



Title: **Torbay Highway Network Capacity and Western Corridor Improvements**

Wards Affected: **All Wards**

To: **Transport Working Party** On: **21 June 2012**

Contact Officer: **Patrick Carney**

☎ Telephone: **207710**

✉ E.mail: **Patrick.Carney@torbay.gov.uk**

1. Key points and Summary

- 1.1 As a result of the South Devon Link Road now becoming a reality, Torbay needs to ensure that its network has the capacity to support the economic growth it will bring. Investment is required in order to improve certain areas of the network, which are either showing signs of regular congestion or will suffer congestion in the near future. However, the Council needs to continue to support sustainable travel to add capacity to the network.

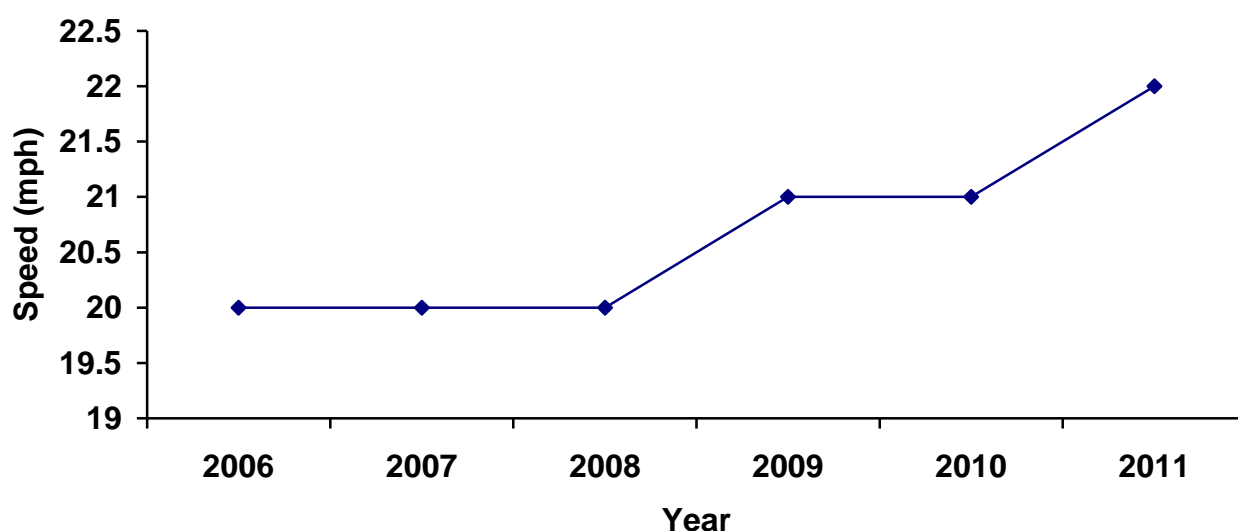
2. Introduction

- 2.1 Torbay Council and Devon County Council have, after many years of lobbying, now been successful in attracting funding for the South Devon Link Road. The outcome will be improved access to Torbay and reduced journey times. However, Torbay's road network must be able to distribute the vehicles efficiently around the network as they arrive more quickly to the Bay.
- 2.2 In assessing how the network will cope the first question must be how is the network operating at present. When assessing the network's capacity the level of congestion must be considered, however there is no detailed definition of congestion. Most people would consider this to be unacceptable journey times, although the Highway Agency prefer to consider journey time predictability i.e. if it takes 30 minutes to travel 5 miles everyday this is better than if it takes 10 minutes one day and 20 minutes the next. Also, what is acceptable journey times, an average speed of 20mph would be acceptable in Bristol or London but may not be acceptable in Torbay. This report mainly considers areas of the network where modelling shows the capacity of junctions to be at saturation during peak times of the day.

3.0 The Current Network

- 3.1 Figure 1 shows the average journey time around the Torbay Strategic Network over the past six years.

Figure 1 – Average Journey Time Around the Bay



The results show an average speed of approximately 22mph with a slight increase over the past 6 years. For an urban network this would be considered an acceptable average speed in many parts of the country. For a short period the Government collected data on average speeds at peak times and compared this on an annual basis. Torbay Council's result for NI167 was an average speed of 22 mph during the peak hours. Table 1 outlines how this compares with some other highway authorities.

Table 1 - Average time to complete 1 mile during peak hours

Authority	Time (mins)	Average speed (mph)
Torbay	2.70	22.2
Bristol	3.44	17.4
Bournemouth	2.84	21.1
Blackpool	3.20	18.75

- 3.2 The table demonstrates that Torbay compares fairly well against other authorities. However, the most recent national customer satisfaction survey on Transport showed that Torbay had one of the lowest satisfaction rates on congestion in the country. Therefore it can be concluded that whilst journey times compare well with other authorities, these do not appear to be acceptable to Torbay residents.
- 3.3 Finally Appendix 1 shows the average speeds around the strategic network broken down into sections. The red areas show the slowest parts of the network where speeds are less than 10mph. These may be areas where future improvements are required.

Appendix 1a – Average Journey Time around the Bay November 2011

Appendix 1b – Average Journey Time around the Bay Three Year Average

4.0 Future Network Capacity

4.1 In order to assess the future capacity of the network the following studies have been considered:-

- The Torbay Saturn Model, this was a course traffic model of the whole Torbay network which considered junction capacities for 2011.
- The Western Corridor Study, this was a model which looked at the effects of development around the Western Corridor (A380 ring road) for the year 2026 and included the South Devon Link Road.
- The Development Strategy Report, this review carried out by Atkins looked in more detail at Torquay and Paignton Town Centre areas for the year 2026.

