for pedestrians within Dover. These will be further complemented by a comprehensive signage strategy. The LDF development and regeneration proposals for the town centre must also include provision for enhancing the pedestrian environment. However, it is considered that more can be done, in particular in reducing severance caused by Townwall Street and in creating 'places' for pedestrians within the town centre to encourage greater footfall and to reduce reliance on the car.

9.7.2 Previous studies, as discussed within Chapter 3, suggest the use of 'super crossings' along Townwall Street in place of a landbridge. It is considered that these should be used to complement the landbridge, which will only provide access across one point of Townwall Street, focussing connectivity on the seafront proposals. An additional crossing should be provided at the Junction with Russell Street. This and the existing crossing with Maison Dieu Road will be treated to enhance the priority given to its users, for example, widened crossings and longer crossing times. This will provide a total of four crossing points (including the existing subway) for pedestrians wishing to cross Townwall Street, significantly enhancing accessibility.

9.7.3 It is widely acknowledged that the River Dour is an under utilised resource as a pedestrian route within the town centre, which has the potential to 'cash in' on its waterfront location to promote trips on foot. The proposed cycle route within the town centre will run adjacent to the River Dour where possible, and provision will be made for both pedestrians and cyclists in the design of this route.

9.7.4 Treatment of all pedestrian and cycle routes will be required and for existing routes, will be instructed by the District Council's Accessibility Audit. New routes will be implemented to the highest best practice design standards. For Townwall Street, it is envisaged that the landmark overbridge will act as a 'Gateway' to the town, ensuring that the street is consciously thought of as part of the town centre, for use by all modes, rather than just as a vehicular route that bypasses the town centre, to the Port. This will encourage all drivers to be aware of other road users and will require clever design solutions. The end of this 'zone', along Townwall Street, should be marked with a bold architectural feature to make it clear to drivers that this zone has ended. Appropriate design solutions should be sought to treat the environment between the landbridge and the end of the 'zone' to complement the landmark features. Figure 9.4 below illustrates the type of solution that should be sought, incorporating landscape features to enhance the image of the street.

Figure 9.4 Example of Town Centre Dual Carriageway Boulevard

10 Public Transport

10.1 INTRODUCTION

10.1.1 Chapter 3 provided a summary of the existing provision for bus services within Dover (detailed in full in Briefing Note 1, Background Document No.11), and the potential for enhancing this provision to support town centre accessibility, the LDF development proposals and expansion of the Port. Proposals for enhancing bus services within Dover have been borne out of this review and have drawn from previous studies and stakeholder aspirations.

10.2 SCHEMES

10.2.1 The proposed schemes are detailed in Table 10.1 below and have been appraised against the policy objectives and implementability, as discussed in Chapter 8.

Table 10.1 Public Transport Schemes

CODE	SCHEME	STRATEGY		
		LDF	TOWN CENTRE	PORT
PT1	Improved Bus Interchange on Pencester Road	✓	✓	
PT2	Improve access to Dover Priory station - bus		✓	✓
PT3	Bus only Pencester Road		✓	
PT4	New Bus Services - Extension of Buckland Valley bus service	✓	✓	
PT5	New Bus Services - Port to Dover Priory			✓
PT6	Park and Ride - Whitfield	✓		
PT7	New Bus Services - Whitfield to Town Centre Express	✓	✓	
PT8	Contraflow bus lane on Maison Dieu Road from Pencester Road		✓	
PT9	Coordinated Traffic Signal Control - Selective vehicle detection (bus priority)	✓		

10.3 PT1: IMPROVED BUS INTERCHANGE ON PENCESTER ROAD

10.3.1 Improvements to the existing bus interchange will aid town centre accessibility and port development proposals. The improvements to town centre bus services include the proposal to make Pencester Road two-way to buses only. This affords the opportunity to enhance the current environment for bus users, pedestrians and cyclists along Pencester Road, creating a modern interchange that compliments the overall regeneration and development proposals for the town centre.

10.3.2 Examples of such interchanges are provided in Figures 10.1, 10.2 and 10.3 below.

Figure 10.1 Example of a modern Bus Interchange (1) – Croydon

Figure 10.2 Example of a modern Bus Interchange (2) – West Yorkshire

Figure 10.3 **Example of a modern Bus Interchange (3) – Manchester**

10.4 TOWN CENTRE BUS SERVICES

10.4.1 A revision of town centre bus services is required to improve connections between the town centre and the port and to enhance current provision to increase efficiency and improve on journey times. This section identifies a range of options for achieving these improvements. The options presented and associated commentary of the benefits and disbenefits, draws upon previously undertaken work and discussions with Stagecoach East Kent (the primary bus operator in Dover).

10.4.2 As detailed in Briefing Note 1 (Background Document No.11), and summarised in Section 3.2, Dover currently benefits from a comprehensive local bus service which is radial in nature, serving the surrounding suburbs. On approaching the centre of the town all bus services are routed via the one-way system. Whilst the one-way loop helps to improve traffic circulating Dover town centre, it impedes bus journey times and bus penetration, creating longer than necessary routes.

10.4.3 Services from the north of the town routeing from River, Crabble, Temple Ewell, Whitfield and Buckland Valley are least affected by the one-way system since they enter from the north. The route these services take via Buckland Avenue, Barton Road, Frith Road and Charlton Road, is only slightly longer than a direct southbound route along London Road and the High Street.

10.4.4 Services from the west, those from Aycliffe, Maxton, Western Heights, Elms Vale, Tower Hamlets, Dover Priory Rail Station and St Radigund's all suffer from unnecessarily long journey times as a result of the one-way system. On routeing to the town centre these services are subject to a detour northbound, away from the town centre along either High Street or London Road, before being able to traverse across to the southbound arm of the one-way system to access Pencester Road, Priory Street and Market Square.

10.4.5 The location of Dover Priory Rail Station to the west of the town centre also prevents a direct journey to the station being undertaken due to London Road being one-way northbound. The route from Dover Priory Rail Station to Pencester Road is also convoluted as a consequence of the one-way loop with services having to route via Priory Road, High Street, Ladywell, Park Street, and Maison Dieu Road before accessing Pencester Road, a diversion of some 500m.

POTENTIAL OPTIONS

10.4.6 A range of options are presented below which each potentially contribute to improve the public transport offer of Dover, through providing improved bus journey times, direct to desired destinations. These options are conceptual in nature and some will require significant alterations to the existing movement of traffic.

10.4.7 The options have been drawn from a number of sources including the Dover Masterplan (May 2006) stakeholder consultation events and following dialogue with Stagecoach in East Kent. In addition a range of further alternatives are presented which draw on the options presented by these sources.

