Plymouth City Council
Plymouth Eastern Gateway Vision

Final Report

March 2004

Llewelyn Davies in association
with King Sturge, SIAS and Scott Wilson.
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The Calatrava-designed bridge in Seville has become a landmark for the city and in many ways has helped to put the city ‘on the map.’
The Case for Action

There are major problems in the eastern approach to the city which have severe effects on the local communities. Congestion and busy roads drive through the existing communities bringing noise, pollution and a degraded environment. As a result the area attracts low profile, mainly retail or industrial uses which need good access to the highway network but only a low quality environment. This leads to a downward spiral which brings further negative impacts on the local communities and a worsening residential environment.

By 2016 congestion within the area is predicted to get steadily worse if major changes are not made. An underlying growth of 15% is expected across the city but in localised areas it is predicted to be far greater. Increases are forecast; for example on Exeter Street 20%, on Embankment Road 24% and on Billacombe Road 38%.

This congestion, if not dealt with in the near future, will have an even greater impact than currently on the communities who live in the Gateway. With these problems on the horizon, the case for action becomes indisputable.

At the same time it is essential that the proposals for the area are not only transport solutions: A broader vision is needed for the area, for it to thrive in the longterm. The opportunity must not be missed whilst dealing with these problems to make best use of the area’s many assets.

The area has fine views onto the Plym and is distinctive and very visible because of its setting along the river. Intrinsically this is a dramatic and attractive approach to the city. At present the waterfront in particular, but also other parts of the area, are underused and underperforming. The good natural setting provides the opportunity to create a gateway which is not only a successful neighbourhood but a symbol for the city and which rivals other fine European waterside city gateways, such as Seville, Lisbon or Newcastle.

This combination of latent potential and the need to respond to a most difficult transport situation have led to a bold concept. We have asked the question ‘What level of intervention is required to respond to these problems and to this potential?’ We concluded that change cannot be achieved without a high level of intervention. Without this, current and future congestion problems will not be fully addressed and the potential of the site in both economic and urban quality terms, will not be realised.

The Proposed Framework

The framework which has been developed gives high quality access to the city centre and the Port from the east, a fine waterfront along the estuary and a much improved urban environment, particularly in those communities and areas currently suffering the impacts of through traffic and carved up by transport infrastructure and low quality development. The potential new Gateway transport infrastructure also provides the opportunities to serve the major developments east of the Plym estuary.

A range of urban development, regeneration, amenity and transport projects designed and working in an integrated way is necessary to realise this potential. The projects include:

1 Two major and radical measures. The first involves the creation of a new urban avenue, a tree-lined and pedestrian friendly boulevard, along the old ‘Friary Station’ rail corridor. This would provide a high quality route from the estuary edge to the city centre. The second involves the creation of a new route and bridge across the River Plym, joining the
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urban avenue from the point where it departs from the estuary edge. Thus traffic from the new developments east of the Plym to the city centre and the A38 would totally avoid the residential areas of the East End.

2 The removal of through traffic other than local traffic and public transport from the existing residential areas (Embankment Road, Heles Terrace and Cydnia Way) giving the opportunity to recreate a quality urban environment for local purposes and the enjoyment of local people.

3 The current and extended route from Marsh Mills southwards would be redesigned as an urban avenue for walking and cycling alongside and allowing for linkages between the adjacent communities and open spaces and the water’s edge. While remaining a high capacity route, lower running speeds would be planned.

4 A linear walk and park along the edge of the estuary, well landscaped and accessible from Marsh Mills to Cattedown. The southern end of the park and walk would be framed by new quality buildings and be designed to provide an attractive visual “gateway” to the urban area.

5 The restructuring of the road system and urban blocks between the estuary, Cattedown and St Jude’s to provide both a new route running south from Laira through Cattedown to the Port and city centre and an accessible and attractive development area between the water’s edge and the existing residential communities.
We have labelled this the 'Preferred Option'; it is a big idea and needs thorough additional work on its design, cost, funding, practicality and means of delivery.

There is also a need to relocate and consolidate the drive-in retail and industrial uses (either existing or planned) which would otherwise make the proposed strategy unrealisable.

This strategy and how and why it emerged is described further later in this summary and of course in more detail in the main report.

The proposed framework will involve a complex, lengthy and costly programme of action to realise. It is now important to have wide ranging consultations before moving further ahead. A key matter for these consultations should be to establish an organisational way ahead or delivery vehicle. The final chapter of the main report outlines a possible approach and a programme of further action.

The scheme will depend on the support of the local residents, landowners and businesses. Some consultation has already taken place with landowners. A thorough understanding of the views and aspirations of the businesses, landowners and local communities will be a critical step in ensuring the ultimate success of the initiative.

The scheme will depend on the successful coordination and assembly of key sites. In particular this affects the former Blagdons boatyard site, Heywoods Paving (now owned by E and JW Glendinning Ltd), Kent Holdings’ land near Laira Bridge, the former Western National bus depot (now owned by Salmon Harvester Developments), Morley Properties site near Laira Bridge, London and West Country Estates land in the Faraday Mill area and the Friary Retail Park on Exeter Street.

However difficult the venture, the prize is high:

- A proud and attractive “Gateway” to the city running right through to the centre;
- A great area in which to live, work and play alongside the estuary;
- Renewed quality and character in the existing communities free of through traffic;
- Access to the waterfront;
- The ability to cater for the major development opportunities east of the city.

Without aiming high, the poor environmental conditions, the disappointing sense of arrival, the low development expectations, the current transport problems and the transport difficulties facing new development will remain and worsen.

**Study Objectives**

The Eastern Gateway Area of Plymouth has an important role to play in the regeneration and development of Plymouth and the surrounding area; particularly eastwards where significant growth is likely in Plymstock and areas of South Hams.

The Eastern Gateway is the key approach to the city by road and rail from the rest of Britain, excepting Cornwall and North Devon.

There are almost intractable difficulties to be addressed. The road and rail networks impose great severance and very poor environmental conditions in
the residential communities they pass through and upon a series of potential development and regeneration areas. The existing dense urban form, the coastal edges, topography and existing transport infrastructure impose major barriers to catering for the private vehicle and public transport movement demands. Additional growth eastwards will exacerbate matters.

A team of consultants have worked with the Transport and Planning Service of Plymouth City Council for several months studying the complex inter-related issues involved. The overriding aim of the study is “To identify and evaluate integrated solutions to transport, development and environmental issues within the Study area, having regard to the impacts of development and other proposals planned to take place outside of the Study area; and from this to identify deliverable short, medium and long-term proposals”. The objectives of the study are given below:

- To gain the fullest understanding of the existing and future issues affecting the study area;
- To identify potential transport solutions or combinations of solutions to enable future travel demand from developments within and impacting the study area to be met, within the context of the need for a high quality built and natural environment;
- To identify a strategic framework which accommodates the transport solutions and sets a framework for new developments and environmental improvements throughout the study area;
- To identify short, medium and long-term proposals which are deliverable, viable and sustainable;
- To produce a robust appraisal system by which the framework options and short, medium and long-term options are tested, and from this to make recommendations on preferred proposals.

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Study Process

The study process covered issues relating to transport and the quality of the environment together with consultations with the major landowners. Some of these have current plans which are based on how the area is at present rather then what it might become. These are unlikely to fit comfortably in any new strategy for the area.

Some 45 possible measures were generated for consideration and grouped into the following major options:

Within this framework, eight transportation model scenarios were developed and tested, together with supplementary transport tests concerned with future traffic growth and substantial new development eastwards.

Each of the three development concepts, the Do-Minimum, Intermediate and Do-Maximum represents varying levels of intervention. Each had ‘matching’ land use mixes and was appraised in terms of local environmental quality, development potential and the quality of Gateway likely to be produced. Costs were estimated.
Main Findings

Given the wide ranging studies undertaken our overall findings are surprisingly simple and clear.

The study established that there is no value in options which involve through traffic continuing to be routed along its current routes through the East End communities. In environmental and traffic terms the situation is bad and will only get worse. This is one significant reason to exclude the Do-Minimum Option, although it fails also in other important respects. The Intermediate option (which represents an intermediate level of intervention), although it had many merits in development and urban design terms, did not tackle the major congestion point within the Gateway area at the western end of Laira Bridge.

There is only one option, the Do-Maximum, which is recommended to be pursued. The study has identified that this option alone meets the multiple long term requirements of the area. Only this high-intervention option is able to improve conditions within the study area whilst creating a new imposing gateway and in particular it is the only option which responds well to future traffic needs. This applies to general increase of traffic, but also to the ability of the option to respond to the additional growth of traffic generated by any development in the east.

The Preferred Option or Do-Maximum Option, is radical and has two major elements. First, it involves the building of a new urban avenue from Embankment Road to the east side of the city centre. The route is along the old railway line to Friary Station. Second, this route is extended across the Plym on a new bridge providing direct routes from Plymstock to the city centre and via Embankment Road to the A38 Junction at Marsh Mills. This has major advantages which are outlined later.

The transport philosophy which underpins the Do-Maximum solution is one geared towards public transport. The infrastructure proposed is aimed primarily to assist in putting in place a more sustainable approach to the city and relieving the existing impacts on the local communities.

The area’s problems cannot be resolved in isolation and the ultimate success of a transport solution for the area is that it is embedded in a city-wide transport strategy. Work for this study has necessarily concentrated on the study area and the affects of strategic city wide strategies on the area will need to be measured as they evolve. However this would not affect the preferred option, because of the concept inherent in this solution of removing through traffic from the communities and all the benefits which can be derived from this.

The Do-Maximum Option will be complex and expensive to deliver. There are multiple land ownerships, the need for multiple funding sources and focused development management over several years. The option cannot be realised solely by reliance upon the planning system, normal funding sources and local authority powers. A specially tailored delivery organisation will have to be established and funded.
Figure 1: The Do-Minimum Option achieves no improvement to the current congested gateway. The Intermediate approach has some merits but does not improve congestion at the western end of Lara Bridge. The Do-Maximum Option provides a smooth route away from local communities.

The Do-Minimum Option

The Intermediate Option

The Do-Maximum Option
The Reasons for the Preferred Option

The preferred option is a big expensive solution. However the advantages of this option are considerable.

- In functional terms, creating a new crossing to the north of the existing bridge removes the private vehicle traffic load at the western end of Laira Bridge. It effectively takes the potential for congestion away from the local communities where it is inherently difficult to manage;

- The reduction in intensity of traffic at junctions at the western end of Laira Bridge releases a significant amount of route capacity for public transport (bus or tram) services especially on the bridge;

- The community benefits from reduced severance from traffic through the East End, an improved transport route running along Embankment Road, an improved local centre, better links to the waterfront and the benefits of a vibrant, mixed use quarter;

- In development terms, it reduces traffic severance between the existing communities and the estuary - side development sites and avoids the need for a road between those sites north of Laira Bridge and the estuary;

- It provides more direct routes from both Plymstock and Marsh Mills to the City Centre and from Plymstock to the A38;

- It releases development land in the old railway corridor to help offset the cost of the road;

- It would provide a 'splendid' arrival to the city and its centre; a splendid bridge across the estuary; a waterfront of distinction and then a landscaped urban avenue to Sutton Harbour and the city centre.

It should be noted that the release of the 'Friary' route corridor for the new urban avenue is dependent upon a short realignment of a section of the freight railway line to the port.

Urban Quality

The existing “Gateway” starts impressively alongside the Plym estuary; a fine entrance. However, as the main route enters the built-up area, there is an immediate and sustained loss of quality. The character becomes one of fractured sites sitting within the structures of the roads, railways and junctions and featuring industrial/retail sheds and vacant, even derelict, land and buildings.

The main routes then enter predominantly residential areas; Victorian and intrinsically attractive. However, the severance, noise, visual intrusion and air pollution debase the areas they pass through. The through traffic also impacts negatively on local movements by foot, cycle and vehicle. The heavy goods vehicles traffic adds to the problems. Given these conditions, development interest focuses on non-food retail as the highest value generator in an accessible, visible but poor environment.

The current patterns of use and infrastructure mean that the communities of the area are cut off from the estuary, as are the green corridors; thus while the people can see the river they cannot reach it and enjoy it in a safe and pleasant way.

Against this backcloth, a series of basic measures are seen to be important ingredients of whatever option is pursued:
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- The removal of through traffic from the residential communities and the key routes being reconfigured for local purposes; walking, cycling, public transport and access across the areas to community facilities;
- Changing the character of Embankment Road from Marsh Mills southwards so that it becomes a corniche avenue, well landscaped, crossable by pedestrians and giving access to a parkland corridor along the edge of the estuary;
- A ‘drive-in’ retail strategy which consolidates this demand in one area which is designed and landscaped for this purpose. The shotgun location of these uses, if continued, will blight the Gateway for the foreseeable future;
- The diminution of highway, rail and junction structures especially in the Heles Terrace to Laira Bridge area together with the reconfiguration of street and block forms to create cohesive development sites and linkages from the local communities to the estuary;
- The deliberate planning and design of ‘green links’ from the open spaces inland to the estuary;
- High standards of urban design, architecture and landscape to create a quality corridor and a ‘Gateway’ statement between the estuary and the existing communities.

Thoroughly pursued and taken together these measures can create a place of quality and character, dominated by housing, leisure and other community uses and activities alongside the estuary.

Transport

Average bus and vehicle journey times and speeds were assessed for both 2002 and 2016 travel demand scenarios, together with traffic flows in key problem areas, notably Heles Terrace and Embankment Road (west), that is the part of Embankment Road to the west of the Heles Terrace area.

The future year testing incorporated assumptions consistent with the recent Structure Plan Review producing significant increases in traffic in the Gateway by 2016. The testing estimated a peak period traffic increase of 15% for the city as a whole, but with greater increases on individual roads, for instance Exeter Street (20%), Embankment Road (24%), Billacombe Road (38%).

Transport model tests were then designed to examine a range of measures:
- Do minimum and speed reduction, improvements on Heles Terrace and its junctions;
- Heles Terrace By-Pass with Old Laira Railway Bridge used for public transport;
- Gdynia Way widened and two way; Embankment Road (west) for public transport and local access;
- Southern By-Pass added and Gdynia Way flow reversed;
- New southern bridge over the Plym joining to a southern By-Pass;
- Northern By-Pass;
- Northern By-Pass plus new northern bridge over the Plym and through traffic eliminated from Gdynia Way and Embankment Road (west).

Eight model tests were undertaken as is shown in Figure ii. It was soon apparent that only one transport

| Test | Increased green signal times for pedestrians on Embankment Road and Laira Bridge | HGV restriction on Heles Terrace and new junction on Gdynia Way | New Bus lanes on Laira Bridge and Embankment Road | Widening Heles Terrace | Speed reduction along length of Embankment Road | Laira Rail bridge used for public transport | Heles Terrace bypass road | Gdynia Way becomes two way route | Through traffic barred from Embankment Road (W), becomes buses and access only | Southern bypass road | Gdynia Way as one way route for inbound traffic from Embankment Road | New Laira Bridge for traffic between Plymstock and the city | Northern bypass running along former rail line to Friary Park | New roundabout connecting Embankment Road and Northern bypass | New bridge crossing the Laira from Pompflett Roundabout to Embankment Road | Through traffic barred from Gdynia Way |
|------|---------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------|---------------------|-----------------------------------------------|---------------------------------|----------------------|----------------------------------|-------------------------------------------------|---------------------|-------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------------------------|----------------------|
| 1    | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
| 2    | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
| 3a   | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
| 3b   | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
| 4    | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
| 5    | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
| 6    | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
| 7    | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
| 8    | ●                                                                                | ●                                              | ●                                             | ●                   | ●                                              | ●                               | ●                    | ●                                               | ●                                               | ●                   | ●                                              | ●                               | ●                                 | ●                                 | ●                                               | ●                                               |●                    |
Summary

Action is required in the Gateway area. There are currently significant transport problems in the area. If left unattended or inappropriately tackled, these are likely to become extreme as traffic flows increase. If the city takes up development opportunities in the east matters will become markedly worse.

