

Totnes Transport Strategy

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1.1 Introduction

- 1.1.1 Jacobs was commissioned by Devon County Council (DCC) to prepare an A385 Corridor Transport Strategy. Following review of the traffic conditions and the evidence base for transport in Totnes (described in **Appendix A**), it was decided to expand the transport strategy to describe the whole of Totnes rather than only the A385 Corridor.
- 1.1.2 Totnes has been considered to be the fourth most congested town in Devon. In the context of the existing traffic congestion and the planned developments in and around the town, a strategy for accommodating existing and new trips was required.

1.2 Planning Context

- 1.2.1 There are a number of planning documents that set out the planning context for the Totnes Transport Strategy. The Devon and Torbay Local Transport Plan (LTP3) sets out a vision for a transport system which will help to deliver a low carbon future, a successful economy and a prosperous, healthy population living in an attractive environment.
- 1.2.2 The associated strategy sets out how to achieve Devon and Torbay's vision and has five key objectives:
- deliver and support new development and economic growth,
 - protect the existing transport network by making the best use of the transport asset and prioritising maintenance,
 - work with communities to provide safe, sustainable and low carbon transport choices,
 - strengthen and improve the public transport network,
 - become the 'place to be naturally active'.
- 1.2.3 The Local Sustainable Transport Fund (LSTF) is a central government fund to which local authorities may apply for budgets to deliver transport-related improvements which meet specific objectives. Devon County Council (DCC) successfully bid for funding with a project titled "Breaking the link between economic growth, carbon and congestion".
- 1.2.4 The LSTF project had two objectives – encouraging economic growth whilst reducing carbon. The project was centred on four packages:
- P1: reducing the need to travel
 - P2: inform and support commuters
 - P3: extending choice and removing barriers
 - P4: managing the network effectively
- 1.2.5 Totnes has been chosen as an LSTF town due to planned growth (in terms of development), its status as one of Devon's most successful market towns, and identified existing congestion. As a result DCC is aiming to implement the packages, in conjunction with contributions from the developments, to aid

in managing the network so that effectively the impact of development is minimised. The LSTF programme has led to the formation of the Totnes on the Move community group to help shape proposals in the town.

1.3 Guiding Principles

1.3.1 In drawing together the objectives from the LTP3 and LSTF programme, the following guiding principles have been set out for the Totnes Transport Strategy in order to deliver the proposed growth in the Local Development Framework:

- 1) People Place First:
 - People are to be connected to key land uses by walking/cycling links
 - The network is to be safe, legible and consistent
- 2) Managing Traffic:
 - The road network is to function but must share the space with people
 - The available capacity in the network is to be maximised
- 3) Ensuring that alternative modes for travel are available for all journeys:
 - There are to be no barriers to sustainable travel for journeys within, into, out of and through Totnes.

2.1 Types of Trips in Totnes

- 2.1.1 An overview of transport conditions in Totnes requires exploration of the different types of trips into and through the town, the quality and availability of other modes and consideration of the impact of new developments on the network.
- 2.1.2 The existing transport networks in Totnes are described in detail in **Appendix B**.
- 2.1.3 Current trips on the Totnes network include the following:
- Through Trips – these represent approximately 70% of the trips on the A385 (Station Road) during peak periods, and are associated with trips between diverse origins and destinations in South Hams, Torbay and beyond. This represents observed and latent demand which cannot be diverted to other modes or other routes (with the exception of a bypass).
 - A bypass option was considered for inclusion in the strategy but has been excluded on the basis of a very high cost of implementation, as well as the significant environmental impact which would result from it. Furthermore the multiple entry points into the town result would require dual bypasses to effectively remove all the through-traffic out of Totnes.
 - Trips to/from Totnes (including surrounding villages) – survey data indicates that up to 89% of commuter trips into/out of Totnes are made by private car.
 - Internal trips – 2001 Census survey data indicates that 34% of journeys to work (starting and ending within Totnes) are made by car. By contrast 37% of such journeys are made by walking and 22% are not made as this proportion works from home. Furthermore the following issues have been identified by the local community as deterrents to pedestrian and cycle movements:
 - Pedestrian and cycle routes are not continuous;
 - The A385 forms a barrier between the north and south of the town;
 - Air quality is negatively affected by emissions from congestion on the A385 corridor.
 - More detailed descriptions of traffic conditions in the town are included in **Appendix C**.
- 2.1.4 DCC have identified the need to introduce preventative measures to reduce the number of personal injury collisions along the Fore Street and the High Street. Following a consultation on different options for experimental schemes, DCC now intend to introduce an experimental reversal of traffic flow on Station Road and Lower Fore Street.

2.2 Quality and Availability of Alternatives

2.2.1 An analysis of the quality of alternative options has been undertaken to establish what improvements may be required in the strategy to address the future needs of the area. The factors influencing people's decision whether to walk, cycle or use public transport have been captured as part of the evidence base referenced in **Appendix A**.

2.2.2 The existing bus, walking and cycling networks are included in **Appendix B**.

Rail Transport

2.2.3 Totnes is fortunate to have a railway station served by long distance services, providing connections to Bristol and London as well as Plymouth and Exeter. However, the service is variable with limited regular local stopping services provided, which results in gaps in the timetable at certain times of the day to destinations such as Plymouth or Newton Abbot.

Bus Transport

2.2.4 The bus network in Totnes consists of the convergence of routes. Bus services are provided along key corridors such as the A385. Services are generally hourly (although where routes converge a half-hourly service is provided). There are limited bus routes serving the town itself, supplemented by community transport services that run a limited number of routes and services per day.

2.2.5 There is a need for improved signing and information to guide visiting rail users to the bus services that don't access the station forecourt but provide links to the hinterland and beyond.

Walking

2.2.6 The current walking network consists of a combination of informal routes. There are a small number of dedicated routes, established away from trafficked roads around Borough Park (pedestrian crossings on main roads closely match these routes). The signing to guide unfamiliar pedestrians to these routes requires improvement, and linkages to Bridgetown on the east of the town could be improved.

Cycling

2.2.7 The level of cycling in Totnes has increased by 14% between 2005 and 2010. However, there are still a limited number of routes, with only one "red-carpet route". This route mirrors the A385 linking key nodes, and with improved signing and links could provide an opportunity for a sustainable corridor between Bridgetown, the lower part of the town centre and the rail station.

2.3 The Impact of New Developments on Transport

2.3.1 The issues raised by new developments are whether the new land uses are adequately connected to the key locations within the town to allow walking, cycling and public transport trips to take place, and whether the existing road network has sufficient capacity to accommodate those vehicle trips generated by the developments.

- 2.3.2 The potential impact of new developments proposed in Totnes is described in more detail in **Appendix D**.
- 2.3.3 The amount of growth planned is 650 new dwellings (a 17% increase on the existing 4160 households in Totnes¹) and the strategy is aimed at measures to accommodate these additional households whilst minimising their impact on the network. There is a limit to what can be done to the highway network, and the impact of the growth will be spread across the town, and can be best accommodated through some peak spreading and by improving sustainable alternatives.