Dover Masterplan Options

10.4.8 The Dover Masterplan presents five potential improvement options. The options range from a do nothing scenario with incremental scales, to full two way working of the current one-way loop. The identified key objectives of improving the town centre local roads (from previous Masterplanning studies) are:

- To prioritise public transport over private vehicular use (Obj DOV 22); and
- To support the strategic role of Dover's road network with respect to the Port (Obj DOV 23)

10.4.9 In addition to the five potential improvement options, three sub-options are presented which are specific alterations on parts of the road network. Table 10.2 below summarises the potential options and sub options.

Table 10.2 Bus Options

OPTION / SUB-OPTION	DESCRIPTION
11A – Do Nothing	No changes to road network. Introduction of active bus priority at signals and improved pedestrian crossing facilities.
11B – One-Way with Selective Improvements	Footway widening in the High Street area.
11C – One-Way with Selective Improvements and Cycle Lanes	Extension of Option 11B, with additional provision for cyclists including sections of with-flow cycle lane, sections of two-way cycle lanes and sections of two-way cycle lanes, as appropriate. This would reduce the width of all approaches to signalled junctions, down to one lane.
11D – Limited Two-Way Operation	Two-way operation of Maison Dieu Road between Bridge Street and Castle Street. This option would effectively produce a bypass to Priory Road and High Street.
11E – Full Two-Way Operation	Two-way operation to cover London Road, Buckland Avenue, Barton Road and Firth Road. This would require significant removal of on-street parking to ensure sufficient carriageway widths.
Sub 11i – Castle Street Closed to Through Traffic	Closure of Castle Street east of the junction with Church Street
Sub 11ii – Pencester Road Closed to Through Traffic	Pencester Road restricted for access only by bus, taxi, cycles and pedestrians. Potential to allow two-way working for bus.
Sub 11iii – Priory Road and/or High Street Closed to Through Traffic	Closure of Priory Road and/or High Street to through traffic requiring two-way operation of Maison Dieu Road.

10.4.10 The Dover Masterplan report draws its assessment to a preferred option and moves away from comprehensive re-working of the one-way system. The preferred option presented within the Dover Masterplan took forward elements of Options 11C and 11D.

Stagecoach East Kent Option

10.4.11 In addition to reviewing the work previously undertaken within the Dover Masterplan, the views of Stagecoach East Kent were sought. Their experience of bus operations in Dover ensures they are well placed to provide operational options to improve bus flows within Dover Town Centre. Following discussions with Stagecoach East Kent they have provided a number of potential options for re-working the local road network within the town centre to improve bus operations. These options were largely based on improving access to the town centre focal point of Cannon Street, Biggin Street and Market Square.

10.4.12 The preferred option presented by Stagecoach involves buses routeing south along Cannon Street, Biggin Street and Market Square, before routeing back north via Queen Street and York Street. This option would ensure bus services continue to serve Pencester Road in addition to the town centre focal point.

OPTION DEVELOPMENT

10.4.13 The option derived has been founded on the assessments previously undertaken with further consideration of key destinations that currently exist within Dover and in addition those areas which will generate increasing levels of demand.

10.4.14 These areas include Dover Priory Rail Station, with respect to the significantly improved travel opportunities afforded by the domestic Channel Tunnel Rail Link (CTRL) service extension to Dover from London.

10.4.15 The growth of Dover Port will also bring with it increased levels of demand particularly for employment trips. Whilst the growth in demand will stem mainly from the redevelopment of the Western Port, the current and forecast demand from the Eastern Port will also figure highly.

10.4.16 The expansion of Whitfield and the associated growth in population will bring with it a requirement for the extension of existing bus services and the creation of new services. This will better accommodate the range of destinations that residents of Whitfield will likely require access too.

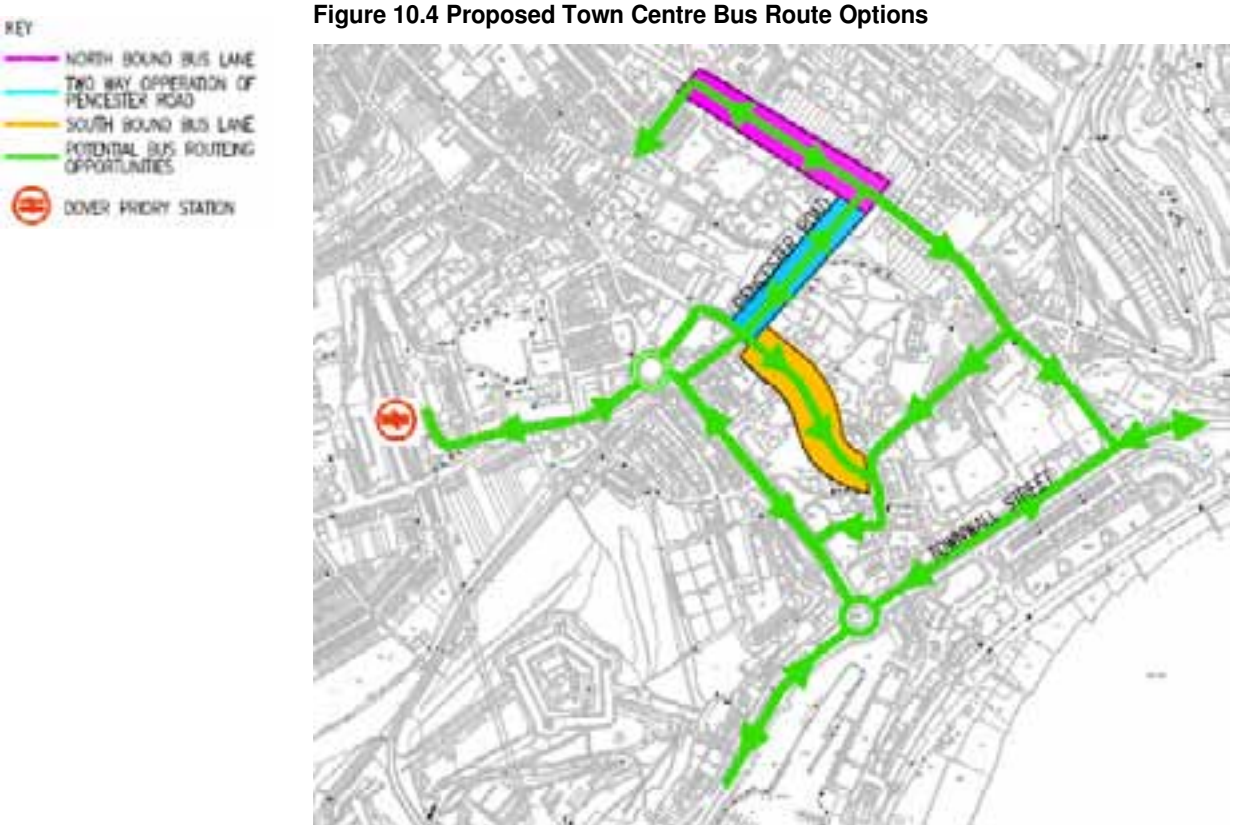
PROPOSED OPTION

10.4.17 The proposed option has been developed following a review of the options presented in the Dover Masterplan and those provided by Stagecoach. The devised option consists of three principal changes to the town centre local road network. In summary these changes are as follows:

- Two-way operation of Pencester Road for buses, taxis and cycles only;
- A northbound (contra-flow) bus lane on Maison Dieu Road between Pencester Road and Park Street; and
- Southbound operation of buses along Cannon Street, Biggin Street and Market Street.