The study shows that only a highly interventionist approach can deal with a transport problem which is not only local but has city-wide implications in the longer term.

The area has enormous potential and this is a rare opportunity to create a splendid new Eastern Gateway to Plymouth; a gateway which sees major development, a much improved communication infrastructure, and which provides an attractive and visually dramatic entrance to the city.

However, it will not be easy. Many land ownerships, developmental and operational issues and stakeholders are involved. The costs are substantial and development funding has to be won from both the public and private sectors. The integrated design of transportation infrastructure, site development and environmental improvement works will be necessary. Complex land assembly issues abound.

Thus this ‘framework’ study has in essence produced a strategic approach to thinking about the future of the area. It is not yet a detailed or implementable plan of action.
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The key recommendations of the study are that:

- There is only one reasonable way ahead which meets all the study objectives and which is both practical and in keeping with the status of the city. This is the Do-Maximum approach which should be investigated further.

- Moving towards the implementation of the scheme as fast and efficiently as possible is essential otherwise its realisation may become compromised to the point of impracticability.

The next steps involved include:

- Full Consultation with Stakeholders in the community and public and private sectors on the findings of this study;

- Preparing a policy statement to guide development control decisions with regard to key sites in the area. Key sites are the former Blagdons Boatyard site, Heywoods Paving (now owned by E and JW Glendinning Ltd), Kent Holdings land near Laira Bridge, the former Western National bus depot, Morley Properties land, London and West Country Estates land in the Faraday Mill area and the Friary Retail Park on Exeter Street;

- Preparing a more detailed development framework plan for the area and the main works proposed. This will involve continual refinement and reappraisal of the preferred option as feed-back and detailed investigation inform the plan;

- Preparing an implementation strategy; costs, funding, planning and the establishment of an organisational structure capable of implementing the strategy;

- Setting up an 'interim team' of planners, transport planners, engineers, landscape architects and urban designers to undertake the necessary studies and handle development control and stakeholder liaison matters while the detailed plans and implementation mechanisms are put in place.
1 Introduction

1.1 Background to the study

Plymouth City Council have commissioned consultants Llewelyn Davies, in association with transport consultants SIAS and Scott Wilson, and property advisors King Sturge, to carry out a Framework Study for one of the key gateways to the City of Plymouth.

The Eastern Gateway area is a focus for one of the major regeneration initiatives in the city. The Transport and Planning Service of the City Council has identified the need for a framework plan to illustrate how the area could be improved and developed.

The study is one of a series of measures aimed at improving the East End. It has been designated a Strategic Opportunity Area in the Plymouth Local Plan, which seeks to promote residential and commercial led regeneration in the East End.

The East End Regeneration Strategy and Master Plan Consultation Draft, which was prepared in September 2002 and has been adopted as Supplementary Planning Guidance (SPG) by the Council, aims to create both sustainable residential areas and address the area’s capacity to play a more significant role in the city’s economic performance. Clearly the Eastern Gateway Study draws on much that is contained in the East End Regeneration Strategy.

The overriding aim of the Study is:

In line with this aim, the Council has set out a number of key objectives for the Development Framework:

- To gain the fullest understanding of the existing and future issues affecting the study area;
- To identify potential transport measures or combinations of measures to enable future travel demand from developments impacting on the study area to be met, within the context of the need for a high quality built and natural environment;
- To identify a strategic framework which accommodates the transport measures and sets a framework for new development and environmental improvements throughout the study area;

Coordination of the initiatives of the East End Regeneration Strategy with the wider gateway proposals will be essential.

This study is being carried out alongside the Plymouth Single Regeneration Budget (SRB) Gateway Project. The SRB Scoping Report is contained in Appendix 3.

1.2 Study Objectives

The area forms the entry point to Plymouth from the east and has an important role to play in this regard. At the same time, the area is fractured by a complex road and rail network, severing access to some residential communities and potential development sites.

The overriding aim of the Study is:

“To identify and evaluate integrated solutions to transport, development and environmental issues within the Study area, having regard to the impacts of development and other proposals planned to take place outside of the Study area; and from this to identify deliverable short, medium and long term proposals.”

(PCC Brief)

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- To identify a strategic framework which accommodates the transport measures and sets a framework for new development and environmental improvements throughout the study area;
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Figure 1.1: Eastern Gateway Study area: The key features

Figure 1.2: SRB Gateway Project Study area

Key

- **Main roads into the city centre**
- **Railway lines**
The gateway area incorporates potential development sites such as the former Western National bus depot, Blagdon’s boatyard and Heywoods Concrete Works.

It also includes large sites owned by the council: Embankment Road public open space, a series of playing fields and other public open space.

The locations of some of these sites and the nature and quality of their future treatment will be critical to the quality of the area in the future and thus its regeneration. These sites are discussed in Chapter 2 and further steps needed to ensure they are properly integrated into regeneration is assessed and discussed in Chapter 9.

The report is set out in the following way:

- Chapter 2 provides an overview of the study area in terms of key issues and guiding principles;
- Chapter 3 looks at the study methodology and development of possible actions and measures;
- Chapters 4, 5 and 6 set out the three development concept options and include rationale, description and appraisal;
- Chapter 7 assesses the options and presents a Preferred Option;
- Chapter 8 examines the Preferred Option, especially its phasing, in more depth;
- Chapter 9 sets out the conclusions and recommendations.

The Appendices document includes previous reports, as part of this study, and other background material.
2 Area Appreciation

This section looks at the issues which affect the study area and have been divided into:

- Long term planning policy issues;
- Physical analysis of the area and the issues arising;
- Economic issues.

2.1 Planning Policy: The Gateway and the long term future of the city

The area is affected or may be affected by a series of planning policies and projects which are listed in Appendix 1; The Stage 1 Issues Report. These include: The SRB Gateway Project, The East End Regeneration Strategy and Masterplan and The 2020 Partnership Vision.

Of critical importance to this study is the future of the immediately neighbouring area to the east of the Plym. The Council is currently engaged in a Sustainable Urban Growth Study which is assessing the suitability of areas around and within the city to accommodate growth which is beyond the capacity of the built-up area. The eastern edge of the city forms part of this.

Should development be located to the east of the city, the Eastern Gateway will clearly be even more significant than it is today. It is clear that the future of the Gateway and of the eastern part of the city are inextricably linked.
02 Area Appreciation

Figure 2.1: Existing Character areas (and severance between and within them)

Figure 2.2: Main existing open spaces

Figure 2.3: Existing transport and movement.

Figure 2.4: Permeability. Problems exist throughout the area but are particularly severe around Embankment Road and Gdynia Way.

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2.2 Physical Analysis

The study area is a large and complex one. It incorporates several different character areas (a number of residential areas, industrial, industrial port related). This complexity is further increased by the fact that it naturally has both a strategic role as the entry point to Plymouth, and at the same time a local role for the communities who live in the area. Figures 2.1 - 2.4 show the main characteristics of the area.

These layered issues have been assessed. A summary of the key issues affecting the study area are contained in Table 1. The key issues identified within the study area were:

- The high visibility of the area and the need to assess views into and from it;
- Character areas within the study area and the need to assess the identity of the local communities;
- The lack of green space in the area;
- Movement through and within the study area;
- Permeability through the study area and between the character areas;
- Main routes and the gateways into the city centre.

Key opportunities relating to these issues for the study were identified as:

- The opportunity to create an exceptional entry view and gateway on arrival to Plymouth;
- To provide a network of green and public space;
- To reconnect communities and create links to the waterfront.
2.3 Views

The open quality of the estuary means that the area is very visible from the banks and from other parts of the city. The gateway area itself enjoys striking views out over the estuary. Important views (Figure 2.5) should be addressed by future development. These are discussed below.

2.3.1 The present-day arrival

The area can easily be identified as a gateway to Plymouth. The visitor to the city centre from the east will see the Plym Estuary from the Exeter/London railway or from the A38. This is the visitor’s first impression of the city from the east via Marsh Mills. It is a good one: the natural setting is spectacular.

This good first impression rapidly deteriorates, especially for those arriving by car, either from the north eastern route or via the Laira Bridge. The visitor will soon be faced by a poor visual environment, underused or unused land and shed development. The visitor by car travels through sections of congested routes before arriving at the city centre.

A large part of this poor gateway quality is due to the fact that the entry point to the city is poorly defined. It is difficult to know where the actual gateway point to the city is currently located. Sainsbury’s spectacular winged canopy is an early marker of the city’s approach, although does not have a community or civic character and is still a long way out from the city. The first gateway point within the built-up area could just about be pinned down to the area around Exeter Street, at Cattedown roundabout, which is hardly inspiring. Large parts of Cattedown and other areas are passed through before reaching Exeter Street without any real sense of their gateway role.
2.3.2 Views from the area
As well as those views of the area which immediately affect the quality of the gateway to Plymouth, there are several key views of the area from other parts of Plymouth and views out of the area which will need to be closely addressed in any development framework.

The area is highly visible, both from higher ground and from the opposite bank of the Plym.

Certain spectacular views from the area will need to be harnessed to ensure that local people and visitors are able to enjoy them and that development benefits from the greater value that they can help to generate.

2.3.3 Views: Key Principles
This is the key entrance to the city of Plymouth, and is currently under-exploited and subject to ad hoc development. The topography of the area gives tremendous views, especially over the River Plym.

Views: Key Principles
Proposals must be carefully assessed in terms of the views in and out of the site. The fundamental principles of this study are to:

· Capitalise on and enhance the views into the study area from other locations, such as the eastern river bank;

· Enhance the views of the city from the east;

· Create a new view of Plymouth through the creation of the new gateway. There is the opportunity to create a sense of place through innovative architecture and distinctive landmark buildings.
2.4 Transport and Movement

Transport issues are crucial to this study. There are considerable negative impacts on the area at present from traffic flowing through it to reach the city centre.

Transport issues must therefore operate at two levels in this study: Firstly at the micro level of the neighbourhood, appreciating the local effects of existing or proposed measures, but secondly also at the macro level, providing Plymouth with a gateway of distinction and a solution which moves towards an effective city wide transport network.

2.4.1 Private Vehicular Traffic

Congestion in the study area is a serious problem and conditions at present are regarded as unacceptable by some. Others perceive the start of a serious breakdown in the operation of the network if traffic demands are allowed to increase without any step change in provision.

There is a need to find a way of improving matters locally whilst addressing wider strategic requirements. Traffic flows from the A374 and A379 converge at Gdynia Way and Heles Terrace where the worst traffic congestion occurs, particularly at peak hours. As a result traffic uses alternative less suitable roads at peak periods to avoid this congestion where this is possible.

A key feature of the project is to look at ways of alleviating the impact of this traffic and ultimately reducing the traffic flows. The key policy is one relating to managing and constraining traffic growth. This sets the scene for the option development stage of the study.
2.4.2 Public transport

It is considered that public transport to the city centre could only be described as adequate, and the routes to and from the new and growing residential and employment areas to the east are poorly served.

In addition, public transport penetration of the housing areas is poor and routes are focussed on passing through the study area rather than serving the activities which lie within it.

2.4.3 Rail

The study area includes a number of rail lines including the London (Paddington) to Penzance line and also serves the cross country route to major cities in the Midlands, the North of England and Scotland. In addition, freight lines to Laira Goods Yard and south into Cattedown run through the study area.

The gateway area presently has no direct rail access. The London to Penzance main line is crossed by Embankment Road at Laira. Working infrastructure exists along the old London & South Western Railway line, but this is only infrequently used for freight transport. An infrequently used rail link also exists to the south of the Tothill Park recreation ground and forms part of the Cattedown Branch Line to the Port.
2.4.4 Pedestrian and Cycle Movement
The nature of the large, busy roads passing through the area mean that the environment for pedestrians and cyclists is often very poor. Pleasant and useable links for north-south movement in particular are lacking. Pedestrians must in several places resort to using awkward routes or pedestrian bridges.

There is a need for a network of links for pedestrians and cyclists across the whole area. These should be well integrated into the urban fabric and should therefore be pleasant, safe and overlooked.

Pedestrian and cycle access from the local communities to the river is limited by large industrial sites. There is an opportunity for an exceptionally attractive waterside pedestrian/cycle route along the estuary which at present is not easily accessible.

2.4.5 Future traffic flows and development in the east
Tests carried out by SIAS were undertaken prior to this study as part of the Draft Structure Plan Examination in Public (EIP). This exercise predicted natural growth from the National Road Traffic Forecast and traffic growth resulting from proposed housing and other developments in the Plymouth area for 2016. This included development under consideration in the east, at Plymstock Quarry and further east in parts of South Hams.

Future year testing incorporating assumptions consistent with the Structure Plan Review produced a significant increase in traffic in the Gateway area by 2016. The testing estimated a peak period traffic increase of 15% over the city as a whole, produced by increases on individual roads as follows: Embankment Road-24%, Tothill Road-24%, Exeter Road-20%, Billacombe and Oreston Road-38%.

The importance of the role of the Gateway from this perspective cannot be understated. The development concept which is taken forward for the Gateway must be capable of supporting this additional traffic. If it cannot, the traffic problems which can be expected will not only threaten local gridlock, but extensive traffic problems for the entire eastern area of the city and arguably the principal approach to the city. The effect on the city as a whole and on the city’s economic well-being is a genuine concern.

Transport: Key Principles
Key transport issues for the study are to:

- Reduce the impact of traffic and manage the traffic flows;
- Improve public transport operations and its accessibility by the local communities;
- Encourage modal shift to public transport for journeys through the gateway area;
- Provide a smooth route into the city centre;
- Reduce traffic impact on the local community;
- Address the need for a strategy which will accommodate future traffic flows and possible development to the east of the Plym;
- Provide good facilities for walking and cycling.
2.5 Environmental Quality

2.5.1 Assets
The study area is intrinsically (and this means ignoring the traffic noise, severance and vacant sites) a very beautiful area with considerable natural and built assets.

- The setting of the River Plym is impressive. This needs to be simultaneously used to best effect and also protected. Key natural assets which need to be considered are the Plym Estuary, reclaimed land at Laira (the Blagdon’s site) and the old railway track around Blagdon’s site. Limestone outcrops to the south of Laira Bridge Road are registered as SSSIs.

- In terms of archaeological and built assets, none of the sites identified in the archaeological survey are formally designated as being of national importance. Nonetheless and perhaps more important than any key buildings of exceptional merit, there is a good stock of attractive Victorian streets in the area which form a good anchor of high quality and a model for future development.

2.5.2 Constraints
There are a number of issues which detract from this setting:

- Vacant land: The area has a large number of vacant sites. These provide an opportunity to change the local environment and help to regenerate the area;

- The severance between the residential areas by heavily trafficked roads such as Heles Terrace, Embankment Road, Gdynia Way and Laira Bridge Road is of major concern. The physical danger of the roads is accompanied by health concerns arising from air pollution and visual intrusion caused by vehicles;

- There is considerable severance and conflict of pedestrian/cyclists and motor vehicles. Pedestrians are hindered in many parts of the study area by limited footpath widths and proximity to large volumes of motor traffic. Cyclists are deterred by the volume of traffic and lack of cycle space;

- There are further concerns in respect of the impact of heavy goods vehicles passing through residential areas or “rat running” to avoid the busy main streets. This presents both environmental and safety concerns.
The estuary of the river Plym forms a beautiful backdrop to the site.