¹ From 2009 Mosaic Data as included in the Totnes - Devon Town Mosaic Profile (March 2010) by Devon County Council (page 10)

3.1 Overview

3.1.1 The following components of the strategy have been identified in order to address the needs of the transport network under the guiding principles, and the associated objectives:

1. Community Bus Support
2. Transport Exchange Hubs / Park and Change Sites
3. A385 Junction Improvements
4. Traffic Management Scheme along Fore Street and the High Street
5. Enhancing the Rail Station as a Transport Exchange
6. Enhanced Pedestrian and Cycle Routes/Network
7. Community Car Clubs / Car Sharing Schemes
8. Promoting Change through Travel Planning

3.1.2 The map in **Figure 3-A** shows the strategy components spatially. A larger map is included in **Appendix E**.

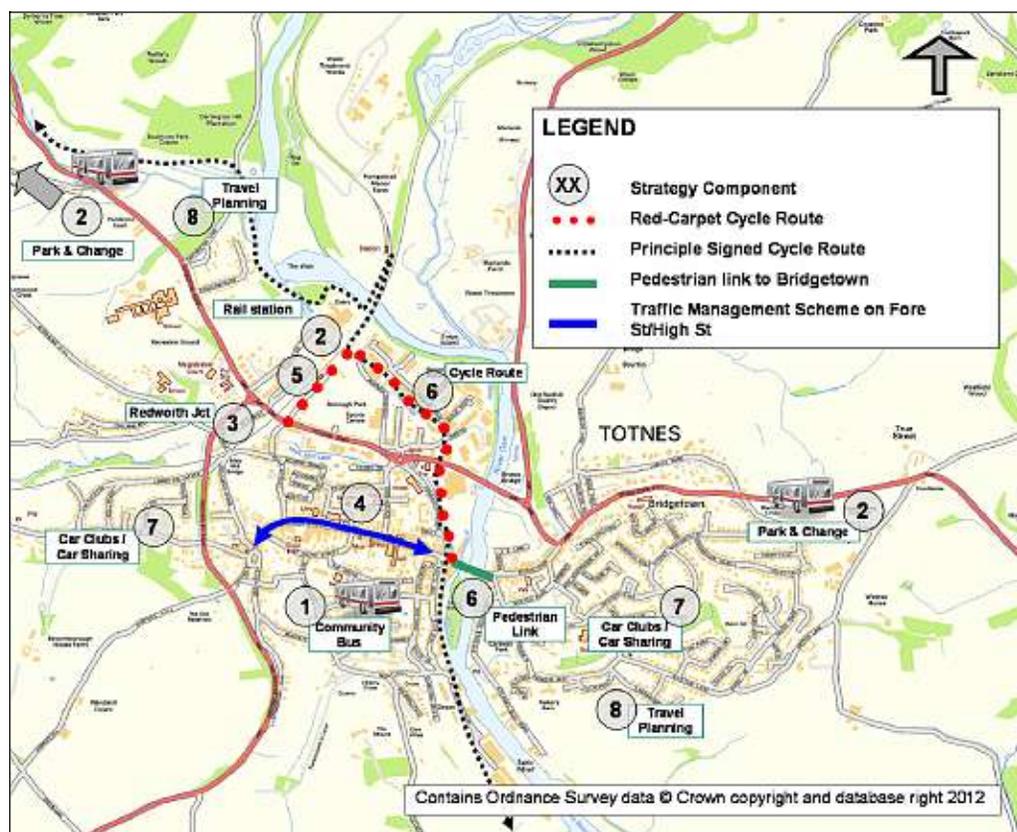


Figure 3-A: Totnes Transport Strategy Components

3.2 Community Bus Support

- 3.2.1 The objective of supporting Community Bus Services is to address travel within Totnes as well as travel between the town and neighbouring communities, increasing the mode share of public transport.
- 3.2.2 There is an opportunity to explore further support for Community Bus services in the form of capital funding towards the lease and maintenance of one or more bus vehicles. It is important to note that LSTF support is only available in the short term as one-off funding. Consequently any expansion of community transport must be sustainable and able to support itself in future.
- 3.2.3 The provision of additional services/increased frequencies would encourage the use of public transport, improve the commercial viability of such services and reduce the need for private vehicle access into the town. It could form part of a network linking transport exchange hubs such as the rail station.

3.3 Transport Exchange Hubs / Park and Change Sites

- 3.3.1 The objective is to establish transport exchange hubs in the town and rural hinterland, and Park and Change sites in rural locations, providing increased access to sustainable modes (in particular public transport) and positively impacting on the need for private vehicle access into the town by reducing trips from origins along the main routes on the A385 corridor into the town.
- 3.3.2 Exchanges such as park-and-change sites and community bus stops in rural locations, supported by measures such as smart ticketing and improved information services, would allow travellers to link between different modes of sustainable travel. This could be combined with enhancements to the quality of public transport facilities in town (e.g. at the station and bus stops).
- 3.3.3 Potential locations on the west of the town and the east of the town, linked with existing bus services or community bus services to/from the town centre, would reduce the number of cars accessing the road network and parking within the town. Locations should be linked to the town by cycling and walking routes, and allow for car share trips to be promoted.
- 3.3.4 Further sites along the C794 from Avonwick (linking in with the SHDC offices) and at the KEVICCs site, occasionally operating during key public events in the town, may further reduce the need for private vehicle access into the town.
- 3.3.5 The development of these sites is a long term measure and needs to be undertaken jointly with South Hams District Council through the application of Section 106 contributions from developers.

3.4 A385 Improvements

- 3.4.1 The objective of improvements along the A385 through Totnes would be to maximise the capacity of the network and improve the opportunities for pedestrians and cyclists to permeate the corridor. There are limited opportunities to achieve this, focussed on Redworth Junction and Coronation Road Roundabout.

Opportunities at Redworth Junction

- 3.4.2 OPTION A: Signalised pedestrian and cycle crossings on the southern approach (A381 Western Bypass) to Redworth junction would improve the junction for pedestrians and cyclists, particularly along the key movement for school children towards KEVICCs.
- 3.4.3 OPTION B: A roundabout layout at Redworth junction, combined with a system of left-in/left-out access along the A385 Station Road between Redworth junction and the Coronation Road roundabout junction, would remove a number of conflicting movements along this section of the corridor whilst not restricting access. A pedestrian crossing would be provided on the A381 Western Bypass approach.
- 3.4.4 OPTION C: A refresh of the traffic signal controls at Redworth junction and coordination of these signals with the adjacent signalised pedestrian crossing at the rail station access/Castle Street junction could result in a modest reduction in congestion during peak periods.
- 3.4.5 It is proposed that signal and roundabout based alternatives are progressed further into detailed designs for consultation. The two proposed alternatives should include Option B, providing a new roundabout and crossing, and a combination of Option A and Option C, providing a controlled pedestrian crossing and a refreshed signal control system.

Opportunities at Coronation Road Roundabout

- 3.4.6 The southern arc of the Coronation Road roundabout could be improved to provide a more direct route for pedestrians and cyclist along their desired route.