10.4.18 The changes described above are shown in Figure 10.4 below.

Figure 10.4 Proposed Town Centre Bus Route Options



DETAILED CHANGES

10.4.19 Detailed changes to the existing highway network to accommodate these proposals are described in full in the Infrastructure Design Report (Supporting Document No.6).

ROUTE OPPORTUNITIES

10.4.20 The alterations to the town centre local road network do not necessitate any alterations to the existing bus service network within Dover. All existing routes can continue to operate as they currently do. There is therefore no immediate impact on current bus operations or a requirement to accommodate additional mileage.

10.4.21 The proposed changes to the town centre local road network do, however, offer the opportunity to improve the penetration and route choice of buses within Dover. This allows new routes and route alterations to be devised which better accommodate new areas of passenger demand and important new links.

10.4.22 The two-way operation of Pencester Road allows bus services to operate between Dover Priory Rail Station and Pencester Road, providing a direct link. This removes the need for services to route indirectly around Priory Road, Ladywell and Maison Dieu Road. This does not just benefit services originating in Maxton, Elms Vale and Tower Hamlets, but should be utilised as an opportunity to improve bus access from Dover Priory to Pencester Road thus benefiting all bus services.

10.4.23 Additionally, buses could route south along Maison Dieu Road and access the Eastern Port of Dover. This could provide a key link between Dover Priory, the town centre and the Port.

10.4.24 To better accommodate the two-way operation of Pencester Road, a northbound contra-flow bus lane along Maison Dieu Road between Pencester Road and Ladywell would be implemented. This would allow bus to route eastbound from Pencester Road and continue northbound on Maison Dieu Road before linking to London Road (northbound only) via Ladywell. Bus services can then continue to suburbs of Dover as currently.

10.4.25 The southbound operation of buses along Cannon Street, Biggin Street and Market Street will allow all bus services to route directly into the town centre and penetrate the main retail focus. This also supports efforts to better serve the proposed food retail development within central Dover. This area of the town is partially served by the existing bus network (Service 68), but the current road layout prevents services from routeing to Pencester Road stops and then on to Market Street. This new road layout will ensure all parts of the town centre can be accessed by all services.

10.5 PARK AND RIDE

10.5.1 The introduction of Park and Ride services will assist the strategy priorities of supporting town centre accessibility and Port growth. Chapter 4 discussed the potential demand for Park and Ride services within Dover and the options for site locations and service characteristics. This initial review of demand suggests that a conventional Park and Ride service for Dover is unlikely to be a commercially viable proposition. However, Park and Ride sites at the appropriate locations have the potential to intersect some journeys destined for the town centre and to the Port. This will assist in reducing the impact of vehicle growth, as a result of regeneration and Port development plans, within the town.

10.5.2 The potential to relocated town centre parking to the outskirts of the town also has benefits for maximising development potential and improving town centre conditions for pedestrians. Oxford is a prime example where Park and Ride services have been implemented on strategic routes which have greatly assisted in reducing the volume of traffic which would otherwise have headed straight for the town centre. Other examples illustrate how town centre parking can be reduced in parallel with the introduction of Park and Ride, such as Winchester.

Bus Service

10.5.3 This section assesses the likely requirement for buses to serve the proposed Park and Ride sites as identified above. For reasons of commercial and operational viability, it would be beneficial to link the same bus service to serve both the Whitfield site and the A2 site. As an indication, the service could route as follows, Whitfield Park and Ride site, A2, A20 Townwall Street, York Street, Dover Priory Rail Station, York Street, Pencester Road, Maison Dieu Road, A20 Townwall Street, A20, Capel-le-Ferne Park and Ride site. The total return trip length of this route would be approximately 34km.

10.5.4 To assess viability Table 10.3 below details the number of buses that would be required to operate this service at varying levels of frequency and provides an indicative gross bus operating cost. In generating the vehicle requirement for this route it is

assumed the average bus speed would be 30kph and the annual operating cost per bus would be £140,000.

Table 10.3 Bus Requirement

SERVICE FREQUENCY (buses per hour)	VEHICLE REQUIREMENT	ANNUAL GROSS OPERATING COSTS
12	14	£1,960,000
8	10	£1,400,000
6	7	£980,000
4	5	£700,000

10.5.5 It is recommended that Park and Ride services operate at a 10 minute frequency (requiring 7 vehicles). This corresponds with successful schemes elsewhere. The implementation of two Park and Ride sites at strategic locations should be supported by a clear parking strategy within the town centre (see Chapter 11). A parking strategy that combines a relocation of town centre parking spaces with an increase in town centre parking charges will help to encourage visitors and commuters to utilise the Park and Ride services. Charges for the Park and Ride services will be determined in line with the scale of charges for parking to ensure that they are significantly favourable to parking in the town centre.

10.5.6 As an indication of the potential cost of introducing a Park and Ride service, which also provides an express bus service to residents of the proposed new Whitfield development, an overview financial assessment has been undertaken. The assessment takes account of potential fare revenue that could be generated by the new service and offsets this against the operating cost of providing such a service.

10.5.7 Table 10.4 below details the potential revenue that could be generated from the Park and Ride service (see Chapter 4).

Table 10.4 Park and Ride Potential Revenue

Daily Passengers*	Weekly Passengers (5 days per week)	Annual Passengers (48 weeks per annum)	Annual Revenue (£2.50 return fare)**
540	2,700	£129,600	£324,000

* For both sites

** Per car rather than per passenger

10.5.8 Table 10.5 below details the potential revenue that could be generated from the Express Service based on two development scenarios at Whitfield.