The existing Victorian streets provide an attractive living environment. There are localised examples of a high quality environment.

The area has some natural features which must be protected.

Residents can see the water but cannot easily enjoy the waterfront.

The existing Victorian streets provide an attractive living environment. There are localised examples of a high quality environment.

The new Theatre Royal building (Tr2) brings an important new activity in the area and a potential focal point, but at present its setting is not encouraging this.
There are large areas of vacant land which detract from the visual quality of the area and the sense of place.

Railway lines further carve up the area.

Large roads slice through the local communities, adversely affecting the sense of place. At present this is perceived as a place to move through, not a place in which to stop.

Embankment Road has the potential to be a successful local centre. Any sense of place is ruined by the detrimental effect of traffic and transport infrastructure.

Access to the waterfront is limited by large industrial sites and poor connections. Although the setting is spectacular the waterside pathway does not do it justice.

2.5.3 Sense of Place

The result of these numerous problems is a fragmented neighbourhood. This has already been identified by the East End Regeneration Strategy as a problem requiring attention. Despite some very attractive areas of Victorian housing, the area as a whole lacks a sense of cohesion and a clear structure. Its potential main focal point at Embankment Road is denied any sense of place because of the heavy traffic passing through it and so fails to act as a real local centre. The east-west routes dominate the area and block the potential for strong north-south routes.

The lack of cohesion ultimately means that there is no opportunity for any expression of community. Despite some fine streets and localised efforts towards an improved environment, the fundamental structural difficulties in the area make any larger scale civic efforts impractical and do not allow smaller scale endeavours to grow into a robust expression of civic pride and strong sense of place.
Environmental Quality: Key Principles

The environmental quality of the area is currently poor. Proposals must address this and aim to:

- Improve the environmental quality of the entry route for visitors arriving in the city;
- Improve the environmental quality and sense of place across the residential areas, and specifically to:
  - Improve the linkages between communities within the study area;
  - Improve access to and use of the waterfront;
  - Remove adverse impacts (noise, air pollution, severance of traffic) on local communities.

Figure 2.7: Key principles towards improved Environmental Quality
2.6 Economic Viability

2.6.1 Background
The study area has a wide range of different land-uses. The physical characteristics of the gateway area have a significant impact on these uses and on the potential uses which might be attracted. The major arterial routes running through it have resulted in commercial uses being polarised at each end of the corridor, with food and non-food retail uses prevailing at the major intersections.

An appreciation of the workings of the property market is a fundamental component in delivering change. An historical appraisal of the land uses within the gateway shows that the amalgam of uses has evolved piecemeal. This amalgam is a consequence of the market forces and planning policies prevailing over time.

Food and non-food retail are the premium uses in terms of land value. This is in consequence of the limited number of locations where the trading potential can be maximised. Rarely therefore are these uses revoked, moreover their use tends to intensify or extend. Land values will therefore weigh heavily in bringing about change within the Gateway.

The following matrix provides an indicative guide to the likely level of market value prevailing within the Gateway. This is land use value which is different to market value or capital value of existing buildings which may be higher or lower than land value.

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Value Per Acre</th>
<th>Value Per Ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Retail</td>
<td>Circa £2,000,000</td>
<td>£4,940,000</td>
</tr>
<tr>
<td>Non-Food Retail</td>
<td>Circa £1,250,000</td>
<td>£3,000,000</td>
</tr>
<tr>
<td>*Residential</td>
<td>Up to £600,000</td>
<td>£1,480,000</td>
</tr>
<tr>
<td>Leisure</td>
<td>Up to £500,000</td>
<td>£1,235,000</td>
</tr>
<tr>
<td>Office</td>
<td>Up to £300,000</td>
<td>£740,000</td>
</tr>
<tr>
<td>Industrial</td>
<td>Up to £200,000</td>
<td>£490,000</td>
</tr>
</tbody>
</table>

*No allowance made for level of affordable housing or waterfront sites.

To change the composition of these uses through the development process will require added value to be created.

The benchmark for property and land use appraisal is one of value. Inherent in the development process is the concept of change by adding value. The private sector will measure value by the level of commercial return either through capital gain or enhanced revenue.

2.6.2 Consultation
Figure 2.8 shows the location of key sites in the study area. The major landowners were consulted. These landowners have identified a clear aspiration to maximise commercial gain from any outputs of the Gateway Study. In certain cases this has already begun to move through the planning process. The outcome will clearly have a fundamental impact on how the added value is used to benefit the area. Presently market forces are dictating that each proposal is being promoted in isolation. A joined up strategy needs to be formulated for the area as a whole to benefit from these private sector initiatives.

The ability to address these issues within a time frame that is capable of delivering a joined up strategy will
clearly have a major influence on the future. The land use, which is the subject of numerous current proposals and ideas is non-food retail. This will clearly have an affect both within and beyond the study area. As things stand at present, with the exception of food retail, this is the highest land value generator and capable of contributing significantly through planning gain.

The aggregation of retailers at Marsh Mills and Coypool contrasts with the dispersed nature of the consents at Laira and Exeter Street. Furthermore a qualitative comparison reveals shortcomings in the provision at Laira and Exeter Street. The opportunity to consolidate these consents into one composite location which benefits everyone should be investigated.

The feasibility of a further major foodstore has not been ruled out. Planning policy is however more likely to support intensification of use rather than a new designation. Thus, the expansion of Sainsbury’s cannot be ruled out.

What is clear from our consultations is the need for radical change in order to achieve a dynamic shift in the way that real estate works within the Gateway. Relocations of Sainsbury or Laira Depot are unlikely, however re-routing vehicular movement around Prince Rock/Laira is. Accessibility and conflicts with main traffic movements are working against each other around the diverse and unplanned range of current land uses. A re-ordering of uses in a new structure would alleviate and resolve many of the existing logistical problems. To achieve this new roads will need to be built. The inescapable driver of property values remains “location, location, location”, which in today’s market means “access, access, access”.

Figure 2.8: Key sites and land ownerships in the Gateway area
It is important to note that the key sites capable of facilitating substantive change are all in different ownerships. Each of these owners is seeking to maximise their return from their ownership whether through operational or development profit.

The greatest prospect for partnering will be where the development process has yet to commence or where obsolescence/operational constraints exist. It is encouraging that Westbury, Heywoods Paving (now owned by E and JW Glendinning Ltd), Midas, Sainsbury, Salmon Harvester and London & Westcountry all have development opportunities which if embraced positively could bring about real change in the study area.

2.7 Key Criteria against which to test options

From this analysis, key principles have been established. It is considered essential that the development concept chosen for the gateway attracts very positive responses to the following assessment.

Any proposed development concept will be assessed for its performance in terms of:

Transport and Movement:
How does the option perform in transport terms, in terms of benefits for the local communities and, in particular, with regard to increased traffic and development east of the Plym?

Environmental Quality:
What kind of place could the strategy provide and how successful is it in terms of environmental quality? Does it provide a suitable gateway?

Economic Viability:
How does the strategy deal with key sites and how well does it perform in terms of economic potential?

Three options were developed for this strategy and each tested against these criteria. The process undertaken to establish three key options is described in the following chapter. The Options are then described and evaluated individually in Chapters 4, 5 and 6 before being compared in Chapter 7.
03 Study Process

STAGE 1
Area appreciation
- Define urban Design issues
- Define transport issues
- Assess property market and issues
- Assess planning Context

Define Key Characteristics

STAGE 2
Option Development
- 45 initial transport, planning and urban design measures amalgamated into
  4 Options

STAGE 3
Refine Options
- Do-Minimum Option
- Intermediate Option
- Do-Maximum Option

Assessment of options against key criteria
Conclusions and Recommendations
### Initial Measures

With the main study issues in mind, the consultant team developed a long list of possible measures or actions. No constraint was put on the level of intervention the measure might require, nor on the costs or feasibility of implementation. The exercise was simply to produce the widest range of measures possible. Table 2 sets out the full list of initial measures or possible actions.

In addition to the measures outlined in the table, there are a number of baseline events, either planning permissions or regional policy aspirations which are planned for the area. These can be divided into a number of types:

1. **Current policy,** for example residential and employment allocations, such as Plymstock Quarry. These policy commitments and their implications have been factored into all considerations.

2. **Planning permissions which will go ahead as they are in line with the overall vision for the study area such as The East End Community Resource and Enterprise Centre at Cattedown. These have been factored into all considerations.**

3. **Planning permissions or applications which the consultant team do not think are compatible with the Gateway Vision, such as the extant planning commitments permission at the Salmon Harvester site (former bus depot) for non-food retail. (These have been included in the “Do Minimum” Option in Chapter 4 only)**

<table>
<thead>
<tr>
<th>Number</th>
<th>Option Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Consolidated retail park in Prince Rock</td>
</tr>
<tr>
<td>2</td>
<td>Expanded Sainsbury store</td>
</tr>
<tr>
<td>3</td>
<td>Consolidated commercial development at Marsh Mills</td>
</tr>
<tr>
<td>4</td>
<td>Making best use of site at Blagdons</td>
</tr>
<tr>
<td>5</td>
<td>Relocation of Heywoods Pavings</td>
</tr>
<tr>
<td>6</td>
<td>Landmark buildings</td>
</tr>
<tr>
<td>7</td>
<td>Artworks</td>
</tr>
<tr>
<td>8</td>
<td>Residential Development at Mount Gould</td>
</tr>
<tr>
<td>9</td>
<td>Transfer Midas application to Heywood site</td>
</tr>
<tr>
<td>10</td>
<td>Relocation of non-conforming industrial uses to Cattedown/Marsh Mills</td>
</tr>
<tr>
<td>11-13</td>
<td>Land reclamation along River Plym</td>
</tr>
<tr>
<td>14</td>
<td>Open space strategy: Green fingers to waterfront</td>
</tr>
<tr>
<td>15</td>
<td>Open space strategy: improvements near Laira depot</td>
</tr>
<tr>
<td>16</td>
<td>Development of Prince Rock Playing Fields</td>
</tr>
<tr>
<td>17</td>
<td>Laira open space strategy; Laira open space bridge</td>
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<tr>
<td>18</td>
<td>Bus lanes</td>
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<tr>
<td>19</td>
<td>Bus Priority Package</td>
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<td>20</td>
<td>Enhanced Pedestrian and Cycle Network</td>
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<td>21</td>
<td>Improvements to Embankment Road</td>
</tr>
<tr>
<td>22</td>
<td>Cycle route</td>
</tr>
<tr>
<td>23</td>
<td>Laira Bridge - operational modifications</td>
</tr>
<tr>
<td>24</td>
<td>Additional Bridge over the River Plym</td>
</tr>
<tr>
<td>25</td>
<td>New Local Relief Road to bypass Gdynia Way</td>
</tr>
<tr>
<td>26</td>
<td>Development on St Boniface playing fields</td>
</tr>
<tr>
<td>27</td>
<td>Traffic Management: localised measures on residential streets</td>
</tr>
<tr>
<td>28</td>
<td>Demand Management; Laira Bridge tolls</td>
</tr>
<tr>
<td>29</td>
<td>Embankment Road relief road</td>
</tr>
<tr>
<td>30</td>
<td>Construction of a road link from Embankment Road to Finnigan Road</td>
</tr>
<tr>
<td>31-32 and 41</td>
<td>LRT</td>
</tr>
<tr>
<td>33</td>
<td>New corniche road around Cattedown peninsular</td>
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<tr>
<td>34</td>
<td>Ferry</td>
</tr>
<tr>
<td>35</td>
<td>Living bridges over Gdynia Way</td>
</tr>
<tr>
<td>36</td>
<td>Hele’s Terrace bus priority</td>
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<tr>
<td>37</td>
<td>Reduce Impact of Network Rail Sidings</td>
</tr>
<tr>
<td>38</td>
<td>Construction of a tidal gate</td>
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<tr>
<td>39</td>
<td>Rail Capacity Improvement</td>
</tr>
<tr>
<td>40</td>
<td>Rail Improvements to Passenger Traffic</td>
</tr>
<tr>
<td>41</td>
<td>Relocation of Prince Rock School</td>
</tr>
<tr>
<td>42</td>
<td>Riverside park or promenade</td>
</tr>
<tr>
<td>43</td>
<td>Community Transport</td>
</tr>
<tr>
<td>44</td>
<td>New road along rail line to Friary Yard</td>
</tr>
<tr>
<td>45</td>
<td>Mitigation of Pylons</td>
</tr>
</tbody>
</table>

Table 2: Initial Measures
3.2 Development of Options

The measures set out in the section above were then combined to create four initial options and finally amalgamated to result in three development concept options representing three levels of intervention:

Option 1 - Do-Minimum Option
Option 2 - Intermediate Option
Option 3 - Do-Maximum Option

Furthermore two additional categories of intervention were established:

- ‘The Add-ons’: These are individual actions that are not a central or integral part of each Option, yet may be "bolted-on" as an additional development proposal;
- ‘The Must Dos’: These are actions that the study team consider crucial for the study area, no matter what level of intervention is required.

The Must-Dos are listed in Table 3 and illustrated in Figure 3.1. Further information regarding the earlier stages of work are given in Appendix 2: Stage 2 Option Development.

The options presented in the following chapters represent three levels of intervention. The Do-Minimum Option presents minimal transport and environmental improvements. The Intermediate Option presents a more proactive approach and an intermediate level of intervention. It includes creating a southern route into the city centre thereby attempting to reduce congestion in the existing communities. It also presents a more interventionist approach towards landuse throughout the area, especially along the waterfront.

The Do-Maximum Option is the most proactive option and represents the highest level of intervention of the three options. It includes many of the measures included in the Do-Minimum and the Intermediate Options, but provides a new northern link into the city centre and a new bridge over the River Plym, with partial separation of public transport from general traffic.

The options are set out in detail in the following chapters.

3.3 Transport Issues

3.3.1 Paramics Transport modeling

Nine model network scenarios were tested which range from minimal intervention to the most proactive, in order to achieve an understanding of the level of intervention required to improve conditions in the area. These are set out in Table 4. A wide range of scenarios were tested because within each development concept there were many possible traffic measures and combinations of traffic measures. The tests were structured to identify the effects of different measures.

Particular model tests may be relevant to more than one development concept option. However there is no direct correlation between any single model test and one concept option.

3.3.2 Conclusions from Test Results

The Do-Minimum Option is created by a mixture of Test 1 and Test 3a. Test 3b is closest to the Intermediate Option and model Test 8 is the closest test for the Do-Maximum Option.

All the tests show that any scheme will be a compromise between reducing traffic volumes on the sensitive residential routes and maintaining journey times for buses and private vehicles. At present the area generally works well in terms of traffic flow for through...
movement and it is hard to maintain this level of service when creating new junctions that are not grade-separated.

It is worth noting that there are periods of severe congestion. Without any action, future traffic demands will make this a more frequent and lengthy occurrence.

The Do-Minimum test gives better accessibility for pedestrians and cyclists in terms of crossing the major routes through the area, removes HGVs from Heles Terrace and enhances traffic flow on Heles Terrace. However, it does nothing to remove traffic from Embankment Road and will slow vehicle and bus journeys through the Gateway.

Test 3b (the Intermediate Option test) does not attempt to reduce traffic volumes on Embankment Road but only Heles Terrace. It does not involve as much infrastructure as Test 8 and does not perform as well in terms of journey times and vehicle speeds. It does however have a significant positive effect on Heles Terrace traffic volumes. With extra engineering work to create better junctions at either end of the relief road, the model may show traffic flow that is more in line with present conditions. The most important negative aspect of this test is that congestion is likely to continue at the western end of Laira Bridge.

Test 8 removes the majority of through traffic from Heles Terrace and Embankment Road whilst maintaining overall average journey times for vehicles, although journey times for some routes increase by up to 33%. Bus journey times also suffer but to a lesser extent.