3.5 Traffic Management Scheme along Fore Street and the High Street

- 3.5.1 DCC have identified that a high number of injury collisions involving pedestrians have continued to occur. As the highway authority DCC is required to undertake appropriate preventative measures to address this issue.
- 3.5.2 The objective of the proposed Traffic Management Scheme is to reduce the number of through trips (trips not stopping along Fore Street or the High Street) throughout the day. Measures to address through trips are required as surveys show a high proportion of these movements are illegal.
- 3.5.3 A reduction in the number of through trips can be expected to result in lower speeds in this part of the town centre and a reduction in both the number of incidents and their severity (“sharing space at walking pace”). This would make Fore Street and the High Street more attractive for pedestrians and cyclists, increasing the modal share for sustainable travel modes.
- 3.5.4 Following a consultation on different experimental options, DCC intend to pursue an experimental reversal of traffic flow on Station Road and Lower Fore Street, presenting drivers wishing to access the Plymouth Road signals with the option of travelling via either the Southern Area Access Road (St Katherines Way) or the Coronation Road Roundabout.

3.5.5 It is recognised that there are various other options being pursued in the town centre, such as the implementation of Shared Space. The proposal to alter traffic flows can be incorporated into a longer term Town Centre Scheme.

3.6 Enhancing the Rail Station as a Transport Exchange Hub

3.6.1 The objective is for the rail station to act as a transport exchange hub, allowing travellers to link between different modes of sustainable travel, maximising the local and long-distance links provided by the rail services.

3.6.2 Proposals include additional secure cycle parking, improved signs guiding pedestrians and cyclists from the station forecourt to bus services along the A385 (Station Road) and to routes through Borough Park and towards the town centre along Castle Street.

3.6.3 A pedestrian/cycle route underneath the A385 (Station Road) alongside the rail tracks is being explored. This would allow pedestrians and cyclists to link directly to Castle Street and the town centre without having to cross the A385. This would reduce the delay to both the pedestrian/cycle journeys and to traffic along the A385.

3.7 Enhanced Pedestrian and Cycle Routes/Network

3.7.1 The objective of enhancing specific pedestrian and cycle routes and establishing networks in the town is to remove any deterrents to walking and cycling, reducing the need for private vehicle access into the town. These changes would assist in mitigating the impact of future development trips. Secondary benefits include a reduction in the carbon footprint associated with travel in the town, and improved health and wellbeing for those participating.

3.7.2 The map in **Figure 3-B** shows the notional cycle links within the town of Totnes, linking key land use sites to the existing red carpet route.

3.7.3 Deterrents to pedestrian and cycling movement have been identified at a number of locations such as Redworth Junction, the old Totnes Bridge (Bridgetown), linking the rail station to the town centre and Plymouth Road.

3.7.4 The proposed schemes to remove the deterrents include the following:

- Junction Improvements to Redworth Junction, providing a formal pedestrian/cycle crossing point.

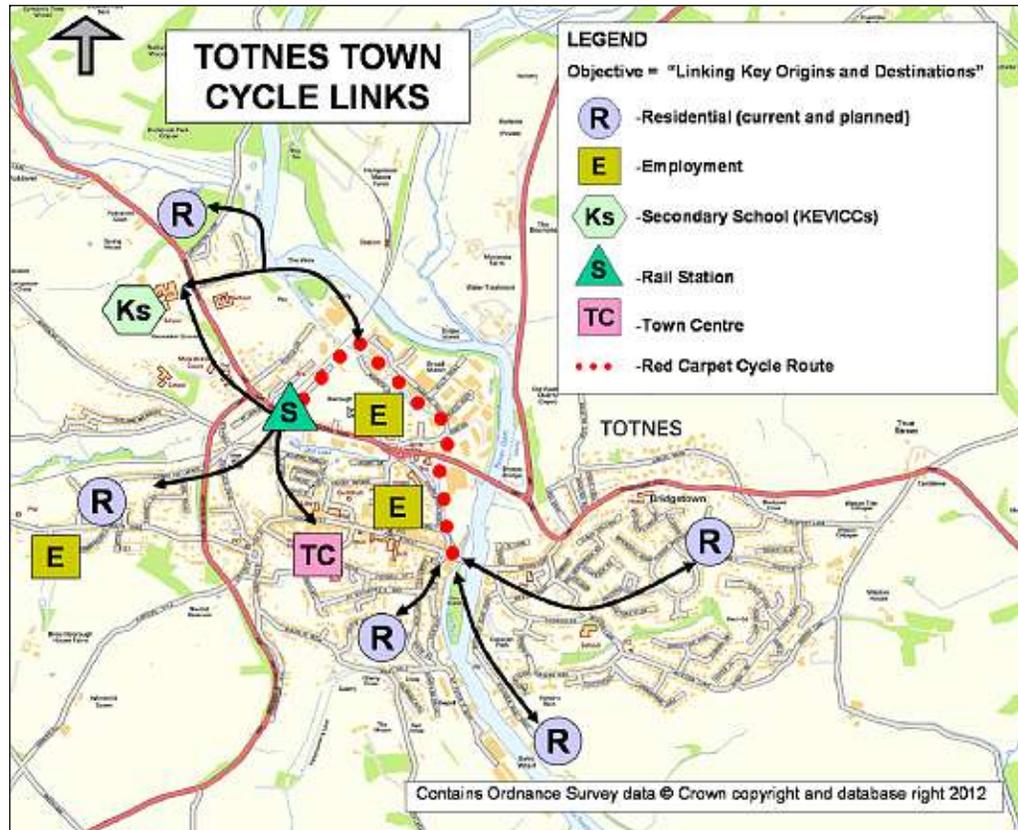


Figure 3-B: Totnes Town Cycle Links Map

- Possible measures to create an improved pedestrian / cycle link between the Bridgetown community and the town centre need to be balanced against the need to provide sufficient road width for larger vehicles and continued vehicular access for residents.
 - The potential pedestrian route underneath the A385 from the station linking to Castle Street would provide a more direct route to the town centre. This route may be constrained by Network Rail requirements.
 - Improvements to Plymouth Road leading into the town centre would make the route more attractive for pedestrians, encouraging walking and reducing private vehicle trips from along this part of the network. This could be linked to potential park and change schemes.
- 3.7.5 A cycle strategy has been developed as part of the LSTF programme, from which key elements can be identified for implementation. Establishing a network within the town and linking to neighbouring towns and villages form the basis of the strategy.
- 3.7.6 Increasing cycle parking in the town centre and at transport exchange hubs (such as the rail station) would improve accessibility to the cycle network. The parking would be supported with the provision of access to electric bikes and competence training.

- 3.7.7 An electric bike hire scheme is being planned as part of the LSTF programme. This scheme would encourage people to cycle despite Totnes' hilly terrain, resulting in carbon reduction.

3.8 Community Car Clubs / Car Sharing Schemes

- 3.8.1 The objective of promoting Community Car Clubs and Car Sharing schemes would be to reduce the need for single-occupancy private vehicle trips, ultimately reducing the number of private vehicles on the network within Totnes.
- 3.8.2 On-and-off street parking places could be dedicated to club car use, especially in high profile parts of the town centre. With the district council's support, DCC's promotion of car sharing could be supported by local travel planning initiatives, and by facilities created at village transport exchanges.