Table 10.5 Express Service Potential Revenue

Development Scenario at Whitfield (Dwellings)	AM peak trips (1 trip per dwelling at 5% bus mode share)	Daily Passengers (AM peak equates to 12.5% of all day trips)	Annual Passengers (6 days per week, 48 weeks per annum)	Annual Revenue (£1.25 return fare)
1800 dwellings	90	720	207,360	£259,200
4800 dwellings	240	1,920	552,960	£691,200

10.5.9 Table 10.6 below combines the potential revenue that could be generated from the Park and Ride sites and the Express Service and offsets this against two operating cost scenarios

Table 10.6 Cost Revenue Profile

Scenario	Annual Combined Revenue	Annual Bus Operating Cost	Profit / Subsidy
Park and Ride with 1800 with 10 minute Service Frequency	£583,200	£980,000	-£396,800
Park and Ride with 4800 with 10 minute Service Frequency	£1,015,200	£980,000	£35,200
Park and Ride with 1800 with 15 minute Service Frequency	£583,200	£700,000	-£116,800
Park and Ride with 4800 with 15 minute Service Frequency	£1,015,200	£700,000	£315,200

10.5.10 Table 10.6 above, shows that the service can operate without an annual loss with a larger development quantum at Whitfield. A loss is generated with 1800 dwellings at Whitfield, however it should be noted that the assessment of revenue generated for the Park and Ride component of the service only considers commuting trips. Further revenue would be generated by retail and leisure trips which would supplement the revenue generated by the service. The extent of this revenue gain is largely dependant upon other demand management measures that are introduced within Dover. The assumptions used within Tables 10.4 and 10.5 are indicative only, but they do indicate that a Park and Ride scheme that is built on an Express Bus Service from Whitfield has the potential to be a viable scheme.

10.6 WHITFIELD BUS SERVICE OPTIONS

10.6.1 At present there is one bus service operating in the vicinity of the proposed development site at Whitfield. This service currently operates from Dover town centre, around the one way central section along Melbourne Avenue, to Tesco on Honeywood Parkway before continuing on to Whitfield. The service operates every 10 minutes between the town centre and Tesco. Every other service continues on to Whitfield,

providing a 20 minute frequency between the town centre and Whitfield. The bus service details are listed in Table 10.7 below.

Table 10.7 Whitfield Bus Service details

Service Number	Operator	Route Description	General Details
61	Stagecoach	Whitfield – Melbourne Avenue – Town Centre - Aycliffe	Mon – Sat Every 10 mins between Town Centre and Tesco Every 20 minutes between Town Centre and Whitfield Every 20 minutes between Town Centre and Aycliffe

SERVICE CHARACTERISTICS

10.6.2 To cater for the likely demand generated from the additional dwellings and employment a service frequency of 10 minutes will be required to serve these areas. There are a number of options for providing a new / improved bus service for the development at Whitfield.

EXISTING LOCAL BUS SERVICE OPTIONS

10.6.3 Following discussions with Stagecoach, Service 61 is seen as offering a good foundation to provide this level of service to the new areas of development. The current spare capacity on this route is unknown, but the service would effectively need to be doubled from the existing 3 vehicle fleet to provide a 10 minute service that penetrates all new areas of development in addition to serving the existing demand. Since the new developments will largely be on the end of the existing route, journey times for existing passengers will not be affected significantly.

NEW LOCAL SERVICE POTENTIAL

10.6.4 In the absence of service 61 as an option, a stand-alone shuttle would need to be provided, although this would likely route as the 61 but with a greater number of new vehicles. Upgrading service 61 is therefore preferential.

10.6.5 There may be a need to provide additional provision over and above the main link to the town centre, in order to provide direct links between the area and other facilities such as the hospital/health services. The demand and therefore the required level of service for these services would need to be assessed further.

EXPRESS SERVICE

10.6.6 To supplement the proposed improvement to the existing local bus service, an Express Bus Service could be introduced which “piggy backs” off the proposed Park and Ride site in proximity to the A2 and A256. Independent of where the Park and Ride site is located, the bus service could be routed within the proposed Whitfield development, providing an Express link between the proposed Whitfield development site and central

Dover. This would provide an attractive, frequent and fast journey to Dover Town Centre, the port and Dover Priory Rail Station for residents of Whitfield.

10.7 DOVER PUBLIC TRANSPORT IMPROVEMENTS

10.7.1 As discussed in Briefing Note 1 (Background Report No. 11), a review of the Dover bus network was undertaken by Jacobs in October 2006. This highlighted that the Dover bus network was largely commercial and operated at frequencies above those for settlements of a similar size. A recent fleet upgrade has also ensured the majority of vehicles are to a modern standard. Overall the general level of provision in Dover is very good and there is a continued commitment to improve services through the draft Quality Bus Partnership (QBP) between Stagecoach, KCC and DDC. Using the QBP as a vehicle for improvement, a number of proposals have been identified and are detailed below.

SPECIFIC IMPROVEMENTS

10.7.2 Despite the overall good level of service, public transport improvements have been identified which directly tackle gaps within the existing Dover bus network. These improvements have been described, but in summary include provision of Park and Ride sites on the A20, A2 and A256 approaches to Dover.

10.7.3 To serve the proposed Whitfield development, improvements are proposed to the existing Service 61, with added provision of an Express Bus Service from Whitfield to central Dover. The Express service will also double up as the bus service from the proposed Park and Ride site at Whitfield.

10.7.4 Proposals to alter the town centre one-way operation have also been put forward. The details of these changes are discussed in Section 11.4. In summary, these changes allow buses to better penetrate Dover town centre and provide a less convoluted route between Dover Priory Rail Station and other parts of Dover. These changes should stimulate private sector investment in new / extended services from operators. Investment in infrastructure changes of this nature provide a longer term, more certain, return when compared to major short term third party investment in bus subsidy

WIDER BUS NETWORK - IMPROVEMENT DRIVERS

10.7.5 In addition to the specific improvements which have been identified, there are a range of factors which will require further improvements to be made to the existing bus network. These drivers include the following:

- Ongoing improvement to the existing network as defined within the Kent Second Local Transport Plan and 2006 to 2011 Kent Bus Strategy
  - Tackle social exclusion
  - Develop new services including Demand Responsive and Community Buses
  - Develop further Bus Quality Partnerships
  - Improve Public Transport Information
  - Improve bus integration with rail and cycling
  - Improve bus infrastructure
  - Introduce integrated ticketing systems;
- Realisation of the benefits offered by the alteration to the town centre local road network; and

- Accommodating the increased demand from proposed developments within the LDF, in addition to expansion of Dover Port and demand generated by CTRL serving Dover Priory Rail Station.

DOVER-WIDE IMPROVEMENTS

10.7.6 In consideration of the drivers outlined above, there is potential opportunity to improve the Dover wide network with modest changes to the existing bus routes and introduction of new routes. These improvements are independent of those which are likely to be taken forward through a QBP.

10.7.7 Firstly, the opportunities afforded through the alterations to the town centre local road network should be drawn on to offer improved trip choices to Dover residents. The alterations proposed to the town centre road network allow all local services to more efficiently serve Dover Priory Rail Station and penetrate more of Dover town centre. All local services should therefore be routed to take advantage of this. Whilst this will likely lead to increased vehicle running times with an associated requirement to increase fleet size, part of this cost will be offset by increased patronage levels.