It is apparent that Test 8, which is recommended for the Do-Maximum Option, has clear advantages over the other tests. Indeed, it is the only test which has any significant effect on the transport situation in the area. In the following chapters we have assessed each development concept according to the three criteria established in the previous chapter. However, given the importance of transport issues in the gateway, the model tests are an early indicator of the level of intervention required to achieve a step change in the area.

### 3.3.3 Future Traffic Pressures

The tests referred to and documented in the previous section have been undertaken using 2002 traffic demand levels. Some additional testing was undertaken using an estimate of future demand level in 2016. This exercise was consistent with work previously undertaken by SIAS using the wide area Plymouth TTWA Paramics Model for technical inputs to the recent Draft Structure Plan EIP. This exercise modelled predicted traffic growth resulting from proposed housing and employment developments around Plymouth, as well as natural traffic growth in line with the National Road Traffic Forecasts.

Once the 2002 matrix had been factored to these new higher levels for 2016, model runs were carried out and statistics produced on bus and vehicle journey times, vehicle speeds and traffic volumes. These were then compared with the 2002 runs to show the level of change expected from future traffic growth. The future runs were carried out only for the Base and Test Networks 3a, 3b and 8.

As would be expected vehicle speeds, bus journey times and vehicle journey speeds all increased using the future year modeling work. Tables showing the results of the tests are given in Appendix 4.

These results confirm the belief that the traffic congestion problems of the area must be addressed at a city-wide level. The testing undertaken concerns itself with the study area only. Clearly the transport solutions for the study area, if congestion is to be addressed in the long term, must be part of wider thinking.

<table>
<thead>
<tr>
<th>Test</th>
<th>Network 1</th>
<th>Network 2</th>
<th>Network 3a</th>
<th>Network 3b</th>
<th>Network 4</th>
<th>Network 5</th>
<th>Network 6</th>
<th>Network 7</th>
<th>Network 8</th>
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<td>Test 3b</td>
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<tr>
<td>Test 4</td>
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<td>✗</td>
</tr>
</tbody>
</table>

Table 4: Paramics Traffic Model network tests undertaken

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Plymouth Eastern Gateway Vision
04 The Do-Minimum Option

Figure 4.1: The Do-Minimum Option development concept

- **Green Fingers**: Quality of space improved. Potential for new frontage development.
- **Public Artwork or Small Scale Development** to act as gateway feature.
- **New Green Link**: Landmark on entry into Plymouth.
- **New Waterfront Promenade, Cyclepath and Bridleway**.
- **Improvements to Pedestrian Crossings and Modifications to HGV Routes**.
- **Embankment Road and Cenina Way**: Retained as main routes into city centre.
- **Rationalisation and Consolidation of Retail in Laира Bridge Area**.
- **Marsh Mills First Existing Landmark on Entry to Plymouth**.
- **Primary Vehicular Route**
- **Key Links to Waterfront**
- **Key Pedestrian/Sustrans Link**
- **Nodes**
- **Landmarks**
- **Existing/Proposed Public Open Space**
- **Pedestrian Links Encouraged**
- **Area with Potential for New Development**

Not to scale.
4 The Do-Minimum Option

4.1 Overview

This option could be achieved relatively easily and in a short time frame. It is a largely reactive approach, where the local authority would mostly act in response to opportunities rather than proactively promote development.

Measures are predominantly transport related and include traffic priority measures, which promote environmentally friendly modes of transport, bus priority packages at Heles Terrace and potential for bus priority at junctions. These would need to be co-ordinated through an area-based transport strategy. The bus priority measures would be likely to penalise other road users since no major new road space would be created.

The other initiative for the area under this option would be the implementation of a series of artworks along Embankment Road. These would be administered by the SRB Gateway Study, and it is recommended that a city or area-wide strategy would need to be in place to co-ordinate the planned structures within an overall theme.

The Do-Minimum Option also includes a number of important measures which recur in all three of the concept options. In terms of transport, these measures include community transport initiatives, modifications to local access arrangements, rationalising HGV movements and improving the cycle paths on the western banks of the Plym.

The option also includes encouraging green links through the area to the estuary and environmental improvements to Embankment Road to include a riverside promenade, and increased pedestrian crossing points.

In terms of land use, it is thought that positive planning is essential to rationalise and consolidate retail in the Laira Bridge area, and to try to relocate Heywoods Pavings, allowing a more suitable use for the site.

4.2 Rationale and Description

The option is the best that can be done with minimum intervention. In terms of transport, the primary aim is to address the bottleneck created by the imbalance between the demand for travel through Heles Terrace and its capacity. Most bus routes between the city centre and the east (Plympton, Plymstock and beyond) pass through Heles Terrace or the junctions either end. Additionally these junctions carry the major traffic flows to and from the east while Heles Terrace links Plymstock to the A38 and beyond. At peak times queues form and because of the diversity of bus routing and lack of road space there is no practical means of providing bus priority. This option investigates the feasibility of widening Heles Terrace within the space available to increase capacity and reduce delay at this location. It would not provide much, if any, overall increase in network capacity since this will be restricted by other overloaded junctions. The existing poorly designed footbridge would be removed and replaced by an at-grade signalised pedestrian crossing facility. This is something local residents have long desired.

This option also includes bus and cycle priority measures throughout the network where it can be demonstrated that they are advantageous. These would be co-ordinated through an area-based transport strategy to promote these environmentally friendly modes of transport.
A widespread provision of bus lanes is not included in this option as this would only serve to further slow existing traffic in the area, and exacerbate congestion and the attendant issues of noise and pollution. A more detailed assessment would need be undertaken.

In transport terms this option ensures that future LRT development would not be compromised. All potential routes would be unaffected.

4.3 Mix of Uses

The mix of uses within the study area would not differ greatly from the current mix. Current planning permissions would not be affected, and proposals would go ahead, so that the Western National site could be developed for retail and Sainsbury's could expand their store at Marsh Mills.

There would be minimal new residential development in the area, and uses would continue to be the mix of commercial and industrial uses, marine-related along the river edge, which would be increased with the addition of the new development outlined above, and the consolidation of uses on existing retail areas.

4.4 Appraisal

This option has been assessed in terms of the three criteria set out in Chapter 2: Whether it would help to solve the transport problems in the area (and especially how it would deal with future traffic flow), whether it would improve the local environment, and whether it would maximise the area's key location and create a gateway and how it affects the area's development potential.

It is unlikely that the measures proposed in this option would create major change in the area in terms of traffic intrusion and environmental impact. The public artworks would, if carefully planned, provide visual identity and focus. However the real issues and aspirations for the area (namely a quality gateway, coherent and attractive neighbourhoods free of traffic and good clear routing for traffic movement) fail to be addressed to a significant or worthwhile extent.

4.4.1 Transport

At current levels, average journey times would increase slightly with this option. This is due mainly to the types of measures included which seek to protect the area from further environmental deterioration from peak period traffic flows. Tests show they would leave the area completely ill-equipped to deal with future traffic flows. Congestion would reach unacceptable levels.

In terms of issues such as traffic volumes, traffic noise and air quality, there would be little if any tangible change between the Do-Minimum and the existing situation and this would be severely exacerbated in the future. In fact the option suggests that changes of this do-minimum order alone would exacerbate pollution and congestion levels.

4.4.2 Development in the East

It is clear that given this option's extremely poor performance in transport terms, it could not hope to deal with projected growth to the east of the city. The model testing associated with it reinforces the fact that, if the impact from additional development to the east is to be accommodated, doing nothing or, as is proposed here, doing very little, is not an approach worth pursuing.
4.4.3 Environmental Quality: What kind of place could it be?

The introduction of an artworks and public realm strategy would be able to improve the local area in terms of legibility, and create more pleasant streets and improved crossings. There would be improved open space provision created by the “green links” (a feature of all options). Security and surveillance would be improved throughout the area through small scale measures. However, traffic would continue to create noise and pollution, and the severance created by road and rail lines would prevail.

This option allows for some small scale improvements to the area’s gateway function, through the opportunity for artworks which could become key legible “sign posts” and improve the area’s image. Carefully chosen and dramatic artworks can have a considerable affect and generally are to be encouraged. However by themselves artworks would not transform the arrival area.

This option cannot result in the creation of an impressive Gateway for the city. Apart from the public art, improvements to the area would be so minor that they would pass almost unnoticed by the visitor to the area, and the residents.

The development of land would be likely to continue with the development of facilities which rely on the low cost and good accessibility which the area offers. The trend of industrial uses and out of town retail would be likely to continue in a piece-meal manner. Although new developments might individually be of high quality, the character of the area would not encourage a change from the present trend and a large part of the character of the area (by the waterfront) would most probably continue to be dominated by vacant or underused sites and anonymous sheds. With such uses alongside it, there would be little incentive for the waterfront to become better used and enjoyed.

Transport measures in this option, although offering some alleviation of the problems of traffic through the area, do not properly address the severance which the main routes create between parts of the community. These measures therefore do not begin to address the issue of reconnecting the community and allowing it to regain a strong sense of place and coherence.
A public art strategy could improve the approach but is strongest as part of a comprehensive public realm strategy which also looks at the context within which it is placed.

Many of the problems of the area such as the difficult relationship of public spaces and roads could not be resolved by this option.

Traffic measures favour pedestrians but in essence the problems would remain.

Access to the waterfront would continue to be restricted by large industrial sites.
04 The Do-Minimum Option

4.4.4 Land Use Feasibility / Market Appraisal and approach to Key Sites

The reactive Do-Minimum features of this option would largely result in market forces influencing the pattern of land uses. Consequently the only significant changes that are likely to occur are where added value can be created or obsolescence demands change. The operation of these forces have already manifested themselves in a number of locations through the current planning application/proposals before the City council. These include:

i) Sainsbury’s Retail Application, Marsh Mills.
ii) Salmon’s Retail Consent Laira Bridge.
iii) Morley’s Retail Application, Laira Bridge.
iv) Blagdon’s Boat Yard Application, Embankment Road.
v) Michael Kent’s proposals, Embankment Lane.

The predominant land use proposed in each of these locations is non-food retail with some high value commercial leisure uses. Blagdon’s application being the only location where residential land use has been proposed. It is worthwhile to refer to the indicative land value matrix on page 17 to see the attraction at present of pursuing such uses in comparison to other perhaps more desirable uses.

Value is of course driven by the quality and accessibility of the location and it is of no coincidence that each of these locations are high profile and prominent. Their influence on the character and feel of the Gateway is therefore undeniable.

The other high profile ownerships within the Gateway that have a major influence on the character of the corridor are Network Rail’s Laira Depot and the Heywood Pavings Property. There are intrinsic logistical difficulties and a significant operational value of the Laira Depot. Without the total co-operation of Network Rail any alternative cannot be proposed. Furthermore the capital cost of any reorganisation/rationalisation is likely to outweigh any release of land value. We have therefore regrettably treated the depot as a permanent land use within the Gateway.

Heywood Pavings expressed desire to relocate is more encouraging. This site is operational but physically constrained and its relocation is important to attract a more desirable use capable of releasing latent land value. Heywood Pavings is nonetheless an operational and viable business that will need the appropriate incentives of improved operational efficiency and capital gain in order to consider a relocation worthwhile. It is probable therefore that the major contributing benefit the relocation offers is the removal of an undesirable use. It should of course be noted that the desire to relocate has not resulted in any proactive moves from the company which could be encouraged.

In conclusion therefore the non-proactive characteristics of the Do-Minimum Option are unlikely to have any influence on the working of market forces as they prevail. Consequently there is little or no incentive to the landowner/occupier to pursue any alternative route other than one of singular self benefit. This will result in a disjointed arrangement of land uses with no benefit to those properties in less prominent locations.
4.5 Indicative Costs

This option represents a low cost option for the study area. The costs of developing this option are estimated as follows:

Estimated transport and Infrastructure costs: £450,000

This includes:

- The widening of Heles Terrace;
- Traffic priority measures as part of the scheme.

In addition to this, costs will include artworks and the provision or improvement of green links and a waterside promenade: These are extremely difficult to estimate at this stage but a cost is likely to be in the order of £1-2,000,000.

This brings an estimated indicative cost for the major elements of the option in the order of £1.5-2.5m.

The study assumed that in order to promote modal shift from the car to public transport throughout the city a sum of approximately £5,000,000 will need to be spent over time and this will assist in lowering the potential increase in traffic flows through the Gateway. This background expenditure is assumed in all Options and excluded from the Option costs.

4.6 Summary of Assessment

Table 5 shows the assessment of this option against the key criteria. It performs badly in all respects and especially in transport terms which would lead to totally unacceptable congestion levels and worsening local conditions. Because of this catalogue of poor results this approach has effectively been eliminated as a viable option.
How well does the option address the following issues?

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>Comment</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Gateway Quality</td>
<td>Provides an impressive new gateway to Plymouth? Artworks give some improvement but no fundamental change to the gateway experience.</td>
<td></td>
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<tr>
<td></td>
<td>Makes best use of the views from the site? Improved waterfront promenade makes some use of views. Lack of change of land-use means few opportunities for better access.</td>
<td></td>
</tr>
<tr>
<td>Environmental Quality</td>
<td>Provides opportunities for high quality development? It does not. Lack of area-wide strategy means existing low-profile uses expected to continue.</td>
<td></td>
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<tr>
<td></td>
<td>Provides opportunities for a lively waterfront? It does not. Existing low-profile uses expected to continue. Waterfront may improve but opportunity for new uses along the waterfront and for significantly improved access is poor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provides opportunities for high quality open space and amenity? Some improvements to existing green links and access to waterfront. Better waterfront promenade but the promenade remains isolated behind existing ad-hoc and low quality uses.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provides an improved living environment for the local communities? In short term improved crossings and pedestrian environment. But congestion remains and long term increased congestion causing further pollution and severance within local communities. Existing low-profile uses expected to continue, so likely continuation of underused or vacant sites and shed construction.</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>Provides traffic improvements for the local communities? Short term pedestrian environment improvements but continued and worsening traffic congestion.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provides a successful transport solution? It does not. It fails to deal with increased predicted future traffic growth.</td>
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<tr>
<td></td>
<td>Provides a transport solution suitable for further development in the East? It does not. It fails to deal with increased predicted future traffic growth.</td>
<td></td>
</tr>
<tr>
<td>Viability</td>
<td>Provides development potential? It does not provide any significant added value. Ad hoc development is likely to continue as currently.</td>
<td></td>
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Table 5: Summary of Assessment of the Do-Minimum Option against the key criteria

Plymouth Eastern Gateway Vision
GREEN “FINGERS”: QUALITY OF SPACE IMPROVED WITH NEW FRONTAGE DEVELOPMENT.

SECOND GREEN BRIDGE TO LINK TOTHILL PARK WITH ESTUARY
WATERFRONT PROMENADE, CYCLEWAY AND BRIDLEWAY ALONG THE PLYM
SECOND GREEN LINK BETWEEN TOTHILL PARK AND WATERFRONT

IMPROVEMENTS TO LOCAL CENTRE AT EMBANKMENT ROAD
POTENTIAL AT EXETER STREET FOR GATEWAY POINT TO SUTTON HARBOUR AND CITY
INTEGRATION OF SUTTON HARBOUR EAST AREA WITH CATTEDOWN ESPECIALLY AT EXETER ROUNDABOUT.
KEY ROUTES LINKING RESIDENTIAL COMMUNITIES AND THE NEW WATERFRONT.