3.9 Promoting Change through Travel Planning

- 3.9.1 The objective of promoting change through travel planning is to reduce the number of private vehicle trips from new developments, schools and existing employers in the town.
- 3.9.2 This strategy would involve the development of travel plans for these large traffic generators, disseminating information on sustainable alternatives. Certain areas (such as the Babbage Road industrial area) could benefit from a staggered working time arrangement to reduce a spike in private vehicle travel demand during peak commuting hours.

- 4.1.1 Totnes is on a confluence of a number of routes, which combine into a single major river crossing. This results in significant congestion within the town.
- 4.1.2 There are historical and environmental constraints in the town – the solution is not for the town to build its way out of the problem. The environment of the town needs to be reflected and recognition given to the fact that the current road network is mature.
- 4.1.3 There is planned development in the town but the increase in houses is not disproportionately large. The traffic increase resulting from the developments will be spread across the town and can be accommodated through some peak spreading and by improving sustainable alternatives.
- 4.1.4 A range of modest measures are needed – low cost measures aimed at sustainable transport and making better use of what is available within the network. The transport network needs to evolve and allow greater room for sustainable non-car modes.
- 4.1.5 The strategy has identified eight core strategy components to address the needs of the transport network under the guiding principles:
 - 1. Community Bus Support
 - 2. Transport Exchange Hubs / Park and Change Sites
 - 3. A385 Junction Improvements
 - 4. Traffic Management Scheme along Fore Street and the High Street
 - 5. Enhancing the Rail Station as a Transport Exchange
 - 6. Enhanced Pedestrian and Cycle Routes/Network
 - 7. Community Car Clubs / Car Sharing Schemes
 - 8. Promoting Change through Travel Planning

Appendix A Transport Evidence Base

The technical evidence base is a combination of community feedback and technical data. Community feedback was gleaned from the community consultation that Devon County Council and Totnes on the Move had undertaken in 2011, as well as inputs from the Totnes on the Move Steering Group throughout 2011 and early 2012. Technical data was gleaned from previous reports and traffic surveys undertaken.

A presentation was developed by DCC and Jacobs for presentation to the Totnes on the Move Steering Group on 18 June 2012, which contained a summary of all the transport evidence collated for Totnes to that date.

A.1 Totnes on the Move Community Workshops

Devon County Council (DCC) arranged four workshops in March 2011 inviting the community of Totnes, Dartington and surrounding villages to take part in generating sustainable travel proposals for the area.

The Community Workshops Key opinions raised by these studies include:

- Concerns about congestion and air pollution during peak periods along the A385.
- A lack of connectivity for pedestrian and cycle routes
- A lack of connectivity to the town for surrounding villages
- A desire for community transport to be extended to more areas.
- Poor public transport connections, continuity and information.

The comprehensive feedback from the workshops can be reviewed in the Report of the events collated by Devon County Council.

A.2 Previous Studies and Surveys Reviewed

Reports of previous studies in Totnes which were reviewed include:

- ANPR Study of High Street Traffic (Devon County Council) – March 2011²
- The Totnes Transport Evidence Base (Devon County Council) – Aug 2011³
- Totnes on the Move: Report on the Community Transport workshops (Devon County Council) – May 2011⁴

² <http://www.devon.gov.uk/totnes-anpr-survey-08-12-11.pdf>

³ http://www.totnesonthemove.org.uk/wp-content/uploads/2012/08/170811_Totnes-Transport-Evidence-Base-Summary-final-report.pdf

⁴ <http://www.totnesonthemove.org.uk/wp-content/uploads/2012/08/Totnes-on-the-Move-Workshops-Report.pdf>

Appendix B Existing Transport Networks

B. Existing Transport Network and Infrastructure in Totnes

B.1 Road Network in Totnes

Totnes sits at the confluence of key routes linking South Hams, Plymouth, Torbay and Newton Abbot to Totnes and its surrounding villages. These routes are formed by six roads (as shown in **Figure B.1**) - the A384 and A385 linking east-west between the A38 and Torbay, the A381 linking South Hams to Newton Abbot and Plymouth Road linking towards Avonwick. These key routes carry a significant amount of longer-distance trips through Totnes, as evidenced by the 2008 traffic census of eastbound traffic along Station Road: approximately 70% of the morning and evening peak trips were through Totnes.

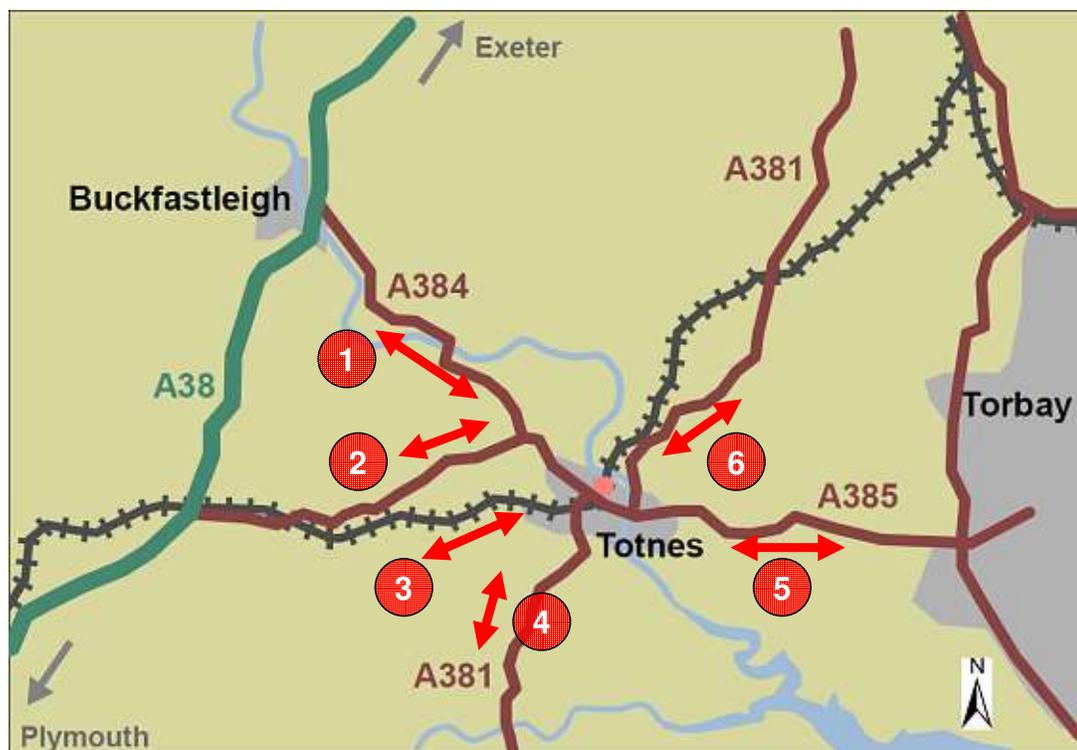


Figure B.1 – Road links into Totnes

B.2 Traffic Data Collection Points

Traffic data collection points used in the development of the strategy are a mixture of permanent and temporary/one-off sites (as shown in **Figure B.2**). The ANPR locations are permanently used by Devon County Council to collect journey time data along the key routes through the town, and the data is supplemented by fixed automatic traffic count sites. Temporary counts include junction turning counts at junctions along the A385 and the traffic census along Station Road undertaken in 2008.