10.7.8 Secondly, the need to supplement the existing network to serve new areas of proposed development should be addressed. Many of the proposed development sites are located on existing bus routes and are of a quantum that do not necessarily require service frequencies to be increased. However, proposed development in the north of Dover, including Land at Port Zone and White Cliffs Business Park (Whitfield is discussed separately above), will need bus services to be improved. Sites at Connaught Barracks and Farthingloe Farm are also outside of the existing bus network.

10.7.9 Enhancing the existing Service 61 is proposed to serve sites in the north of Dover. This will include extending the service into White Cliffs Business Park, in addition to improving the frequency to offer a 10 minute service along the entire route. To alleviate problems with increased journey times associated with the increased route length, a timetable that separates the service should be introduced.

10.7.10 The proposed employment uses at Farthingloe Farm could be served through extension of existing service 68 with additional improvements to frequency bringing it up to every 30 minutes, as opposed to hourly. Based on the existing timetable the service operates using one vehicle. To improve the frequency of the service and extend to Farthingloe Farm an additional 2 vehicles would be required, although there would be a large amount of slack within the new timetable. The service could therefore be scheduled to route to a further area within Dover, improving the general service offering.

10.7.11 To serve the proposed development at Connaught Barracks, the frequency of service 15 (operating between Dover and Deal) could be increased. This increase from the existing hourly service could involve only an increase in provision between Dover town centre and the site, or could be implemented along the entire route to improve bus links with both Canterbury and Deal. Increasing the frequency along the entire length of Service 15 will require doubling of the number of vehicles operating the route from 3 vehicles to 6. The increase of frequency along the full route of Service 15 will provide wider benefits than just for residents of Connaught Barracks.

NEW BUS SERVICES

10.7.12 To better serve Dover Port and in recognition of the significant expansion as part of the Dover Port Masterplan a new bus services could be introduced. A new service which will benefit from alterations to the town centre highway network will be the Park and Ride / Express service. Through its town centre routeing this service will be able to also provide links between Dover town centre, Dover Priory Rail Station and both the Eastern and Western Ports of Dover.

11 Car Parking

11.1 INTRODUCTION

11.1.1 Car parking will play a key role in the transport strategy proposals for Dover. Key transport decision makers, including the HAg and KCC place significant importance on the need to manage the demand for travel, especially by car. Setting aside the prospect of any future national Road User Charging scheme, or a locally proposed charging scheme (which is highly unlikely given the economic condition of Dover), parking is therefore the primary demand management tool.

11.1.2 The use of demand management techniques, such as parking restraint, will be a key driver to the success of other measures, for example, encouraging mode shift to new public transport services including CTRL and Park and Ride. This is based on the principle that manipulating the benefits of one mode of transport, for example Park and Ride, so that they outweigh the benefits of another i.e. the car, is essential to encourage modal shift. A car parking strategy that is focussed on increasing the cost of parking and restricting / relocating the town centre parking stock will work towards this aim.

11.1.3 The schemes proposed are set out in Table 11.1 below and are discussed further within this chapter. Their contribution to the overarching objectives is also detailed.

Table 11.1 Car Parking Schemes

CODE	SCHEME	STRATEGY		
		LDF	TOWN CENTRE	PORT
CP1	Car Parking Strategy to manage demand - price	✓	✓	
CP2	Car Parking Strategy to manage demand - supply	✓	✓	
CP3	Car Parking Strategy to manage demand - Development Parking Standards	✓	✓	

11.2 CAR PARKING SCHEMES

11.2.1 The car parking schemes proposed to aid demand management within Dover have been identified with the specific intention to address anticipated growth in traffic volumes in the town as a result of the LDF development options. The use of parking restraint as a demand management technique provides the potential to reallocate space for more sustainable forms of travel, therefore aiding town centre accessibility for modes including bus, walking and cycling.

11.2.2 The restriction of town centre parking can help to reduce the overall quantum of town centre traffic. In that a significant proportion of Townwall Street traffic is essential HGV traffic destined for the continental ferry services, the ability to influence these trips (excluding the potential re-routing of some Port related trips via the M2/A2) is minimal. Therefore, the reduction in non-essential town centre car trips, in favour of travel by

public transport, cycling or walking has the potential to create an improved environment and assist in the operation of Townwall Street with resultant benefits for Port traffic.

11.2.3 Recent Examinations in Public for other LDF Core Strategies have highlighted how important a balanced parking policy is to the successful delivery of a 'sound' LDF.

11.3 CP1 – PRICE

11.3.1 The draft Dover Parking Strategy undertaken by PBA recognises the need to maintain a parking structure for the town that ensures it remains competitive with other retail centres. However, the proposed increase of 50 pence on the daily charge to £5 is not expected to encourage modal shift in support of proposed Park and Ride services and enhanced town centre bus services. A full review of parking charges within the town is required in the context of other decisions and business case analysis for investment in schemes to encourage non-car modes. This should be undertaken in full consideration of the Park and Ride and town centre bus fares to ensure that resultant parking charges outweigh the costs of travel to the centre by public transport, therefore providing a significant enough disbenefit to drivers to encourage modal shift.

11.3.2 Premium parking charges for the most central car parks should be a priority consideration for this review. The draft PBA Parking Strategy for Dover suggests that this should be delayed until the impact of redevelopment is fully known, however, it is WSP's view that introducing increased parking charges post development, once travel behaviour has been established, is not considered to be acceptable to support the Park and Ride services or enhanced bus services from the outset.

11.3.3 The current charging period of 0900 – 1700 will be extended to cover the period between 0700 – 1900 Monday to Saturday, bringing Dover in line with other centres including Ashford, Canterbury, Margate, Broadstairs and Ramsgate. This proposal maintains free evening parking to encourage the vitality of the evening economy within Dover. Extending the charging period to include Sunday also needs to be considered to support the viability of Sunday public transport services.

11.3.4 The PBA parking study provides a useful base on which to consider future changes. However, in terms of parking cost, a fundamentally different principle is recommended. This is that town centre parking charges are set and maintained at a level which positively influences mode choice. This will need to be directly linked to the economic case for a detailed Park and Ride scheme and should, over time, increase at a rate above the level of inflation. The starting point for increased charges should not be solely driven by the charges in neighbouring towns, but the perceived and actual costs of transport alternatives for travellers. For example, Ashford's draft LDF Core Strategy describes a town centre parking regime which increases charges by 150% by 2011, 200% by 2021 and 400% by 2031. This equates to an annual increase of approximately 16%. This is set against Ashford's development proposals which are significantly higher than Dover's. However, detailed economic analysis should be undertaken to set the percentage increase rates at a level which contribute towards achieving the objectives of Dover's Transport Strategy and Masterplan.

11.4 CP2 – SUPPLY

11.4.1 In addition to increased parking charges, reducing the number of parking spaces in real terms, so that it becomes difficult to find a space within the town centre will further act to encourage modal shift to Park and Ride and town centre bus services.