PEDESTRIAN SUSTRANS LINK

AREA OF LAND RECLAMATION
RELOCATION AND CONSOLIDATION OF RETAIL AND POTENTIAL FOR NEW DEVELOPMENT
POTENTIAL FOR LIVELY WATERFRONT FRONTED BY RESIDENTIAL AND MIXED USE DEVELOPMENT

Figure 5.1: The Intermediate Option development concept
5 The Intermediate Option

5.1 Overview

This Option explores the potential for major change in the Gateway Area. It represents an intermediate level of intervention, clearly more than the Do-Minimum but is not as proactive as the Do-Maximum (see Chapter 6). It includes a number of ambitious actions for the area including land reclamation and some re-ordering of the road network. It requires proactive intervention from the local authority, who will need to plan and promote development with an overall strategy that includes key sites within the area and search very hard for potential funding sources.

In terms of transport, the option includes a modest public transport only bridge across the River Plym to the north of the existing bridge to provide the additional infrastructure capacity to help manage the future needs of the Plymstock Quarry and Sherford developments.

The flow of traffic along Laira Bridge Road to the west of the bridge would be redistributed thereby assisting to some degree access to the development sites on either side of this length of road. There would be no reduction in peak period traffic on Laira Bridge itself and therefore there would be no effect on prolonging the residual life of the bridge.

The option also includes the “Must Do” options below:

- Community transport initiatives, modifications to local access arrangements rationalising HGV movements and improving the cycle paths on the western banks of the Plym;
- Encouraging green links through the area to the estuary and environmental improvements to Embankment Road to include a riverside promenade, and increased pedestrian crossing points;
- Positive planning is essential to rationalise and consolidate retail in the Laira Bridge area, and to try to relocate Heywoods Pavings, allowing a more suitable use for the site.

5.2 Rationale and Description

5.2.1 Transport

In terms of transport, the option includes a modest public transport only bridge across the River Plym to the north of the existing bridge to provide the additional infrastructure capacity to help manage the future needs of the Plymstock Quarry and Sherford developments.

The flow of traffic along Laira Bridge Road to the west of the bridge would need to be relocated to more suitable locations within this open space strategy. This would also be an opportunity to make them more accessible and usable.

Main elements of the Intermediate Option:

- Area of reclamation north of Laira Bridge for mixed-use and residential development;
- Mixed-use development to south of Laira Bridge and connecting back to existing residential area;
- Continued use of Gdynia Way and Embankment Road as traffic routes;
- New road between Laira Bridge Road and Embankment Road to give access to port;
- Public only transport bridge across the River Plym alongside existing Laira Bridge;
- Public transport only route from bridge along Embankment Road;
- Community transport initiatives, modifications to local access arrangements, rationalising HGV Movements, pedestrian crossing improvements to Embankment Road (see ‘Must-Do’ actions);
- Green links and green bridge to the waterfront;
- Waterfront promenade from Marsh Mills to Cattedown (see ‘Must-Do’ actions);
- Potential for landmark buildings on approach to city.
05 The Intermediate Option

A link is created from Embankment Road (east) to Laira Bridge Road to allow traffic to bypass Heles Terrace and to provide access to the port. (This option originally explored the possibility of an additional route to the city centre via a southern link, passing along the waterfront and to the south of existing residential areas, also providing access to the port. This was found to be untenable in transport terms and is retained only as a local street and for port access.)

Future LRT development is not compromised with this option although it suggests that without a major expense and upheaval it would be constrained to a route along Embankment Road. An early decision would be required as to whether the new 'public transport' bridge should be constructed at the outset (at additional cost) to cater for eventual 'light rail' use.

5.2.2 Mix of Uses
The intermediate proactive approach of this option offers up opportunities to influence future use patterns and create new markets. Where land reclamation occurs new sites would be opened up. Where key sites are treated as part of an overall strategy, some previously unviable development sites could also be brought forward. The market forces of location and accessibility would prevail and influence land use.

Residential land use would be the most significant new use to emerge from this more proactive approach. This would result from the change in vehicular movements which could make previously undesirable locations desirable. Land reclamation would make previously unusable sites usable and new roads would make previously inaccessible sites accessible. The predominant gain of residential land use is also a reflection of the inherent weakness in the city's employment markets, particularly for offices. Other commercial uses such as hotels/leisure/retail would be appropriate in key locations and would also be compatible with residential land uses. The provision of community/social and recreational uses would of course form part of the planning package.

The intermediate approach encompasses the desired objectives of the Must-Dos, in particular a positive approach to consolidated non-food retail uses and a relocation of non-conforming uses such as Heywood Pavings.

5.3 Assessment

5.3.1 Transport
The southern waterside route as a main route into the city was dropped from this option. It was an attractive possibility in urban design terms as on paper it seems to relieve the community of much through-traffic. Because of this it is important to record it and the reasons why it was not considered to be satisfactory as a through traffic route only.

The southern route would require a number of new junctions between Laira Bridge Road and Gdynia Way in order to provide access to Cattedown/Prince Rock area. This was recognised early in the assessment of this option as a problematic feature and the traffic and engineering evaluations carried out (and described below) reflect this. The estuary side road as the main route into the city (and thereby significantly freeing the East End of traffic) was excluded as a possibility and consequently was not tested.

Tests also discounted the possibility of sharing traffic to the city centre between the three roads (Gdynia Way, Embankment Road and a southern route).
Tests 3b, 5 and 6 can be interpreted as proxies for some aspects concluded from model testing for this option. The tests used Embankment Road and Gdynia Way in varying formats as the main routes and retained an access road from Marsh Mills to the Port. Whilst it may appear that some benefit could be derived from spreading the traffic loads between existing routes and a new southern route (Embankment Road, Gdynia Way and the new corniche route), the main problem is the congestion point at the western end of Laira Bridge. This was seen to be too severe to make a third east-west road workable on a southern at-grade alignment.

In the course of the model testing, Tests 5 and 6 (which include a southern route) produced so much additional delay on the network that it became impossible to sensibly compare them with other tests. Since they did not address one of the main objectives of the study in that regard, the detailed outputs were omitted from the model reporting. In summary, they could not be made to work even at current traffic levels.

As a result of this, the tests which included a southern route were not tested further. However even the scenario which was tested, Test 3b (which is closest to the intermediate option as shown in figure 5.1) did not perform satisfactorily and the results of this test are given below. This too failed largely because of the congestion problem at the western end of Laira Bridge and means that the Intermediate Option must be excluded in transport terms. Given the importance of transport issues in the area, any option based on Test 3b (or 5 or 6) would produce problems in the area and cannot be recommended.

In overall terms in Test 3b, average vehicle speeds on the main routes through the Gateway decrease by 5mph compared to the present situation for the same traffic levels. Average speeds on the route between Marsh Mills and Pomphlett reduce by approximately 10mph in both directions, with the speeds on the route from Pomphlett to the city centre also reducing by a similar amount. These decreases are significant for private cars but are necessary to produce the bus journey time improvements and the relief to Heles Terrace.

Overall bus journey times are slightly reduced, however bus journeys times from Marsh Mills to the city centre can be expected to rise by around 7-8% on average for that section of their journey within the Gateway model area.

Vehicle journey times show an overall rise on the main routes through the area. Journey times from Marsh Mills to Pomphlett rise by roughly 25%, Marsh Mills to the city centre by 15% and Pomphlett to the city centre by 85%.

Embankment Road traffic volumes are at similar levels as in the present situation. Heles Terrace sees a reduction in traffic of around 90% northbound and over 65% southbound. There are likely to be significant environmental benefits in the Heles Terrace area arising out of these changes although transport disbenefits will occur elsewhere unless significant modal transfer from car to bus occurs (e.g. Pomphlett to city centre corridor).

5.3.2 Development in the East

Given the congestion point at the western end of Laira Bridge, increases in vehicle numbers will aggravate this problem. Tests showed that the option performed badly with regard to future flows and would certainly perform badly with the additional impact of developments to the east of the Plym.
5.3.3 Environmental Quality. What kind of place could it be?
This option would dramatically change the nature of the area in terms of land use. In addition, there would be a better and extended open space network, linking local communities to the river and providing local resources. However transport problems remain and would adversely affect any development.

The Gateway and the Waterfront
This option contains an ambitious set of solutions, which could provide change for the area in terms of the visual gateway created and through landmark buildings and open space.

There would be an increase in the volume and mix of uses, including residential and commercial development, which would improve the level of activity in the area, improving safety and surveillance.

This option sets a framework in place which could enable the waterfront to be significantly improved. An area of land reclamation allows for residential development along the waterfront, linking with a green bridge from Tothill Park. This has the potential to significantly improve the quality of the area to the north of Laira Bridge and connect back into existing residential areas. Clearly this would also depend on the quality of this development in its detailed layout and implementation.

This option provides the opportunity for a sequence of high quality open spaces both leading to the waterfront and along it.

However there would be some environmental costs related predominantly to the reclamation of land on the banks of the Plym. A feasibility study would be required at the earliest opportunity, followed by an Environmental Impact Assessment to look at mitigation measures.

On paper there are possibilities for an impressive gateway and waterfront. However all the apparent benefits of this option will be adversely affected by traffic problems and must be judged accordingly. Severe congestion around the western end of Laira Bridge, which is foreseen in this option, will have a serious adverse affect on the quality of the environment.

5.3.4 Land Use Feasibility / Market Appraisal and approach to key sites
The creation of land with waterfrontage and the opening up of new development sites would create a supply of new property opportunities. The value of these opportunities would be determined by the strength of market demand and the cost of undertaking the development. The type of land use would be influenced by the factors of location and accessibility as well as the size and shape of the sites. New commercial uses could be attracted to those locations with prominence to the major road network and with good access. Residential uses would predominate elsewhere and would in particular favour the reclaimed and new waterfront sites. New residential development would in particular create demand for complementary uses including local retail, leisure and community facilities.

It is envisaged the residential development would comprise a mix of unit sizes designed in such a way that maximum density is achieved to facilitate views of the river and beyond. The waterfront locations are not considered to be of comparable quality with a number of the seafront and harbour side developments recently completed in Plymouth and would consequently be priced accordingly. It is envisaged that an element of affordable units will be provided for in accordance with planning guidelines. However the table below clearly shows how river views could affect value and the importance of positioning key residential elements on the waterfront, for example to the north of Laira Bridge.
A green bridge linking the waterfront with improved existing parkland providing a high quality green space and a new landmark on the approach into Plymouth. This is also a feature of the Do-Maximum Option.

Assuming there to be a combination of 1 and 2 bedroom apartments it is projected that sales values based on current market evidence would range between:

<table>
<thead>
<tr>
<th>Capital Value</th>
<th>Specification</th>
<th>Size</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>£120–£150 per ft²</td>
<td>1/2 bed units</td>
<td>500-700 ft²</td>
<td>Landmark building, no views</td>
</tr>
<tr>
<td>£150–£180 per ft²</td>
<td>1/2 bed units</td>
<td>500-700 ft²</td>
<td>Waterfrontage with views</td>
</tr>
<tr>
<td>£180–£200 per ft²</td>
<td>1/2 bed units</td>
<td>850-1,000 ft²</td>
<td>Landmark building, no views</td>
</tr>
<tr>
<td>£200+ per ft²</td>
<td>1/2 bed units</td>
<td>850-1,000 ft²</td>
<td>Waterfrontage with views</td>
</tr>
</tbody>
</table>

Table 6: Estimated capital values (Autumn 2003) for residential development in a proactive option

The land value derived from new residential development would be determined by the quality and size of development proposed. In order to maximise value a master plan will be required identifying the individual development opportunities. The extent of new residential land created and the new opportunities released is therefore difficult to determine. The headline values of £1 million per acre achieved for prestige sites adjoining established good quality residential areas are unlikely to be achieved in this location. Market demand should nonetheless sustain a very favourable land value which, subject to the amount of land released, should generate a very significant receipt.

A note of caution should be added. Clearly on paper there are many development opportunities in this option. However any remaining congestion problems which are anticipated around the western end of Laitra Bridge, would clearly have an affect on the area and its economic viability and any long term congestion would inhibit the release of the latent potential.

Key sites
This option would rely on a proactive approach from the local authority to ensure a coherent strategy with regard to some key sites. It becomes essential in this option to continue close consultations with landowners and business tenants to ensure that the overall strategy and the mutual benefits and added value are not compromised.

The existence of extant or implemented consents clearly establishes a significant and substantial level of base value. There is nonetheless added value to be created by a proactive approach. Salmon own a cleared and undeveloped site which has difficult access and egress arrangements. Furthermore in the absence of an occupier/tenant the investment value remains latent and the proprietal issues are confined to one party. Morley similarly own a property that is not without its own access and egress failings.

The arrangement of the accommodation and specification of the buildings are poor and MFI as the occupier does not require the benefit of the open A1 consent that the Certificate of Authorised Use permits. Add to this the rapidly shortening occupational leasehold interest and the opportunity to release latent value becomes clear. The latent value opportunity is not as easily defined with Landsecurities ownership of Friary Retail Park other than the tenants trade as bulky goods operators within an open A1 consent. The total retail floor permitted at each of these locations totals approximately 160,000 ft².

Should this floor space be aggregated at a single location these will be a significant release of latent value which could be in excess of £10 million. Furthermore a consolidated location of the uses would provide the opportunity for an improved retail offer and release the vacated sites for alternative uses.
A cautionary note should be added that should the latent value be released at any one of the existing sites the net benefit would be eroded and the opportunity would become prohibitively expensive.

Delivery of these two principal land uses will make other complementary land uses a realistic proposition. A mixture of commercial and residential uses in key locations would become feasible. Complementary with this land use mix would be the objective relocating of inappropriate uses such as Heywood Pavings. Alternative uses could be considered with the prospect of some business use within the new access corridor for example the M Thomas site.

5.4 Indicative Costs

This option has significant cost implications. The cost of infrastructure and engineering elements is estimated to be £20,000,000. This includes:

- New bridge over River Plym;
- New bus lanes;
- New road layout and land reclamation (for associated road only);
- Electricity pylon relocation;
- Additional cost for forming a northbound grade-separated link between the new link road and Embankment Road, including raising pylons;
- Land reclamation and remediation (estimated at approximately £150 per sq.m plus £240 per linear metre of river frontage).

The costs of the waterside promenade, improvements to green links and a green bridge are difficult to estimate at this early stage. The costs are estimated to be in a range of £3,400,000.

The overall cost, therefore, of the major elements of this option is estimated to be in order of £24,000,000.