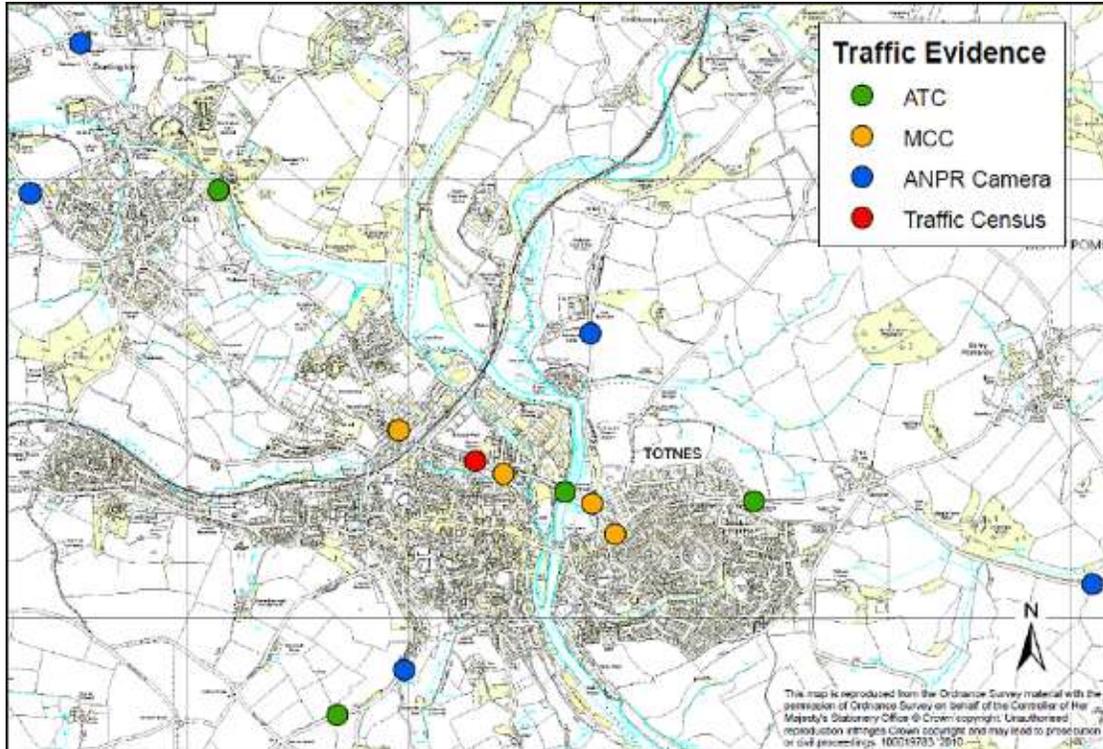


Figure B.2 – Traffic Data Collection Points in Totnes

B.3 Existing Public Transport Network

Totnes functions as a service centre for a large rural area and sits on key bus and rail corridors (as shown in **Figure B.3**). The rail station serves as a rail head for the same large rural area, with links to local and major long-distance destinations (such as London Paddington). The bus routes serve to provide a basic level of connection to the town and the rail station.

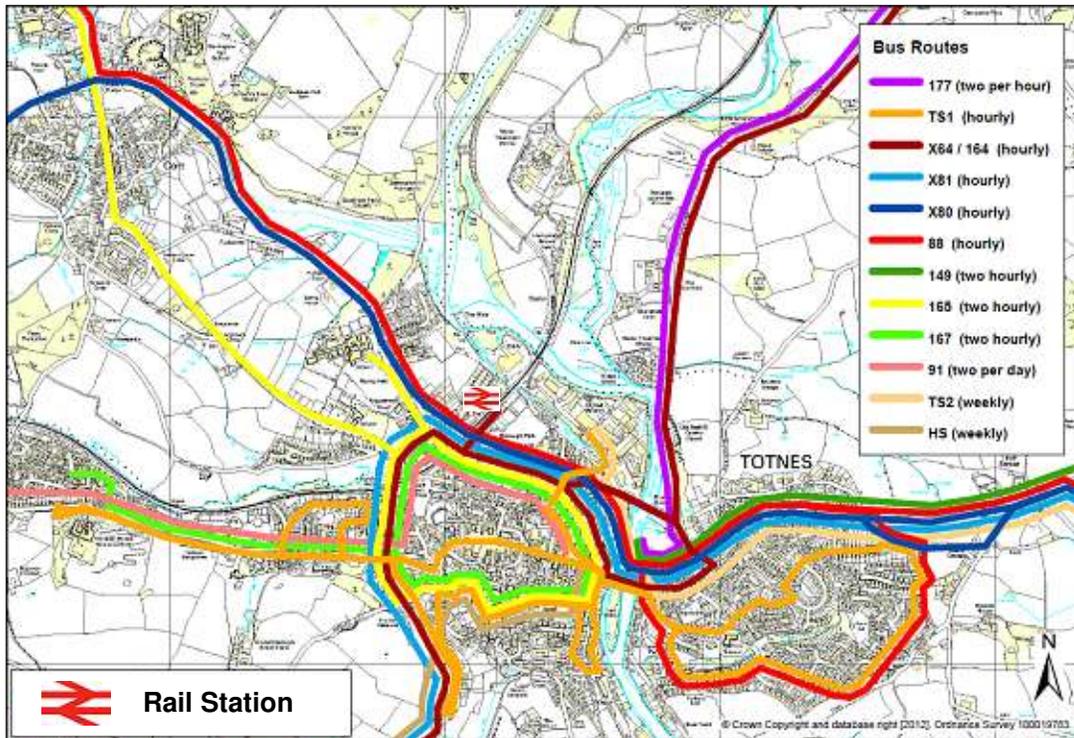


Figure B.3 – Bus Routes in and around Totnes

In addition to the formal bus network, there is a network of Community Transport services which operate to link the town to neighbouring villages.

B.4 Existing Walking and Cycling Networks

The existing walking network is shown in **Figure B.4**, and represents routes connecting crossings along the major road network. The gradients in the town and the severance caused by the A385 can discourage pedestrians.

The existing formal cycle network is shown in **Figure B.5**, and indicates that there is one formal route for cyclists in Totnes. The significant gradients up the High Street and towards Bridgetown can discourage cyclists, but the existing linkage to Dartington is well established and the community workshops indicated a desire for more cycle links to neighbouring villages.