For some drivers, increasing costs is not enough to deter travel in to town and city centres, but if it becomes difficult to find somewhere to park, then it is more likely that the disbenefits associated with this, such as increased journey times due to time spent queuing, will encourage modal shift.

11.4.2 The draft Parking Strategy for Dover maintains a 15% buffer of supply over demand in assessing future requirements for parking stock. It is recommended that this policy be reviewed so that demand always slightly outweighs supply. The demand that is not subsequently accommodated in the town centre will be provided at the proposed Park and Ride sites. The quantum will need to be assessed and the appropriate supply provided at Whitfield and on the A2 approach to Dover.

11.4.3 Capacity at the proposed Park and Ride sites will also allow for displaced parking as a result of town centre developments. The PBA proposal for a multi-storey car park for the town centre, with a net increase in 175 spaces, is questioned on the grounds that this will not support public transport proposals or the aspiration to reduce congestion within the town centre. It is understood that this proposal has come forward as a result of aspirations within the Dover District Local Plan to locate parking as close to town centres as possible. As such, it is proposed that this policy approach be reviewed in support of relocated Park and Ride parking facilities to reduce the impact of traffic on the town centre. In principle, it is recommended that current policy is reversed to plan for a 15% deficit in town centre parking stock.

11.5 CP3 – DEVELOPMENT RELATED PARKING STANDARDS

11.5.1 The proposed level of development and regeneration within Dover affords the opportunity to review development related parking standards to assist in reducing growth in town centre parking stock. This will be supported by the provision of sufficient capacity at the proposed Park and Ride sites.

11.5.2 It has been discussed within Chapter 3 that Dover mirrors some of the characteristics of Ashford, in that they are currently of similar size in terms of population, and both offer international rail services. Ashford proposes significant reductions in parking standards for new developments, such that standards are set at half the current PPG13 levels immediately, reducing to a quarter by 2031. The strategy for Ashford relies on the implementation of a high quality bus service and Park and Ride, both of which are proposed for Ashford. In respect of this, it is proposed that Dover introduces similarly stringent development related parking standards for residential and commercial land uses.

11.5.3 It is recommended that parking standards should be set on a variable scale based on levels of accessibility. This simple analysis can be undertaken within the Government's accessibility model, Accession (held by KCC). Similar approaches have been adopted successfully elsewhere.

11.6 CONSULTATION, MONITORING AND REVIEW

11.6.1 Decisions on each of the measures discussed above must be in place prior to commencement of development. This will ensure that intentions are clear from the outset and will encourage behavioural change and travel characteristics from an early stage, rather than to try and reverse these at later stages which will inevitably prove more difficult. The proposed measures are interlinked and rely on each other to offer the greatest chance of success in reducing car borne trips in to the town centre for

employment, retail and leisure purposes. Implementing these measures from the outset will also support the viability of proposed town centre and Park and Ride services.

11.6.2 Strategies that focus on increasing costs to the public and that may result in perceptions of restricted choice are always contentious. Introducing a revised parking strategy that incorporates the measures as outlined above will need to follow a series of consultation and awareness raising events. The message to the public needs to be clear and this must be mirrored in strengthened policies within the Dover District Local Plan.

11.6.3 A monitoring process will need to be defined to ensure that capacity at the Park and Ride sites is sufficient to meet the demand for town centre trips that cannot be accommodated within town centre car parks.

12 Highways

12.1 INTRODUCTION

12.1.1 The proposals for highway schemes to help mitigate against the impact of growth within the town have been identified through the modelling process. Scheme details, including costs and designs, are discussed in detail within the Infrastructure Design Report (Supporting Document No.6). Table 12.1 below sets out the main schemes that will assist the overall strategy to accommodate growth related to the LDF options and Port development on the highway network

Table 12.1 Highway Measures

CODE	SCHEME	STRATEGY		
		LDF	TOWN CENTRE	PORT
H1	Downgrade old A2	✓		
H2	A strategic and dynamic routeing strategy for Port traffic - Motorway VMS System			✓
H3	A strategic and dynamic routeing strategy for Port traffic			✓
H4	A strategic and dynamic routeing strategy for Port traffic - Freight Quality Partnership			✓
H5	Diversion of A2 around Whitfield	✓		
H6	Coordinated Traffic Signal Control – (SCOOT UTMC System)	✓		
H7	Improved one-way system - two-way Pencester Road		✓	
H8	Improved one-way system - two-way western arm		✓	
H9	Improved one-way system - two-way on Maison Dieu Road		✓	

12.1.2 It should be noted that schemes H7, H8 and H9 have not been proposed due to unacceptable highway impacts (following engineering tests and analysis). Any potential benefits to the current one-way system are outweighed by the negative traffic impacts caused (delays, queues, safety issues and road widening).

12.2 H1, H2, H3 AND H4 STRATEGIC ROUTEING STRATEGY

12.2.1 As discussed earlier (see Chapter 3), the potential to use the M2/A2 as well as the M20/A20 route to access Dover Port has been discussed and analysed in the past. Whilst the HA has a determined policy to promote the M20/A20 as the primary route, based on current HGV demand and historic agreements, it is possible to encourage use of the alternative. Any increased use of the M2/A2 route could:

- Reduce traffic (especially HGV's) on Townwall Street;
- Provide flexibility for Hauliers and Port management if conditions on the M20/A20 deteriorated;
- Improve air quality, reduce community severance and provide greater route reliability for journey times on Townwall Street
- Provide two routes to the Port, relating closely to the aspirations for a Western docks development.

12.2.2 It is clear that the M2/A2 is of an inferior design standard, when compared to the M20/A20. In addition, the gradients (and resultant gear changes for HGV's) makes it less cost effective for hauliers. However, 15% of HGV drivers currently use the M2/A2 and more could be encouraged to do the same (some 35% according to recent research undertaken for the HAg).

12.2.3 The section of the route between Lydden and Dover is particularly constrained and an on-line dualling scheme is currently being considered at a national level. This national attention reflects the fact that the success of Dover Port is of importance for wider UK economy. Likewise, the prospect of strategic lorry parks on these two routes are associated with the ongoing debate about the dualling proposals. Within the context of the Dover Transport Strategy, the improvement and promotion of the M2/A2 route as a nationally important second access to Dover Port is supported.

12.2.4 Whilst it is acknowledged that it is very difficult to 'force' HGV drivers to choose one route over another, significantly more can be done to encourage greater use of the M2/A2. In particular, a Variable Message Signing Strategy for parts of the M25, M20 and M2 would enable the HAg to actively manage the two routes. This would allow the promotion of the M2 route (via VMS) to be triggered by congestion or even air quality issues on Townwall Street. This is a policy decision for the HAg rather than a significant investment (as the required technology is largely in place). In addition, it is recommended that the Dover Harbour Board investigate and pursue a range of other measures to influence HGV driver behaviour as part of a Freight Quality Partnership. The Government has produced best practise guidance for creating FQPs and this approach is now well established with a number of operational schemes around the UK.

