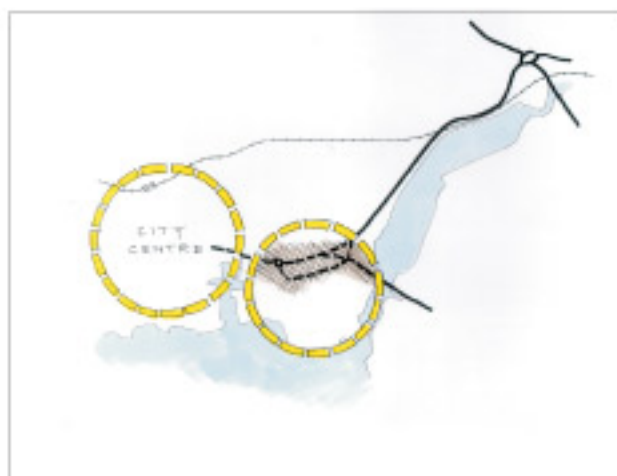


## Executive Summary

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The Do-Minimum Option



The Intermediate Option



The Do-Maximum Option

Figure i: 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 Laira Bridge. The Do-Maximum Option provides a smooth route away from local communities.

## 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 backdrop, 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;
- Gydnia Way widened and two way; Embankment Road (west) for public transport and local access;
- Southern By-Pass added and Gydnia 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 Gydnia 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 1	Test 2	Test 3a	Test 3b	Test 4	Test 5	Test 6	Test 7	Test 8
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						●	●		
Gydnia 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 Pomphlett Roundabout to Embankment Road									●
Through traffic barred from Gdynia Way									●

Figure ii: Paramics Transport Modelling Tests undertaken

test showed positive results with regard to the long term transport issues in the Gateway area. In both alleviation of adverse impact on existing communities and in catering for the demands for movement, the Do-Maximum Option offered the only truly positive overall transport planning approach. Everything else only performed as well or worse than the current situation.

Given the potential traffic pressure on the Gateway and the effect of transport measures on the local environment, the benefits created by transport solutions are a key criteria in the assessment of the development concept options.

It is important to note that the boulevard (or northern by-pass) and bridge in the Do-Maximum Option release routes for dedicated public transport through the area. This is of strategic importance in relation to the major developments projects east of the Plym.

The preferred development proposal also provides opportunities for road pricing and congestion charging. These should be considered along with other demand management measures that the City Council may wish to consider as a city-wide policy. However this report does not include the impact, implications or mitigations that may arise out of any future city wide demand management policy that may be appropriate or be introduced into the city. Nor does it examine the details of any such measures.

## 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 local environment, an effective transport infrastructure, is supportive to the major proposed developments to the east of the estuary and which provides an attractive and visually dramatic entrance to the city.

However, it will not be easy. Many landownerships, 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.

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.

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