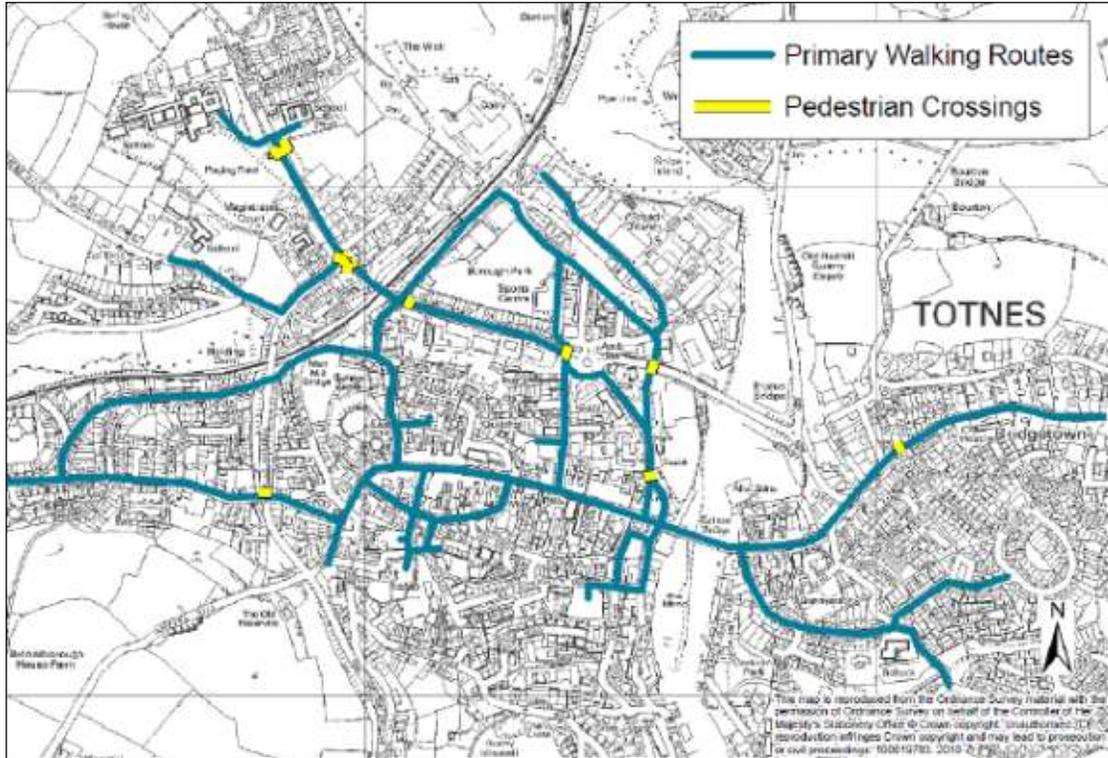


Figure B.4 – Pedestrian Network in Totnes

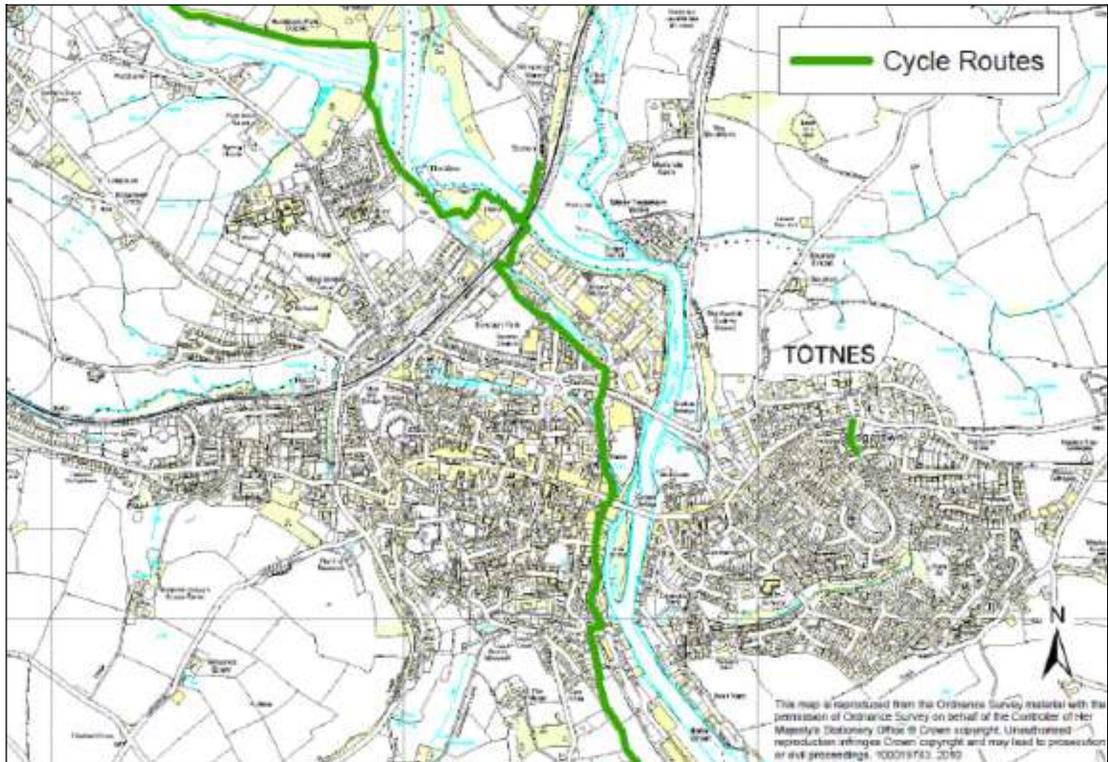


Figure B.5 – Formal Cycle Network in Totnes

B.5 Air Quality Management Area (AQMA)

Totnes has an Air Quality Management Area (declared in May 2009) which extends along the whole corridor from the west of Totnes to the east of Bridgetown (as shown in **Figure B.6**). Impacts on air quality resulting from traffic would be concentrated on key pinch points and sections of Bridgetown Hill where the topography and the built environment combine to increase and trap emissions. South Hams District Council has a responsibility to develop an Action Plan to address air quality in this area.