12.2.5 Increased use of the A2 (as part of the Port Masterplan) lends further weight to the business case for diverting the A2 around Whitfield. This diversion provides for the longer term growth of the Port and Dover and helps to remove the severance between Whitfield and the rest of the town.

12.3 PROPOSED HIGHWAY IMPROVEMENTS

12.3.1 The Infrastructure Design Report (Supporting Document No.6) provides details of all highway improvements proposed. The proposals put forward in the report indicate that the level of mitigation within the Town Centre and beyond for LDF Option 1 through to 3 do not require any major infrastructure work. Alterations to existing junctions, priority and signal control, would cater for increases in traffic.

12.3.2 The improvements to Guston Roundabout are considered to be key to the improvement of access to Dover for the surrounding areas. The current delays to traffic from Deal will only increase, at present the delays are unacceptable and traffic forecasts indicate that this will only get worse. The sooner the improvements are in place the sooner the benefits can be realised.

12.3.3 The stepped approach to the improvements at Whitfield indicates that the works required are minimal in order to deliver the level of service required. Adding additional capacity over and above what is required for mitigation through to option 3 would result in a junction in option 4 that would have 'too much' capacity and would appear to be over designed. Having 'too much' capacity can result in safety implications so needs to be avoided.

12.3.4 The A2/A256 Dumbell junction also shows that delivery up to option 3 will not need to involve major infrastructure work, certainly not to the extent required for Option 4 and the A2 diversion schemes.

12.3.5 The introduction of the segregated left slip lane from the A256 North in option 3 will result in improved performance which could be taken forward and assist in a staged approach for the delivery of the additional housing to the west of Whitfield in Option 4.

12.3.6 The move from Option 3, 10.500 dwellings to Option 4, 14,000 dwellings requires more substantial improvements to mitigate the additional trips., including the A2 diversion and further improvements to the A2/A256 junction.

12.3.7 These major works are confined to the area surrounding Whitfield but are considered key to the delivery of the long term aspirations for the dualling of the A2. The proposals put forward deliver this aspiration as well as catering for traffic generated by the developments associated with some 4,000 additional dwellings.

12.3.8 It is considered that the proposals to divert the A2 around the northeast side of Whitfield should be developed as a long term aspiration, as it will have a positive benefit to the area. Significant growth at Whitfield (Option 4) and future Port growth are both compatible with this aim.

12.3.9 The effect of the diversion would be to;

- Reduce traffic between Whitfield Roundabout and A2/A256 Dumbell junction by 60% during peak periods, resulting in;
- Improved Air Quality, reduction in noise and visual intrusion;
- Removal of the severance that Whitfield currently experiences; and
- The ability to downgrade the A2.

12.3.10 The consequences of not diverting the A2, thus removing the traffic from the area, are in direct opposition to the points made above. Furthermore, the infrastructure

works required at Whitfield Roundabout to cater for the forecast traffic growth would likely result in the need to grade separate the junction.

12.3.11 Unfortunately this would not deliver the needs of the Whitfield residents. It is also unclear as to whether the land required to deliver a scheme of this size and nature would be available within existing highway boundaries and could therefore result in costly land acquisition.

13 Smarter Choices

13.1 INFLUENCING TRAVEL BEHAVIOUR

13.1.1 It is increasingly important to consider the role of soft measures, that is, measures aimed at influencing travel behaviour in the future planning for movement and access. Soft measures will become more effective of course if the integrated transport network required to provide alternatives to the car is in place, as described in previous chapters, and technology is fully employed to provide information and alternative means of working.

13.1.2 A transport awareness and behavioural change programme will be of benefit to all aspects of growth and development within Dover, related to the Port, town centre and the LDF development proposals.

13.1.3 The Highways Agency already expects development proposals placed before them for consideration to include an effective travel planning process to reduce the number of car trips likely to be generated by that development. The regeneration of Dover will need to take account of the benefits to be derived from implementing travel plans linked to all new development including employment, retail, leisure and residential.

13.1.4 The use of Personalised Travel Planning at the household/family level is proving to be effective in changing the travel behaviour of residents new to an area. Novel approaches to reducing reliance on the individual car such as car sharing groups, car clubs and bike-about schemes will need to be explored and implemented.

13.1.5 Technology will have an important role to play, every new home should be Internet and Broadband enabled so that one potential impediment to home working is removed. Being able to assess the availability and reliability of public transport services before leaving home (journey origin) via the home computer, telephone or television will influence the travel mode chosen on the day.

13.1.6 An area wide Travel Plan may be the best way of making optimum use of resources and achieving the highest degree of mode shift away from single occupancy car trips.

13.1.7 The development control policies of the local planning authorities will have an important role to play in ensuring that the development sector recognises that delivering measures designed to influence travel behaviour is not an option but a requirement of the planning process.

13.1.8 In particular, it is proposed that DDC (or KCC – seconded to Dover) should appoint a travel planning coordinator resource to work with, and advise existing and future developers, major employers, schools and colleges. This investment is as important to the success of the strategy as infrastructure changes are. This new resource should establish and coordinate:

- Dover Commuter Forum
  - An Implementation Board made of leading local business managers and developers;
- Young Persons Travel Initiative
  - An initiative engaging representatives of 14 – 19 year olds, negotiating reduced travel costs and College travel plan measures; and

- School Travel Initiative
  - Yellow bus, walking and cycle scheme delivery.

13.1.9 The Dover specific requirements for Travel Planning and new development should be capture within the LDF policies. The criteria for travel plan measures to reduce car use and encourage alternatives should be explicitly stated within local development control guidance.

14 Conclusion

14.1 SUMMARY

14.1.1 This document is part of a suite of reports, which when considered together, describe the outputs of the Dover Transport Study. Section 1 (Figure 1.1) illustrates how these reports fit together.

14.1.2 This Transport Strategy Report summarises both Policy and Stakeholder objectives for transport (and its resultant implications for economic development, regeneration and spatial planning). This report has identified both existing transport conditions and demographic characteristics within Dover. In combination, the existing conditions and policy aspirations form the context for the Transport Strategy. However, a secondary and important influencing factor is the technical Transport Modelling Stream of work (reported separately in Supporting Documents 8a and 8b).

14.2 PROPOSALS

14.2.1 The Transport Strategy clearly sets out proposals for improving all modes of transport. These proposals have been costed and prioritised via an objectives based appraisal process. The proposals vary in nature from modest improvements to local accessibility to strategic infrastructure. They are designed to work together to provide lasting improvements to the sustainability and quality of the town. The delivery mechanisms for this programme of works is explored further in the Phasing and Implementation Report (supporting Document 7).