5.5 Summary of Assessment

This is shown in Table 7. In development terms, real change could be brought about to the character of the area. In theory added value and a better local environment in some locations could be created by a more proactive and coordinated approach to site development. However the fact that the option fails to perform with regard to traffic problems and future traffic demands calls into question the potential of its economic viability and makes it an untenable proposal for the long term future of the area and the city. The traffic problems this option presents means that it must be excluded from further consideration and is not recommended.
### Table 7: Summary of Assessment of the Intermediate Option against the key criteria

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>How well does the option address the following issues?</th>
<th>Comment</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VISUAL GATEWAY QUALITY</strong></td>
<td>Provides an impressive new gateway to Plymouth?</td>
<td>Improved route along Embankment Road (east). Better access to port. Continued use of routes through existing communities mean that the final approach is largely unchanged.</td>
<td>★★★</td>
</tr>
<tr>
<td></td>
<td>Makes best use of the views from the site?</td>
<td>New development opportunities with potential to make use of views and better access to waterfront.</td>
<td>★★★★</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL QUALITY</strong></td>
<td>Provides opportunities for high quality development?</td>
<td>Provides opportunity to radically alter the area and offer sites for development, especially along the waterfront.</td>
<td>★★★★</td>
</tr>
<tr>
<td></td>
<td>Provides opportunities for a lively waterfront?</td>
<td>Provides good opportunities for a lively waterfront although continued traffic problems are likely to continue to blight areas in immediate vicinity.</td>
<td>★★★</td>
</tr>
<tr>
<td></td>
<td>Provides opportunities for high quality open space and amenity?</td>
<td>Improvements to existing green links and access to waterfront. Improved waterfront and opportunities for rationalised greenspace network behind existing ad-hoc uses.</td>
<td>★★★</td>
</tr>
<tr>
<td><strong>TRANSPORT</strong></td>
<td>Provides an improved living environment for the local communities?</td>
<td>Some better connections between local communities. Potential for congestion at end of Laira Bridge however and continued congestion through local residential areas.</td>
<td>★★★</td>
</tr>
<tr>
<td></td>
<td>Provides traffic improvements for the local communities?</td>
<td>Congestion within the community areas still exists.</td>
<td>★★★</td>
</tr>
<tr>
<td></td>
<td>Provides a successful transport solution?</td>
<td>Congestion still unresolved and in the long term it cannot deal with future growth.</td>
<td>★★★</td>
</tr>
<tr>
<td></td>
<td>Provides a transport solution suitable for expansion in the east?</td>
<td>It does not. It fails to deal with increased predicted future traffic growth.</td>
<td>★★★</td>
</tr>
<tr>
<td><strong>VARIETY</strong></td>
<td>Provides development potential?</td>
<td>It provides good opportunities for new development but continued potential congestion is likely to limit the added value.</td>
<td>★★★</td>
</tr>
</tbody>
</table>

**Key:**  
- ★ Performs poorly  
- ★★ Performs well  
- ★★★ Performs very well
06 The Do-Maximum Option

Figure 6.1: The Do-Maximum Option development concept

- Green "fingers": Quality of space improved with new frontage development.
- Green bridge landmark on entry into Plymouth.
- Waterfront promenade: New Boulevard following line of freight railway.
- Improved local centre at Embrakment Road (better north-south connections between residential areas).
- Gateway to Sutton Harbour City Centre.
- Integration of Sutton Harbour East Area with Cattewater especially at Exeter St Roundabout.
- Key route linking residential communities and the new waterfront.
- Pedestrian/Sustrans Link.
- Rationalisation of freight railway lines.
- Potential for lively waterfront with residential and mixed use development.
- Relocation and consolidation of retail and potential for new development.
- Potential for Pompilius Gate.
- Marsh Mills first landmark on entry to Plymouth.
- Complete cycle path and Sustrans running along Tavistock.
Traffic entering the city from the north would therefore travel down Embankment Road and continue into the new Friary Boulevard. Access to Cattedown from this direction would be improved by providing a new link to Finnigan Road. Traffic from the east, if going into the city, will use the new bridge and boulevard. Access to Cattedown from the east would be maintained via Laira Road Bridge in the short term until the bridge and boulevard were completed.

This means that the existing Laira Bridge would have dramatically less traffic (only local traffic to Cattedown) and will become a public transport route. Gdynia Way could eventually be downgraded or shut (see box overleaf) and the environment on Embankment Road (west), which would no longer have any private vehicular through traffic, would be dramatically improved.

Today, there is a greater environmental understanding and awareness than was the case when Gdynia Way was constructed and although there would undoubtedly be an environmental impact from the new road, landscaping and engineering measures would be employed to minimise these. The new route would also necessitate the relocation of retail units in Friary Retail Park.

Pylons would be removed or raised and some residential and retail relocation would be required.

The Option also includes the “must do” options below:

- Community transport initiatives, modifications to local access arrangements.
- Encouraging green links through the area to the estuary and environmental improvements to Embankment Road to include a riverside promenade.
06 The Do-Maximum Option

and increased pedestrian crossing points;
- Positive planning to rationalise and consolidate retail in the Laira Bridge area, and to relocate Heywoods Pavings. Even if detailed alignment of the railway does not require it to pass through the site, a more suitable use integrated into the overall framework would be important.

6.3 Mix of Uses

In terms of the mix of uses within the area, there will be an increase in floor space resulting in a greater mix of uses and increased development, although not as much as in the Intermediate Option above. An important feature of the option is the change in local environment and the quality of that environment rather than a large increase in development volume.

Rather like the Intermediate Option, but with the opportunity for a higher quality environment, there is excellent potential in the Do-Maximum Option for waterside residential development, especially between Embankment Road and Laira Bridge, with an associated mix of uses, which would be integrated with the existing residential areas giving them good and lively access to the waterfront. Similarly on the approaches to the city centre, opportunities for business and mixed-use development emerge if a strategy is put in place for a coordinated approach to the key sites in the area. A relocation and consolidation of proposed and existing retail uses would also be essential.

6.4 Appraisal

This option has been assessed in terms of how it improves the local environment, how it helps to solve the transport problems in the area, and how it maximises the area’s key location and creates a Gateway. There is no doubt that this is a costly option. More detailed analysis is required to assess its feasibility. Nevertheless, at this early stage it is possible to assess its suitability as an option worth pursuing further.

6.4.1 Transport

Although not all the routes show speeds as fast as in the base situation, the overall speed for all routes is the same as currently. The routes showing a reduction in vehicle speeds are Marsh Mills to the City Centre, Pompehlett to the City Centre and Marsh Mills to Pompehlett. The reductions for traffic from Marsh Mills can be attributed to the addition of the roundabout on Embankment Road; this causes delay on a route which at present flows freely to Heles Terrace.

The overall bus journey times for this option are within seconds of the base journey times. Improved journey times are seen for the outbound routes because of low traffic volumes on Embankment Road (west) and a bus-actuated signal allowing buses to bypass the new roundabout. Poorer journey times are seen for the city bound routes because of queuing on Exeter Street at the junction with the new boulevard. This could be addressed by allowing buses to circumvent the signals in a bus-only lane.

The overall vehicle journey times for the completed Do-Maximum Option are the same as for the base scenario, however some individual routes are slower and some faster. Due to the removal of Gdynia Way all traffic from Pompehlett must now use the new bridge, which is a less direct route for city bound traffic and therefore takes marginally longer. Traffic originating in Marsh Mills and heading for the city centre takes slightly longer than in the base because of queuing from the new roundabout.

However these are issues that can be addressed. The capacities of the critical junctions should be capable of optimisation through the subsequent design process.

Ideas for the treatment of Gdynia Way under the Do-Maximum Option

- Tree-lined avenue:
  Down-graded vehicular route into the City Centre allowing tree-lined avenue with more pedestrian crossings. Pedestrian connections to surrounding streets eg Risdon Avenue and Radford Avenue.

- Tree-lined vehicular avenue with development:
  Available sites along its length developed to give frontage onto the route.

- Green link with pedestrian and cycle route:
  This would need to be combined with some development along its length to ensure overlooking onto the space. (We believe this option would only provide a safe environment with significant overlooking and so without this it would not be suitable).

- Building over the road around Elliott Road:
  Completing urban blocks which are cut short by Gdynia Way and so connecting the urban fabric on either side of the road.

- Removing Gdynia Way as an east-west route and creating a new focal point:
  Extend rear gardens in the western part of the road to remove the east-west connection, create a focus around Elliott Road bridge (either of development or open space), retain part of Gdynia Way to the east of Elliot Road bridge.

(These ideas will require further investigation as to their feasibility).
With traffic significantly reduced there is potential for Embankment Road to become a more pedestrian-friendly local centre on the main public transport route into the city centre.

A high quality waterfront promenade is created along the waterside road. This road can have both a pleasant residential character whilst also acknowledging the working port character of much of the area. This road would therefore also accommodate the port traffic.

and hence there should be some scope for reducing the modelled journey times.

This option reduces the number of trips significantly on Embankment Road. However due to the congestion and increased journey distance when using the "Friary Boulevard" a small number of vehicles still use Embankment Road as a through route. The traffic using it to travel to Plymstock is around 12% of that seen in the base.

This option removes all but 10% of southbound traffic and almost all northbound traffic on Heles Terrace.

6.4.2 Development in the East
The model testing associated with this option shows that a highly proactive option such as this, incorporating major public transport initiatives alongside road construction, is likely to manage the increased demand far better than minor alterations to the current network.

The option’s main advantage is that the two main arrival routes (from the north and from the east) come together at a point which is away from the built-up area. It therefore removes the existing congestion point at the western end of Laira Bridge and consequently removes the congestion point from the adjacent residential areas (which is highly problematic in both other options).

6.4.3 Environmental Quality: What kind of place would this be?
This option offers the opportunity to create a new quarter for Plymouth and it represents very great change. The area would have a greatly improved image, with the new bridge and the "Friary Boulevard" creating a new urban environment and statement, whilst facilitating improvements to the existing residential communities.

However, a feasibility study would be required to look at the practicality of the major new road and bridge, and the environmental constraints. There is little space for manoeuvre at the city end of the "Friary Boulevard" and some innovative engineering would have to be implemented to minimise environmental impact.

The redevelopment potential of major sites allows for the comprehensive redevelopment of this area. This would improve the 24-hour nature of the area, making it more lively and vital. There would be improvement to the residential streets with a reduction in traffic, particularly around the Gdynia Way area and along Embankment Road (west), which would once again become a local shopping street. The severance currently created by these roads would also be alleviated, vastly improving the current residential environment. There are several possibilities for the treatment of Gdynia Way and these are listed in the box opposite.

A New Bridge
A new bridge linking with the new boulevard provides both a smoother, less congested route into Plymouth city centre and the opportunity for a stunning gateway marking the arrival into the city and a symbol both for the city and for the new quarter associated with it. There is a potential for a landmark rivaling other splendid European examples: Lisbon, Rotterdam, Seville.

The Waterfront
This option brings the opportunity for a substantial area of impressive waterfront, which provides an attractive and lively pedestrian environment. Recognising the need, as in other options, to maintain the port activities in the southern part of Cattedown, the area between the Laira Bridge and the new proposed bridge, has good views of the opposite shore and good access to both public transport links, using the Laira Bridge and links into the city centre. As such, a mixed-use area with substantial residential presence along the waterfront is proposed.
The option has much in common with the Intermediate Option in terms of proposals to develop the waterfront but transport issues within the two options are likely to have an affect on the quality of the waterfront that could be created. Severance through the existing communities along Gdynia Way and Embankment Road (west) would be removed in the Do-Maximum Option and much better links could be established between the waterfront and the existing fabric. This would create a more integrated quarter which is more accessible by the local communities.

The new bridge removes congestion around the western end of the existing Laira Bridge. It also removes a major cause of severance along the length of the waterfront. Without the need to accommodate a major route into the city centre along Laira Bridge Road a long stretch of development from the new bridge down to the port area becomes possible with greater potential to ensure that the existing plants (transformer plant and waste water treatment plant) are successfully integrated and as far as possible concealed within new development.

These factors are likely to have some positive impact on value not only for the waterside buildings but for those further back.

**The Boulevard**

The main link into Plymouth City Centre passes along the line of the former railway, to the south of Tothill Park, between St.Judes and the Embankment, eventually joining Exeter Street.

Most important to this route is that it is a street, with a healthy and pleasant integration with surrounding areas and not a through-route with no connection with the surroundings (as is currently the case with Gdynia Way).
As well as residential, the quarter would contain leisure and retail to create a balanced mixed-use quarter where people can live, work and spend their leisure time. The removal of through traffic from the area would greatly enhance the quality of this experience.

Higher storey heights would be appropriate along the waterfront and set against the large expanse of the river. They would also give the necessary mass to give a sense of place to the new quarter.

The boulevard would be a wide tree-lined street with a pleasant pedestrian environment and broad at-grade crossings as well as direct links (vehicular links where possible to link the road into the local urban fabric, but also pedestrian links). Where space is available, development along the street would create a strong lively façade where active uses at ground floor would be encouraged.

The railway line is on an embankment at its eastern end and in a cutting at its western end. The width of its reservation also varies. The design of the new road and the way in which it is integrated into its surroundings will therefore need to vary along its length. This is examined in greater detail in the following chapter.

6.4.4 Land Use Feasibility/Market Appraisal and approach to key sites

The Do-Maximum Option will have a more dynamic effect on the way market forces influence land use. The option affords the opportunity to capture the beneficial development potential of the Intermediate Option. Furthermore, a far reaching new road hierarchy would impact on those areas beyond the immediately definable areas benefitting from the new road system. The East End would be the obvious beneficiary as would the new residential proposals in the Plymstock area and possibly beyond. The multi-model dynamics of the option also have benefits particularly for the rail and port related activities within Cattedown. Consequently the opportunity for increased land value capture and wider economic benefits are opened up by this option.

Inherent within the proposal will be the opportunity to consider new market opportunities and reconsider previously unworkable proposals, in particular the opportunity to relocate uses which are now considered inappropriate. Examples would be a number of the industrial uses within the East End and the relocation of the Plymstock Bus Depot for additional residential development. Inevitably there will be untouchables such as the statutory undertakers plants at Finnegan Road.
6.6 Summary of the Appraisal

A summary of the assessment of this option is given in Table 7. There are numerous benefits of this option, including:

- The potential for an extremely high quality waterfront;
- The potential for an impressive gateway to the city;
- The divisive and negative environmental effects of the existing through routes - Embankment Road (west) and Gdynia Way - would be removed and a new urban quarter would become possible;
- The route would serve the development at Plymstock Quarry;
- The new bridge would release additional public transport capacity on the existing bridge to serve Plymstock Quarry and Sherford;
- Rail access to Cattedown would be improved;
- Road access to Cattedown / Prince Rock would be improved;
- Potential development sites would be rationalised;
- Limited-stop express bus services could be routed along Friary Boulevard to enhance their attractiveness to ‘longer distance’ passengers, while multi-stop services could continue to serve the heart of the East End;
- The new bridge would provide a replacement for the existing bridge before the latter reaches the end of its life and would enable it to be subsequently replaced on its current alignment to a smaller scale for public transport/pedestrian/cyclist use.

The option does create some potential local difficulties for properties adjoining the new route. These difficulties, which would be addressed through excellent design solutions, are far outweighed by the advantages which the option would bring to the area and the city as a whole.
<table>
<thead>
<tr>
<th>THE CRITERIA</th>
<th>How well does the option address the following issues?</th>
<th>Comment</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISUAL GATEWAY QUALITY</td>
<td>Provides an impressive new gateway to Plymouth?</td>
<td>Excellent approach across bridge or from Marsh Mills with views of the new bridge, followed by smooth route along Friary Boulevard.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td></td>
<td>Makes best use of the views from the site?</td>
<td>New development opportunities with potential to make use of views and better access to waterfront.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td>ENVIRONMENTAL QUALITY</td>
<td>Provides opportunities for high quality development?</td>
<td>Provides opportunity to radically alter the area and offer sites for development, especially along the waterfront.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td></td>
<td>Provides opportunities for a lively waterfront?</td>
<td>Provides excellent opportunities for a lively waterfront with good access from local communities.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td></td>
<td>Provides opportunities for high quality open space and amenity?</td>
<td>Improvements to existing green links and access to waterfront. Improved waterfront and opportunities for rationalised green space network behind existing ad-hoc uses.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td></td>
<td>Provides an improved living environment for the local communities?</td>
<td>Better connections between local communities by rerouting main approach to town. Opportunity for better connections to waterfront. Through traffic removed from local centre.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td>TRANSPORT</td>
<td>Provides traffic improvements for the local communities?</td>
<td>Removes through traffic from heart of local community.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td></td>
<td>Provides a successful transport solution?</td>
<td>Takes route away from local communities. Provides better provision of public transport to local communities.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td></td>
<td>Provides a transport solution suitable for expansion in the East?</td>
<td>Yes. The solution is able to accommodate growing traffic pressure.</td>
<td>⭐⭐⭐⭐</td>
</tr>
<tr>
<td>VIABILITY</td>
<td>Provides development potential?</td>
<td>It provides good opportunities for new development.</td>
<td>⭐⭐⭐⭐</td>
</tr>
</tbody>
</table>

**Key:**
- ⭐ Performs poorly
- ⭐⭐ Performs well
- ⭐⭐⭐ Performs very well

Table 7: Summary of Assessment of the Do-Maximum Option.
7 Comparison of Options

7.1 Assessment of the Options

The Gateway is clearly an area of great potential but also one with significant problems. Our analysis showed that at present the situation is problematic and that with future growth and development of the city this situation, particularly with regard to traffic congestion, is bound to be aggravated. The quality of the urban environment is intrinsically linked to traffic issues in the area.