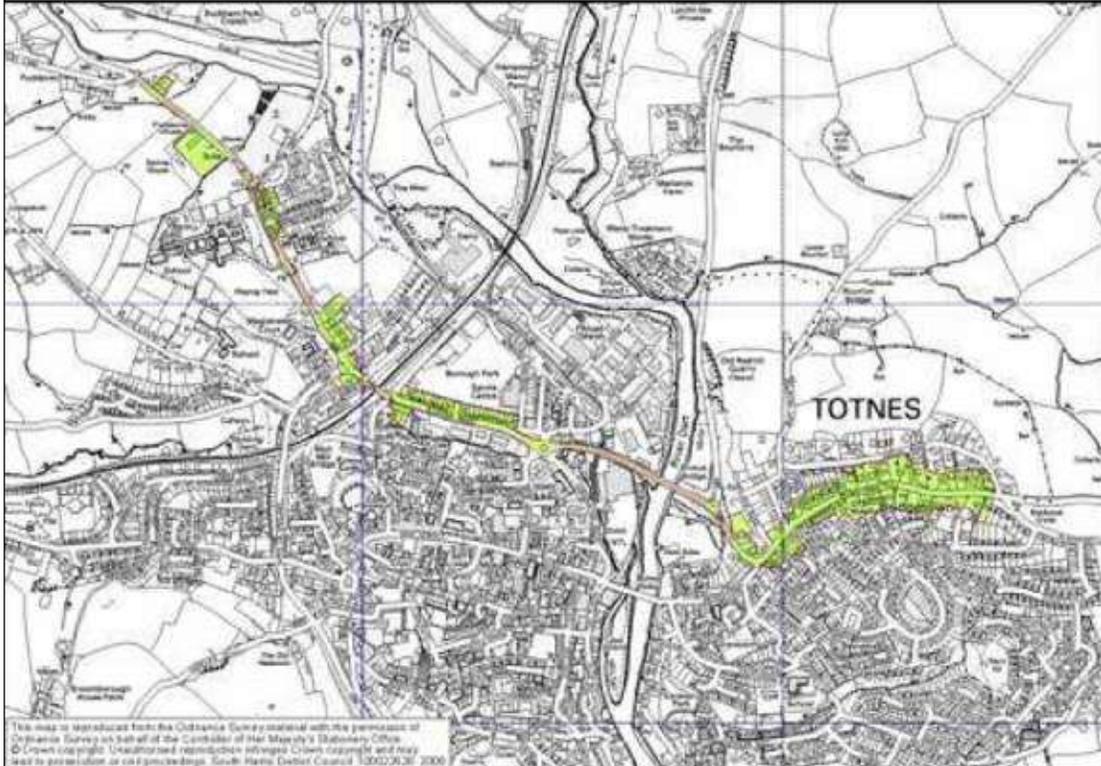


Figure B.6 – Air Quality Management Area along the A385

Appendix C Existing Traffic Conditions in Totnes

During peak periods on weekdays and weekends the main routes in and through Totnes experience significant traffic demand, as Totnes forms a node through which a significant amount of longer-distance trips are made between South Hams, the area around Totnes and Torbay.

In addition to this, the constraints of the road system through the older parts of the town (such as the Narrows) and the topography of the road along Bridgetown Hill result in the A385 corridor in particular being particularly sensitive to small (and large) delays along the route, such as can result from courtesy behaviour at priority junctions and signalised pedestrian crossings.

Trends in traffic volumes along the key routes in Totnes have shown a decline over the last 6 years (refer to Figure C.1 – taken from the Evidence Base):

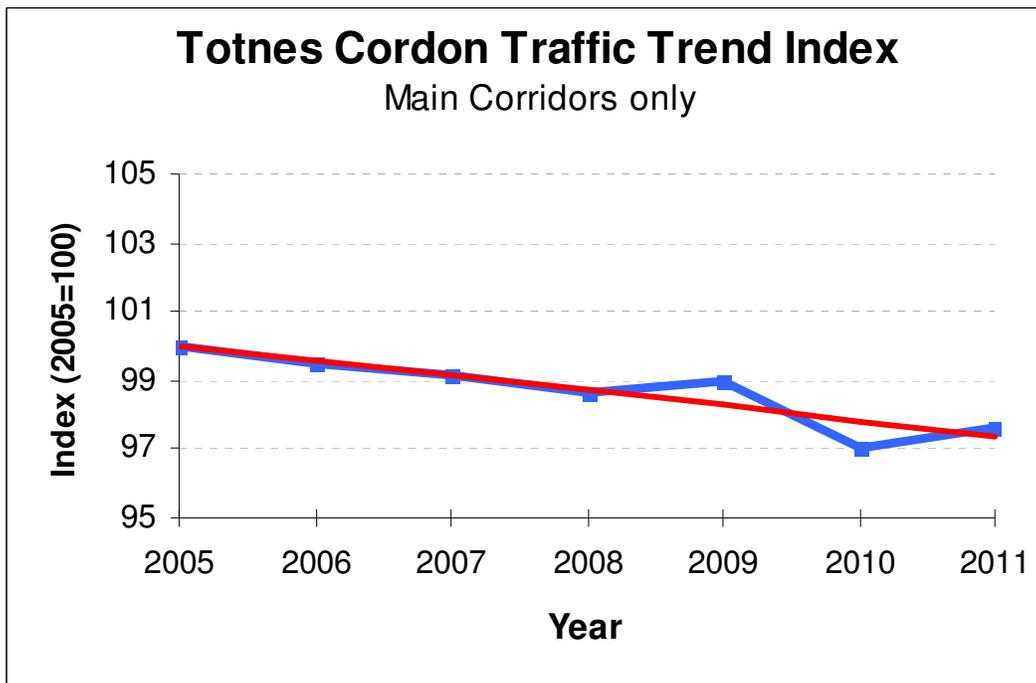
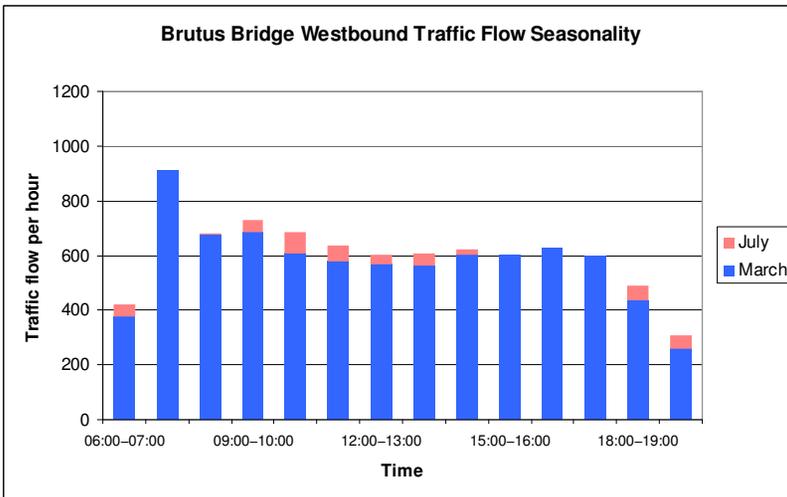
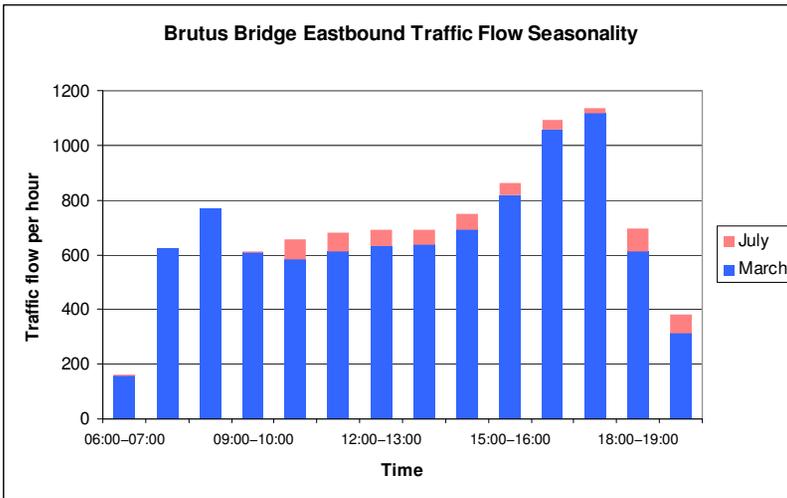


Figure C.1 – Growth trend in traffic along the key corridors

Figure C.2 shows the daily variation in traffic flow across Brutus Bridge on the A385, which clearly shows the morning and afternoon commuter peaks. The journey times (across the main routes through Totnes) indicate the associated increase in journey times associated with the peaks.