14.2.2 The phasing and details of highway capacity improvements to support LDF growth options and address current deficiencies, is set out within the Infrastructure Design Report (Supporting Document 6).

14.3 JOINT WORKING

14.3.1 The whole Dover Transport Study, including this Transport Strategy Report, has been produced with significant and meaningful contributions from many stakeholders. In particular, the active involvement of Dover District Council officers, developers, English partnerships and the Highways Authorities (Kent County Council and the Highways Agency) has helped to shape the recommendations of this report. Their positive inputs are gratefully acknowledged.

Appendices, Figures & Tables

Appendix A Project Brief

Appendix B LDF Development Sites

ID	Development Address
1	22 Park Avenue
2	33 London Road
3	1A Belgrave Road
4	141 Snargate Street
5	Former Builders Yard, Widred Road
6	245-249 Folkestone Road
7	Malvern Road
8	Land at Barwick Road
9	Reliance Garage, Beaconsfield Road
10	Contex House, Primrose Road
11	83-87 Folkestone Road
12	Prince of Wales House, Princes Street
13	149-156 Snargate Street
14	Orange Tree PH, 357 Folkestone Road
15	Land adj to & rear of 21 Cherry Tree Avenue
16	1-13 York Street and 27-30 Queens Gardens
17	Art School, The Paddock
18	38 Castle Street
19	Old Park Barracks, Melbourne Avenue
20	183-185 Folkestone Road
21	Webbs Hotel, 161-165 Folkestone Road
22	65/67 Folkestone Road
23	126 Folkestone Road
24	Former Westmount College, Folkestone Road
25	Former Astor Primary School, Astor Avenue
26	Former Astor Primary School, Astor Avenue
27	Churchill's Snooker Club, London Road
28	United Reformed Church, High Street
29	14 Godwyne Road
30	56-57 Biggin Street
31	14-15 Cannon Street
32	R M Barracks, Gladstone Road/North Barrack Road
33	NCB Site, Beauchamp Avenue
34	Land r/o 7-13 Downlands and 6-8 The Maltings
35	40-42 and land r/o, Gilford Road
36	89 Northwall Road
37	Adj Matthews Close
38	Land north of Ark Lane
39	Former RMSM, South Barracks, Canada Road
40	36 High Street
41	Land rear of and inc 144 Mill Hill
42	Land r/o 223A-235 Telegraph Road
43	Land at Water Pumping Station, St Richards Road
44	26-28 Mill Hill
45	20-22 Sondes Road
46	95-99 Telegraph Road

ID	Development Address
47	Land r/o 14-56 Court Road, Station Drive
48	Land adj Orchard Close, Staple Road, Wingham
49	SE of Market Square and Queens Road, Aylesham
50	Aylesham Baptist Church
51	10 Green Lane, Eythorne
52	West of Pillory Gate Wharf, Strand Street
53	The Bargain Shop, 68 Dover Road 5 dwellings)
54	Land n of River Stour, Ramsgate Road and part of Sandwich Ind Estate
55	St James's Area
56	Land adjacent Former Westmount College, Folkestone Road
57	Charlton Green Sorting Office, Frith Road & Maison Dieu Road
58	Eclipse Recovery Services and Sorting Office, Maison Dieu Road
59	Land on the corner of York Street
60	Factory Building, Lorne Road
61	Land west of the Dublin Man 'o' War PH, 110 Lower Road
62	Esso Petrol Filling Station
63	Guilford Avenue
64	Land adj to the Royal Oak PH
65	Land at Barwick Road
66	Mid Town Area
67	Buckland Paper Mill, London Road
68	Land on the corner of Melbourne Avenue/Old Park Barracks
69	Coombe Valley Road
70	Northwall Road
71	Cannon Street
72	Stalco Engineering, 126 Mongeham Road
73	Garage block, Ethelbert Road
74	The Yew Tree PH, Mill Hill
75	E H Brown & Son Timber Yard, 26/28 Mill Hill
76	Malcolm Waite Ltd, Moat Sole
77	Aylesham Expansion Area
78	Eastry Hospital, Mill Lane, Eastry
79	Land to the south of Sandwich Road, Ash
80	Former Council Yard, Molland Lea, Ash
81	Garage Site, Kingsdown Road, Kingsdown
82	Land to the south of Upper Street, KIngsdown
83	Land to the East of Jubilee Road, Worth
84	Land to the r/o properties at The Street, Worth
85	Connaught Barracks
86	Land West of Whitfield
87	Land East of Whitfield
88	Land West of Whitfield Option 3

Appendix C WSP Appraisal Tool - Options Testing Results

Appendix D Figures

Appendix E Glossary Of Terms

TERM / ABBREVIATION	
CTRL	Channel Tunnel Rail Link
DDC	Dover District Council
Dover Transport Study	The whole process, including model development, identification of schemes, scheme appraisal and Whitfield Masterplanning
Dover Transport Strategy	Transport proposals for all modes
DPRP	Dover Pride Regeneration Partnership
EKC PCT	East Kent Costal Primary Care Trust
HAg	Highways Agency
HGV	Heavy Goods Vehicle
HS1	High Speed 1 – referring to the new term for CTRL
IMD	Index of Multiple Deprivation
KCC	Kent County Council
KPI	Key Performance Indicator
LDF	Local Development Framework
LTP Credits	Local Transport Plan schemes are funded through a single block of credit approvals. The Council is given the freedom to decide on how this would be most effectively spent to meet its objectives.
NRTF	National Road Traffic Forecasts
PBA	Peter Brett's Associates
PCT	Primary Care Trust
QBP	Quality Bus Partnership
SEEDA	South East England Development Agency
SEP	South East Plan
VMS	Variable Message Signing

Figure 1 Dover Land Use Plan

Figure 2 Dover Town Centre Constraints Plan

Figure 3 LDF Site - Farthingloe Farm, Folkestone Road (Employment)

Figure 4 LDF Site - St James's Area

Figure 5 LDF Site - Buckland Paper Mill

Figure 6 LDF Site – White Cliffs Business Park, Phase II

Figure 7 LDF Site - Land at Port Zone, Whitfield

Figure 8 LDF Site – Dover Eastern and Western Docks

Figure 9 LDF Site – White Cliffs Business Park Phase III

Figure 10 LDF Site - South Town

Figure 11 LDF Site - Mid Town

Figure 12 LDF Site - Coombe Valley Road

Figure 13 LDF Site – Land between Barwick Road and Poulton Close

Figure 14 LDF Site - Land East Of Whitfield

Figure 15 LDF Site - Land West Of Ramada Hotel, Whitfield

Figure 16 LDF Site - Connaught Barracks and Fort Burgoyne

Table 1 Strategies, Issues and Options