It quickly became apparent that standing still was not an option: something is needed in the area to alleviate these growing problems. The question became: What level of intervention can best respond to the complex demands of this area of the city? We established three options representing three levels of intervention:

- The Do-Minimum Option
- The Intermediate Option
- The Do-Maximum Option

We established key areas of concern through analysis and consequently have assessed each option accordingly as to the success of:

1. The transport solution the option offers both to the local community and to the city as a whole, paying particular attention to the option’s ability to deal with possible development to the east of the Plym;
2. The quality of the environment which is created locally;
3. The quality of the gateway which is created for Plymouth as a whole;
4. The ability of the option to generate (high quality) development and its approach to key sites within the area.

These issues are clearly interrelated and so are shown in more detail in Table 9.

7.2 Views and the gateway

The Do-Minimum Option performs badly in terms of improving the city gateway. Artworks would be a welcome addition which could have a considerable impact but would only be truly meaningful if part of a thorough public realm strategy. If the large areas of undeveloped or under-used sites do not change, the fundamental character problems of the area will not have been addressed.

The Intermediate and Do-Maximum Options tackle the critical first impression of the visitor to Plymouth by addressing the quality of the route into the city, and clearly defining one or a series of gateway points in the progression to the city centre. The waterfront could become a potentially vibrant place in both the Do-Maximum and the Intermediate Options, flanked by residential and other leisure activities and connected to a series of green links. However the need to retain routes through the East End in the Intermediate Option would detract from the arrival experience of this option.

The quality of the arrival experience in the two options can be qualified further. The Intermediate Option provides a new public transport bridge alongside the existing Laira Bridge. Although this puts all crossings in one location, the crossing is unlikely to be elegant given that several bridges would be positioned together. The Do-Maximum Option on the other hand provides the opportunity for a spectacular new crossing. If this new bridge were designed with imagination, this could in itself be a superb gateway to Plymouth, for those arriving over it, or for those seeing it from the Embankment Road approach.
7.3 Transport

In terms of transport, all of the options being considered are likely to bring about some disbenefits in terms of travel speeds and journey times for private car through trips in the study area simply because there is a high level of service currently for these trips. Based on the work carried out thus far it is impossible to bring about significant benefits for the people living and working in the study area without disbenefits for longer distance car trips. The scale of the disbenefit is exaggerated in the current work because the entire journey for the longer distance trips is not part of the consideration at this stage; only the section of the journey through the study area.

However only the Do-Maximum Option has a positive effect on traffic congestion: all the other options make no improvement in congestion terms. This also affects how the options perform in terms of the local environment they create.

7.3.1 Development in the east

It is against this issue that the options most significantly differ. The Do-Minimum Option clearly is ill-equipped to deal with further development. It would in fact aggravate the situation considerably since measures are only geared to improve pedestrian and environmental conditions for the local community.

The Intermediate Option would provide reduced flow along Laira Bridge Road (west) but reduction on the bridge itself would be minimal. Public transport access from the east would be improved but overall the option would not be equipped to deal with major new development to the east of the Plym.

It is clear from this analysis that the issue of the long term future of the city and the level of intervention appropriate are closely associated.

Not only is the Do-Maximum Option the only option which is able to address the issue of future flows (without development in the east) but it is also the only option that is robust enough to be considered alongside development east of the Plym. These two issues, potential development to the east of the Plym and the choice of option in the gateway area are entirely inter-related and a decision cannot be made on either independent of the other.

7.4 Local Environment

The effect on the local environment of each of these options is critical to the success of the gateway area. The benefits and impacts on the community of each measure need to be thoroughly assessed. Table 8 analyses the benefits and impacts for each of the options.

The traffic measures in the Intermediate Option fail to really make any change on the traffic congestion in the area. The local environment would continue to be blighted by traffic problems.

In terms of the local urban environment it is clear that the Do-Maximum Option has the potential to create an environment which is least fragmented by roads allowing for many roads to be transformed by reduced vehicle numbers and improvements to the pedestrian environment and crossings. Areas of the local community currently cut off, one from the other, would be able to reconnect and Embankment Road (west) could become a successful local centre once more, served by public transport but not blighted by high levels of traffic.
### 07 Comparison of Options

<table>
<thead>
<tr>
<th>EFFECT</th>
<th>THE OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BENEFITS</strong></td>
<td>Do-Minimum</td>
</tr>
<tr>
<td>· Improved pedestrian crossings</td>
<td>· Improved pedestrian crossings</td>
</tr>
<tr>
<td>· Public transport priorities</td>
<td>· Public transport priorities</td>
</tr>
<tr>
<td>· New green links to the waterfront</td>
<td>· New open space network with links to waterfront</td>
</tr>
<tr>
<td>· Consolidation and rationalisation of any future retail proposals</td>
<td>· Consolidation of retail and relocation of some incompatible industrial uses</td>
</tr>
<tr>
<td></td>
<td>· Improved sense of place</td>
</tr>
<tr>
<td></td>
<td>· Lively waterfront promenade fronted by mixed-use area</td>
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<td></td>
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<tr>
<td><strong>IMPACTS</strong></td>
<td></td>
</tr>
<tr>
<td>· Continued traffic blight with traffic flows predicted to increase</td>
<td>· Continued traffic congestion</td>
</tr>
<tr>
<td>· Character of vacant and industrial land continues</td>
<td>· Continued severance of communities by east-west routes</td>
</tr>
<tr>
<td>· If development occurs in the east, traffic blight will be further aggravated to unacceptable levels</td>
<td>· All route options are problematic. Retaining routes through the East End creates congestion.</td>
</tr>
<tr>
<td></td>
<td>· If development occurs in the east, traffic blight will be further aggravated to unacceptable levels.</td>
</tr>
</tbody>
</table>

Table 8: Benefits and Impacts for the local communities
7.6 Conclusions of the Assessment

Clearly the options shown are indicative of the scale of measures required. Further investigation and development will be needed, particularly with regard to transport, before a detailed design can be developed. However with current available information and knowledge a hierarchy between the options has been established and a direction can be recommended to guide the future investigative work now required.

A summary of the assessment of each option against key criteria is given in Table 9. The table shows clearly the Do-Maximum Option is the only option which meets the objectives set out at the beginning of the study.

In terms of the visual gateway produced, the Do-Maximum Option produces by far the most impressive change. In terms of the urban environment created the Do-Maximum Option is the only option which fulfills the criteria set out at the start of the study.

The Do-Minimum Option would only achieve superficial ‘cosmetic’ improvements. By not effectively tackling traffic and the potential of the waterfront, the local communities are unlikely to see any effective change to the quality of their environment.

7.5 Development Potential and approach to key sites

The Do-Maximum Option provides the opportunity for significant new development and redevelopment to occur. The size of the development sites created will result in the emergence of new market opportunities, each of which are capable of releasing substantial latent value. This will prove attractive to the major development organisations and institutional investors who will be required to facilitate implementation.

In the absence of a highly proactive option, the operation of market forces is unlikely to bring about any significant change other than on a site by site basis. Consequently, there would not be any substantial change in the current land use patterns.

The release of major waterfront sites for development and the re-ordering of commercial uses to more appropriate locations are major attractions of the Intermediate and especially the Do-Maximum Option. This in turn would release further redevelopment options, each bringing added value to the property dynamics of the study area. Congestion problems in the Intermediate Option could affect the image and marketability of the area. The Do-Maximum Option provides the potential for the highest quality environment and stronger market.

The diversion of significant amounts of traffic to the northern route in the Do-Maximum Option brings a number of sites with especially attractive and potentially desirable waterside locations.

This study recommends that the Do-Maximum Option is further developed and investigated as it is the only option which fulfills the criteria set out at the start of the study.
<table>
<thead>
<tr>
<th>THE CRITERIA</th>
<th>How well does each option address the following issues?</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISUAL GATEWAY QUALITY</td>
<td>Provides an impressive new gateway to Plymouth?</td>
</tr>
<tr>
<td></td>
<td>Makes best use of the views from the site?</td>
</tr>
<tr>
<td>ENVIRONMENTAL QUALITY</td>
<td>Provides opportunities for high quality development?</td>
</tr>
<tr>
<td></td>
<td>Provides opportunities for a lively waterfront?</td>
</tr>
<tr>
<td></td>
<td>Provides opportunities for high quality open space and amenity?</td>
</tr>
<tr>
<td></td>
<td>Provides an improved living environment for the local communities?</td>
</tr>
<tr>
<td>TRANSPORT</td>
<td>Provides traffic improvements for the local communities?</td>
</tr>
<tr>
<td></td>
<td>Provides a successful transport solution?</td>
</tr>
<tr>
<td></td>
<td>Provides a transport solution suitable for development east of the Plym?</td>
</tr>
<tr>
<td>VULNERABILITY</td>
<td>Provides development potential?</td>
</tr>
</tbody>
</table>

Table 9: Comparison of the options on key issues
8 Development Phasing

8.1 Key Elements of the Preferred Option

This chapter takes a closer look at the Do-Maximum development concept although this is still at an indicative stage and will require further investigations. Figures 8.1, 8.2 and 8.3 show the key component elements of the Do-Maximum Option: The indicative landscape, transport and land-use strategies reflecting the key concerns that arose.

The indicative land-use strategy shows in broad terms how uses within the area can best be distributed. This is a broad indication only and shows predominant land uses in certain areas. These are not land-use zones; a certain amount of use mix should be achieved especially in areas where office or residential use predominates and particularly in the areas around the new bridge junction, along the waterfront and in the areas immediately south of the existing communities.

Sites along the main routes into the city would represent key opportunities for mixed-use development with an emphasis on business with some potential for residential. Active ground floors would be encouraged. Sites along the estuary, between the bridges would provide excellent opportunities for residential development with leisure uses also incorporated.

It is considered that relocated retail areas could be placed in the area on either side of Laira Bridge Road which would have good access from Embankment Road. The detailed design of these sites and the potential for mix of use on their periphery (in order to present a strong elevation and frontage to the road) should be explored.
8 Development Phasing

Figure 8.2: Indicative landscape strategy

- Green open space ‘fingers’
- Pedestrian ‘promenade’ routes
- Locations on promenade routes
- Prestigious city centre route

Not to scale
Predominance of business on main route into city centre with potential for residential and associated mix of use (retail, leisure)

Opportunities for business uses along route into city centre. Potential for public/community uses and some residential near park

Mixed use area with a predominance of business along the main entry routes

Residential along the waterfront with associated mix of use

Consolidated and relocated retail/existing statutory undertaker plants. Perimeter residential wherever possible

Mixed-use with predominance of residential integrated into existing residential areas

Figure 8.3: Indicative land use strategy
Areas to the south of the existing residential areas are best suited to mixed use development with residential to knit into the existing residential community and provide further facilities for it. This will also provide a mixed use and lively link to the river. Existing and relocated port or industrial uses are retained in the south-western part of the area, closest to the existing port alongside new business development.

A relocation strategy and in some cases site acquisition will be an important part of achieving the vision both in terms of locating uses in appropriate locations and also in terms of regenerating key sites in strategic locations. It is clear, especially with regard to key sites on the main route, that although acquisition procedure will vary according to the intended use of the site, procedures will need to be put in place to coincide with the overall phasing of the key elements. Phasing of the development is discussed in broad indicative terms below.

8.2 Phasing

Delivering this vision will be a long term project which will need significant inputs, funds, organisation and commitment before projects are implemented. Aspects of these organisational steps which need to be taken next are included in Chapter 9.

Figure 8.4, 8.5 and 8.6 show an indicative phasing strategy for the implementation of the main elements of the work. This is combined with development occurring around the main infrastructure although this particular element will clearly depend on individual developers.

The strategy aims to ensure that infrastructure projects allow for continued movement through the gateway for those living to the east of the Plym and in the new developments and for them to be in place in time to avoid any aggravation of traffic problems for the local communities.

If development is to take place in the east, the development phasing will need to be coordinated as far as is feasible to reflect the anticipated progression of these developments. Since much of this development and its timescale is yet to be decided upon, the phasing strategy will need to be refined accordingly.

However development is already foreseen at Plymstock Quarry and the alleviation of its impact on the approaches to Plymouth and the route through the East End will require particular attention, especially if development is in place before the construction of the new bridge.
In broad terms putting in place the key infrastructure elements which form the route into the city and removing traffic from the local communities is a priority and the first objective. The second is to provide a public realm setting which provides a coherent and attractive gateway approach and increased development potential.

The following phasing places the bridge construction ahead of the boulevard. However it is essential that the bridge and boulevard are considered together and ideally these would be constructed as simultaneously as possible. Allowing any significant time lapse between the projects would be problematic. It would also be essential to test phasing in traffic terms and adjust it accordingly to ensure that pressure on the East End is managed during transitional periods.

8.2.1 Phase 1: The Bridge

The phasing takes the radical but appropriate approach of beginning with the construction of the new bridge and its link to Pomphlett Roundabout.

The greatest asset of the Do-Maximum Option in traffic terms is that it would remove the existing and potential congestion point away from the East End area it currently runs through. The construction of the bridge allows for increased traffic flows across the river. The bridge at this stage would feed into the existing road network. A competition for the design of the bridge would need to be organised well in advance. The alignment of the route to Pomphlett Roundabout would also require negotiations at the earliest opportunity with landowners.

An assessment of the relative traffic flows would determine whether and to what extent, public transport priority measures could be introduced at this stage on Laira Bridge.

Development at Plymstock Quarry is likely to proceed in the near future and followed by further development. Measures will need to be put in place to manage interim traffic problems. The early construction of the bridge is therefore essential. Testing would be important to measure any possible impact on the local communities.

Above all, the construction of the new bridge shows a commitment to future change. The choice of a well-designed and impressive structure would already begin to alter the perception both of the local area and of the city and increase developer interest in the area.

Relocations made early on would also set the scene for development within the area. A relocation strategy and consultations with owner and tenants would, in any case need to be developed at the earliest opportunity, to ensure that the interests of the various stakeholders are fully understood and addressed.

In summary the elements of Phase 1 are:

- The new bridge;
- Relocation strategy and phased relocations;
- Public transport priority incrementally applied to Laira Bridge.

The waterfront promenade is also completed in this phase from Marsh Mills to Cattedown, setting the scene for future development and bringing better access to the river for local people and for the city as a whole.
08 Development Phasing

Figure 8.4: Indicative phasing strategy: Phase 1

Figure 8.5: Indicative phasing strategy: Phase 2

Figure 8.6: Indicative phasing strategy: Phase 3

- Landmark bridge
- HGVs removed from residential areas
- Existing Laira bridge devoted to public transport
- Freight railway rerouted
- Boulevard & associated development, Tothill Park implementation
- Green bridge and Northern green link
- Waterfront promenade and Boulevard treatment to Embankment Road

Development Phasing Not to scale
8.2.2 Phase 2: The boulevard approach to the city

It would be unacceptable to allow congestion to increase further in the local community of the gateway area. Therefore, the boulevard route from the bridge to the city centre (and therefore the major infrastructure elements of the scheme) must be in place as soon as possible after, if not simultaneously to the bridge. A precursor to the construction of the boulevard is the re-routing of the rail link to the port. Development associated with the boulevard can take place concurrently but the route would also define future development opportunities within a strong new public realm. The character and form of the boulevard is examined in more detail later in this section. A new access road would also be constructed to link Marsh Mills to the port and relieve Heles Terrace.