From the reports the following areas of concerns were identified:-

1) The Western Corridor

Two of the reports identified that the Western Corridor from Windy Corner to Churscombe Cross would have a number of junctions at capacity over the next few years. The main junctions were Windy Corner, Yalberton Road, Long Road, Borough Road, Tweenaway, and Great Parks. However, it was shown that with improvements 10,000 additional houses could be accommodated with acceptable levels of congestion. Improvements have been delivered to Tweenaway Cross, Long Road and Borough Road but further improvements are required to the remaining junctions. These include Windy Corner, an additional lane in both directions from Long Road to Borough Road, a new junction at Great Parks and an additional lane travelling north from Great Parks to Churscombe Cross.

It is proposed that this will be mostly funded from developer contributions as the area is developed. Members are asked to approve the improvements planned for the Western Corridor.

Should growth exceed the 10,000 houses Torbay would need to consider additional infrastructure. This could potentially be a new ring road from Churscombe Cross to the east of Collaton St Mary and rejoining the existing network at Hookhills.

2) Scotts Bridge

As the Edginswell Business Park develops queues will extend on the Newton Road as people try to access Riviera Way. Due to the railway bridge the options to improve capacity are difficult but as planning applications are considered the Council has to be aware of the pressures on this junction. The possibility of a new train station at Edginswell may, however, reduce the number of car journeys to the Business Park, Hospital and The Willows.

3) Shiphay Lane Junction

Two of the studies showed this junction will be over capacity within the next few years. Further studies have been carried out to see if a change in signal timings can improve capacity. There are limited options for physically widening, but an alteration to the sequencing will improve the efficiency of the junction. This is expected to be delivered in 2012/13.

- 4) Abbey Gates
Two of the studies showed this junction will be over capacity within the next few years. A detailed study is required in the future.
- 5) Tor Hill Road/Abbey Road
Two of the studies showed this junction will be over capacity within the next few years. A detailed study is required in the future.
- 6) Penwill Way Junction (Clennon Valley)
All three reports showed this as an area of concern. A detailed study is being carried out at this time to review the signal timings. The affect of development in this area needs to be considered alongside the potential to improve the junction.
- 7) Whitstone Road/Dartmouth Road Junction
Improvements are being considered for this junction as part of the Local Transport Plan Capital Programme.
- 8) Hyde Road/Torquay Road Junction
Two of the studies showed this junction will be over capacity within the new few years. A detailed study is required in the future.

Please note all of these studies tend to concentrate on the strategic road network. Other minor junctions may have queues at peak times or will be affected by new developments and are normally considered as part of the planning process.

5.0 Network Vulnerability

- 5.1 Travelling North to South Torbay only has two main roads which means that when operating normally travel times are acceptable but the network is very vulnerable. In the event of storms or unforeseen events and the closure of one of these routes, the network can become congested quite quickly.
- 5.2 Roadworks have to be co-ordinated carefully and investment is required in an intelligent transport system that give real time information to drivers so that alternative routes can be considered earlier in the journey. Also, better information can ensure that additional travel time can be allowed for during these events.
- 5.3 The introduction of the fast ferry could also provide a valuable alternative to the road network reducing the vulnerability of the Torbay Network.

6.0 Modal Shift

- 6.1 Whilst this report considers the physical nature of the highway network this cannot be evaluated in isolation to modal shift and the capacity of the public transport network. The Local Transport Plan 2011-2026 outlines the importance of modal shift making it a priority for transport schemes and funding. All of the studies identified that modal shift can be a very effective method of adding capacity to a network without physical improvements. For example one study

showed a 20% reduction in vehicles could deliver a 25% reduction in queue lengths on a junction.

6.2 In order to deliver the growth required and the improvements to the network, the Council needs to continue to support modal shift from cars to public transport or other means such as walking or cycling. This does not mean the introduction of “anti car” measures but the provision of travel choice. All successful local economies have a successful public transport network. Therefore it is important to support the following:-

- Good public transport links to town centres and employment areas.
- High quality cycle links between towns and to employment areas.
- Promotion of walking and cycling for short journeys.
- Improved train links to Exeter and beyond.
- The introduction of a station at Edginswell.
- Reduction in vehicle tips generated by the “school run”.
- A fast ferry link to Brixham.
- Possible park and ride facilities.

7.0 Conclusion

7.1 Data shows that travel times in Torbay compare well with other areas although this is not supported by public opinion. However as the SDLR becomes operational and if growth develops as planned, some parts of the network will suffer further congestions.

7.2 Congestions along the Western Corridor will increase and this in turn pushes vehicles into Paignton Town Centre and the Coast Route as drivers consider alternative routes. Funding through developments or the Community Infrastructure levy needs to be found to fund these improvements currently estimated at £6.0 million.

7.3 The other area of concern is the route into Torquay via Shiphay Lane, Torre Station and to the sea front via Abbey Gates. No specific developer funding has been identified for this route and as the Local Transport Plan funding has been reduced by 33% to fund other local priorities, the funding for such improvements will be limited.

7.4 Finally the effects and benefits of modal shift should not be underestimated as a cost effective way of providing capacity to a network.

Patrick Carney
Group Service Manager – Streetscene and Place

Appendices

Appendix 1a – Average Journey Time around the Bay November 2011

Appendix 1b – Average Journey Time around the Bay Three Year Average

Appendix 2 – Western Corridor Improvements

Documents available in members' rooms

None

Background Papers:

The following documents/files were used to compile this report:

Local Transport Plan 2 2006 – 2011

Local Transport Plan 3 2011 – 2026

Development Strategy Report