Public transport routes would flow more freely down Embankment Road (west) and would no longer be congested with unacceptable levels of through-traffic.

Major public realm improvements are a key component of phase 2. The boulevard would provide a pedestrian tree-lined approach and this treatment would be extended to Embankment Road where it passes along the estuary to provide a smooth tree-lined boulevard approach from Marsh Mills to Exeter Street.

The improved Tothill Park would be an important gateway element, especially ahead of development occurring along the route. These public realm foundations would lay the ground for future increased development interest. The redesign of Tothill Park should be of extremely high quality. A high profile landscape competition would be appropriate to raise the profile of the park and the gateway approach.

In summary the elements of phase 2 are:

- Re-routing of freight railway;
- The Friary Boulevard and associated development;
- Boulevard treatment to Embankment Road (along the Estuary);
- Port access road;
- Laira Bridge becomes a sustainable movement route. Through HGV movement prevented in Embankment Road (west);
- The waterfront promenade;
- Tothill Park improvements.

Given the important relationship of the new boulevard and the park, this competition would need to be held prior to the detailed road design. It will be important to establish a design team to work simultaneously on the design of the boulevard and its relationship to the park at an early design stage for an inventive, elegant and coherent solution. This is examined in more detail later in this section.
8.2.3 Phase 3: Completing the Urban Quarter

Embankment Road local centre would be freed of through traffic as a result of Phase 2. Local improvements to Embankment Road could now be made to create an attractive local centre and better connections. Changes could also be made to Gdynia Way (see page 42 for options). The green bridge and the improvement of the green link through Mount Gould would also be completed in this long-term phase.

In summary elements of phase 3 are:

- Local improvements to Embankment Road (west);
- Changes to Gdynia Way;
- Green bridge and northern green link;
- Other environmental improvements in the existing redevelopment area, now relieved of through traffic.
8.3 The Boulevard

The Boulevard is a key component of the project. Like all other elements of the scheme, it would require considerable investigation and further study to adjust alignments, fully understand levels and fully test its feasibility in engineering and traffic terms. It is also essential that the route has the full backing of the community and that it is carried out in a manner which is sensitive to immediately adjacent properties.

It is of critical importance that the boulevard is designed as a landscape artefact of the highest quality; not just a product of highway engineering. It is nonetheless worth examining the route more closely and putting forward principles for its treatment.

The route of the boulevard changes considerably along its length and encounters different problems. At the eastern end, a satisfactory relationship must be established with Tothill Park, to allow the park to become part of a spectacular gateway. At its narrowest point near Eric Road, the issues to be resolved are related to the proximity of adjacent housing and small employment units. At the western end the railway cutting broadens but there are issues of how to integrate the boulevard with the existing street network, and how to terminate the route at Exeter Street. Clearly here there will also be site acquisition matters to be dealt with regard to existing retail uses to the west of Tothill Road bridge.

View of Area A: The existing area where the boulevard would run alongside the park.

View of Area B: The route of the boulevard at its narrowest point.

View of Area C: The wide existing cutting at the western end of the route.

View of Area D: The area where the new route would meet Exeter Street.
Tothill Park could become a high quality linear park along the main route into Plymouth. The relationship with the boulevard needs careful attention but has the potential to provide a stunning landscaped approach to the city.

The design of the bridge will require considerable attention not only in terms of its quality as a landmark but also with regard to the manner in which it links into the existing and proposed street network. The level of the bridge carriageway will need careful consideration and further investigations. A bridge that comes into the area at a high level, for instance, would present greater challenges for integrating the boulevard into its surroundings. The design of the bridge must address and balance the urban design requirements of the area with engineering requirements for the river crossing.

Initial urban design principles are set out below regarding the successful integration of the boulevard and its surroundings.

The boulevard runs along the south side of the park, along the line of the Friary freight railway. The boulevard itself is seen as a tree-lined avenue which is pedestrian friendly with regular crossings. The street-level must be pedestrian friendly and this will require attention to the relationship between the park and the road along its length, especially if the street is above the level of the park. Crossings may, if well designed, be below the road in places, if levels require this, but even if the street is higher than the park, crossings should not be exclusively below the road.

Where the boulevard is higher than the existing park level (as it is likely to be at the eastern end of the park) the interface between these levels must be carefully and successfully landscaped and integrated. This may mean successfully handling the level change or even raising the level of part of the park to meet the road.
Where the level is more in line with the level of the park there are clearly further opportunities for broad crossings to new potential development opportunities on its southern side (these would require relocation of existing industrial units). These developments would be in an important location. There are possibilities to give these developments good connections to the park and to the local communities. Furthermore the area has the potential for public or community uses as part of these locations which would bring activity to the boulevard and create further gateway landmarks.

There is an opportunity to rethink the park itself and create a landscaped public open space in keeping with its gateway position.

8.3.2 Area B: At the narrowest point:
At the narrowest point the road passes between and very close to St Jude’s residential area (Knighton Road) and the East End to the south. The buildings at this narrow point to the south on Desborough Lane are mostly small employment units, but there are also residential streets in close proximity in the eastern side of Desborough Road. It is proposed that at this point pedestrian and vehicular use is separated for a short length and that the road is bridged. There is the possibility for a high quality green link and/or development over the road providing a high quality route. Because the existing terraces back onto the space at present it will be important to provide development which ensures the new route which is overlooked by quality frontage.

Further investigations will clearly be needed to test the concept’s structural feasibility and especially to ensure that a solution is workable and appropriate to the surroundings. The removal of the work units to the south of the existing railway may be necessary to achieve this. A further possibility may involve their removal and relocation in order to avoid the need for a covered section of road and to create an open and active boulevard along the full length of the route.
8.3.3 Area C: At the western end:
At the western end the railway cutting widens considerably allowing once more for a tree-lined boulevard with development fronting it on both sides. The level of the cutting will need to be lowered if the existing Tothil Road bridge is to be retained. Development will need to address the level changes to ensure the creation of successful streetscape both along the existing higher-level streets and along the new boulevard. A thorough public realm strategy would need to be in place to ensure that the environment is a pleasant pedestrian friendly environment. Active uses (leisure, small scale retail, food and beverage outlets etc) on the ground floor should be encouraged. There is likely to be a majority of commercial uses along this busy avenue but there is potential for a mix of residential and other uses. In the areas where the cutting is widest, considerable areas of land become available for development. The quality of these gateway developments will be very important.

8.3.4 Area D: Junction with Exeter Street.
The relocation of at least one commercial unit on Exeter Street (in Friary Retail Park) as the new boulevard joins Exeter Street is required. This arrival point in the city centre is close to Sutton Harbour and there is considerable potential to create an impressive central arrival point at this location. The setting of St. John’s Church could be greatly improved by this. There would be considerable potential for an impressive gateway point, and new landmark buildings to mark the entry into the City Centre.

It is also the place where the main public transport routes and the main vehicular route into the City Centre come together.
9 Conclusions and Recommendations

9.1 Review of Main findings

We asked the question: ‘What level of intervention is necessary to provide an improved gateway, solutions to transport problems and a better living environment in the Plymouth Eastern Gateway area?’

It is apparent that due to growing pressure on the area a Do-Nothing or a Do-Minimum approach is not an appropriate response. Plymouth’s current congestion levels may not appear to be as severe as some other locations in the UK but there is little doubt that the impact of road traffic on daily life in the Gateway Area is significant. Without proactive action, the pressures can only worsen as traffic continues to increase. As the traffic pressures increase, congestion within the Gateway will worsen and the area affected will expand.

Transport issues are directly associated with the quality of the local environment and also have an effect on the wider environment which develops around it; the waterside area is dominated by under-utilised land, which appeals only to uses which prioritise high accessibility and need only low environmental conditions. Unless transport issues are satisfactorily addressed, there will be no significant improvement in the local environment.

The Paramics model testing has demonstrated that re-configuration of the road network accompanied by a combination of new infrastructure and public transport priorities can achieve a comparable level of service to the current situation. In terms of road infrastructure this would not therefore necessarily mean more capacity but would involve replacing some existing roads with new roads on a different alignment as indicated in the Do-Maximum Option. To date, this preferred option, involves closing off Embankment Road (west) and Gdynia Way to private through traffic, re-routing the freight rail line to the Port so that the section to Friary Station is removed, creating a new road into the city along the former rail line to Friary Park and building a new bridge to link with the new route across the Plym to the north of the existing bridge. The proposal is geared towards increasing public transport access to and from the city centre and achieves this by creating additional capacity for this mode in Embankment Road (west) and Laira Bridge.

Although the Intermediate Option produced development opportunities, its predicted inability to address congestion in the area, effectively means that the most major problem for the area has not been addressed. The Do-Maximum Option is the only option which can improve conditions within the study area whilst also creating an improved gateway for the city.

Alongside these proposals it also became clear that the vision for the gateway must be carried forward within a broader city-wide framework and that decisions regarding development east of the city are directly interrelated with the need to pursue a Do-Maximum approach.

Over and above predicted traffic increase, the planned eastern developments in the wider Plymouth Travel to Work Area will generate further additional demand for movement in the corridors within and through the Gateway area. Whilst wider policy initiatives will seek to encourage switches to public transport and reduce car dependency (accompanied by more responsible use), only the extreme optimist would suggest that traffic volumes will not increase irrespective of the level of success on these other fronts.

The study demonstrates that any initiatives towards development east of the Plym are intrinsically linked to decisions about the Gateway. Current work shows that...
only a highly proactive Do-Maximum approach can be realistically considered if development east of the Plym is to take place. Decisions regarding these two city initiatives must also be taken with an awareness of their interdependence.

The study asked 'Which level of intervention is required for real change in the gateway area?'. The underlying question is whether the various demands from beyond the area can be accommodated whilst, at the same time, improving the quality of life for those who work, live and play in the Gateway area.

9.2 Main recommendations

The study outputs are suggesting, in transport, urban design and market appraisal terms that a step-change in quality of life and in the quality of the gateway for those arriving in Plymouth can only be achieved with a significant re-modelling of the urban design structure.

A highly proactive Do-Maximum approach is required and should be investigated further. From our investigations during this study no lesser level of intervention succeeded adequately enough to be considered as an ultimate goal.

The key recommendations of the study are that:

- There is only one reasonable way ahead which meets all the study objectives and which is both practical and in keeping with the status of the city. This is the Do-Maximum approach and should be investigated further;
- Moving towards the implementation of the scheme as fast and efficiently as possible is essential otherwise its realisation may become compromised to the point of impracticability.

If the Preferred Option is to be achieved, an enormous investment of time, energy, organisation and funds will be required. How this can be achieved and a series of urgent next steps are set out below to guide the process forward.

9.3 Implementation and the next steps

9.3.1 The Overall Task

The conceptual framework for the Eastern Gateway presents a major implementation challenge; it is big, complex, expensive and will take several years to realise. Aspects will be contentious. The reshaping of the developer blocks, transport infrastructure and existing land uses together with improvements in the existing communities involve for example:

- Many property, development and community interests in and around the area;
- Existing and potential planning applications;
- The potential to serve the major proposed developments to the east of the Plym, and
- Integrated design, development and phasing of road, rail and development projects.

It can be judged that the challenge is too demanding to be realisable through the planning system and normal public sector funding mechanisms. In addition, there is potential value capture both within the study area and externally particularly from the major proposed schemes to the east of the estuary.

9.3.2 Funding, Costs and Values

The essence of the task is to create a bankable project where the cost streams essential for the project works are offset over time against the funding sources. The funding sources to be explored should include for example:
Contributions from developments within the area;
- Contributions from developments benefiting from the new infrastructure which lie outside the area, particularly to the east;
- Transportation (road, rail and public transport) grants and support;
- Environmental Improvements Grants /Support of one sort or another;
- Central Government support through such bodies as SWERDA and English Partnerships, and perhaps institutional investment (eg The English Cities Fund).

The cost streams needing forecasts include civil engineering works for road, bridge, rail, public transport and other infrastructure, land acquisition, relocations, environmental improvements etc.

In addition, development planning work is required in order to decide how to maximise development value (and thus capture) to support the overall venture.

Thus a detailed appraisal is now required. It is essential that this is both a financial and economic appraisal. The wider economic benefits will be important to securing governmental support.

### 9.3.3 A Delivery Mechanism

There are a series of models of implementation agencies; Urban Regeneration Companies (URC’s), Urban Development Companies (UDC’s); Public/Private Sector Joint Venture Companies; Private Sector-led ventures with public sector support; development trusts and so on. There are also many variations within these typologies and potential hybrids. In addition, issues such as the use of PFI arise. Deciding upon the appropriate package of mechanisms is a demanding task beyond the resources and time scale of this study. A great deal of analytical work and discussions with stakeholders is required including the evaluation of alternative models.

Our initial view veers towards the URC model (given the complexity and scale of the venture) with development agreements with the other key partners and stakeholders. Discussions at a City and County Council level, with the major landowners/developers involved and with SWERDA/EP are now required to establish an approach to determining the delivery mechanisms.

### 9.3.4 The Next Steps

There is a need for interim arrangements to:

- Handle development control particularly with regard to key sites which are of critical importance to the overall strategy. In particular this affects the former Blagdons Boatyard site, Heywoods Pavings, Kent Holdings land near Laira Bridge, the former Western National bus depot, Morley Properties land, London and West Country Estates land in the Faraday Mill area and the Friary Retail Park on Exeter Street. An interim planning policy statement will be required to ensure that decisions made in the short term on the future of these sites is consistent with the overall long term strategy for the area.

- Progress the project in undertaking the necessary enabling studies and consultations now required.

It is advised that a ‘Joint Development Team’ of a planner, urban designer, a surveyor and a transportation engineer is established for the interim period (probably the next 2 years). This team should:

i. Prepare a development framework plan for the area, working up the current concept in detail;

ii. Produce urban design and development control
guidance for use in development control and adoption as SPG;

ii Conduct the delivery, cost, funding, values, engineering and other studies required to move the project along and establish a delivery capability;

iv Plan and manage an ongoing consultation process and programme with the public at large and all the public and private sector stakeholders involved;

v Plan and consult with regard to relocations and site acquisitions. In particular, this is essential with regard to the strategic sites around the Laira Bridge area;

vi Coordinate with the Sutton Harbour East proposals, the adopted East End Regeneration Strategy Master Plan and other city-wide initiatives, especially the emerging retail and transport strategies.

9.3.5 The Quality Imperative

The eastern approaches to Plymouth alongside and across the Plym estuary are intrinsically attractive with great views over water, coast, landscape and urban form. However, these views are not celebrated by the design quality of the infrastructure and the qualitative sense of arrival is lost once the routes force their way into the housing and industrial areas between the estuary and city centre/ Sutton Harbour.

The new concept can and should be highly celebratory; a better roadside landscape and more accessible shore alongside the estuary; a splendid new bridge (Wilkinson Eyre/ Calatrava perhaps); a well designed new 'gateway' and waterside developments; a new urban boulevard lined by quality landscape and development linking to the city centre; and a new urban block structure re-establishing links from existing communities to the shore and healing the impacts imposed by roads and traffic at present.

There should be a 'Quality Design Imperative' in all this. The opportunity is there for a splendid gateway to the city; and one that helps address important improvement and development objectives. Although this is mentioned earlier, in design terms it bears repeating that the next steps are the parallel production of a development framework plan and of accompanying design guidance to establish the qualitative objectives.