Traffic Flows



Journey Times

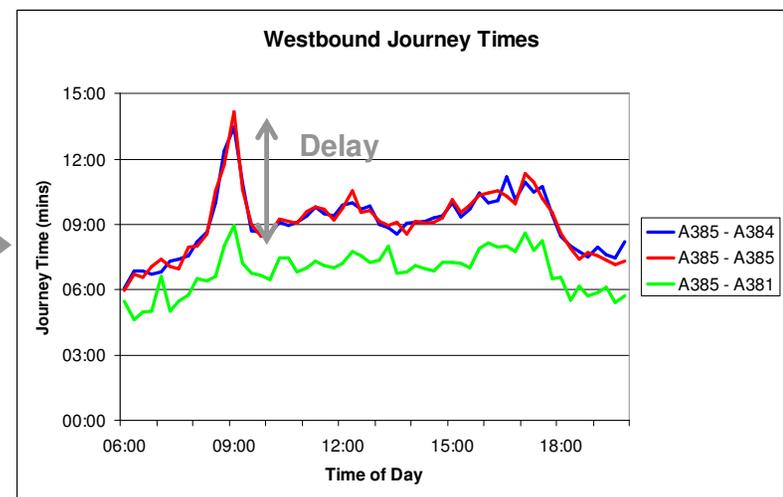
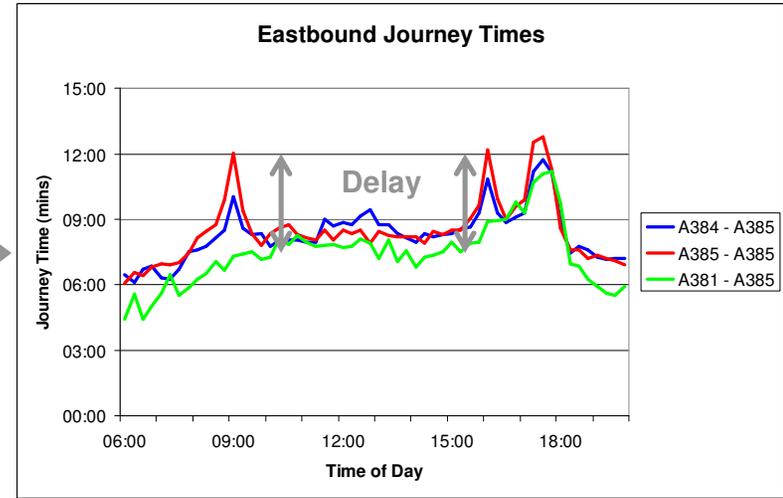


Figure C.2 – Daily traffic flows (with seasonal variation) and journey times in parts of Totnes

There are a number of pinch-points along the A385 restricting the capacity for traffic along the corridor, which include the following:

C.1 Redworth Junction and the Station Access

During the weekday peak periods Redworth Junction (A81 Western Bypass / A385 from Dartington) experiences a significant and variable amount of queuing due to the impact of high demand for traffic through the junction from both the A381 and A385 (with a significant proportion of right-turning traffic from the A381). Furthermore, the junction is affected by queuing resulting from the signalised pedestrian crossing outside the rail station access (known as blocking-back). This occurs throughout the peak periods but is particularly significant when a train has arrived and passengers disembark and then move on foot/cycle towards the town centre.

Another factor impacting on the level of congestion at Redworth Junction is courtesy behaviour by motorists along the A385 allowing in vehicles from the station and Castle St (particularly in the evening peak). This further delays movement along the A385 (most significantly in the eastbound direction) resulting in blocking back to Redworth Junction and queuing on the A385 and A381 approaches.

The queuing resulting from congestion at the Redworth Junction impacts most severely upon the A381 Western Bypass and A385 Dartington approaches, but is also has an impact on westbound traffic approaching the junction from Coronation Roundabout. At times it can result in queuing (or a slow moving queue) that reaches back to the roundabout.

Past proposals to improve this junction have included the widening of the bridge over the railway line (on the westbound approach) to allow two full westbound lanes through the junction.

C.2 Coronation Roundabout

This five-arm roundabout operates at or over its capacity during the weekday peak periods, and is impacted upon by blocking back from Redworth Junction and the Station access. Delays in the evening weekday peak period are most severe as vehicles egressing from the industrial estate along Babbage Road, combined with the signalised pedestrian/cycle crossings west and east of the roundabout, result in instances where the roundabout “locks up” temporarily.

Past studies tested a number of options to improve the junction, including widening exit lanes and closing/partially closing arms to the junction. None of the options were shown to represent significant improvements to the junction operations.

C.3 Junction of A385 Bridgetown Hill / Bridgetown

Turning movements into and out of Bridgetown at this junction result in delays along the A385 corridor during the weekday peak periods. This is due to a combination of traffic demand along the A385 and courtesy behaviour allowing vehicles from Bridgetown to access onto the A385.

C.4 Traffic Using Fore Street and the High Street

As part of annual monitoring of accident statistics along the Totnes High Street, officers of Devon County Council became aware of an increase in pedestrian incidents along Fore Street and the High Street. It was believed that this may be due to a number of vehicles “rat-running” along these streets in order to avoid congestion along the A385 corridor.

In order to identify the number of vehicles making this trip (i.e. travelling through Fore Street and the High Street without stopping) the Council commissioned ANPR (Automatic Numberplate Recognition) surveys of traffic movements throughout Totnes on the major trafficked routes⁵. The results indicated that approximately 44.8% of vehicles travelled along Fore Street and the High Street without stopping during the surveyed weekday.

⁵ <http://www.devon.gov.uk/totnes-anpr-survey-08-12-11.pdf>

Appendix D Planned Developments in Totnes

D.1 Current Land Use Patterns in Totnes

The largest part of Totnes currently lies south of the A385, which – along with Brutus Bridge and the A381 Western Bypass – was constructed as a form of highway bypass to the old town. Fore Street and the High Street form the employment and retail heart of the town, attracting a large number of trips, but employment is also located along Plymouth Road (South Hams District Council) and in the Babbage Road industrial estate to the north of the A385.

The largest residential area lies in Bridgetown east of the River Dart, and is linked to the town centre by the old bridge.

Other key land use sites include the rail station adjacent to the A385, King Edward VI Community College (KEVICC) primary and secondary schools and residential areas south of the town centre.

D.2 Future Planned Developments

The District Council has identified sites in the Development Plan Document (DPD)⁶ for future development in and around Totnes, and has refined these into estimated land uses. These are indicated in **Figure D.1** and **Table D.1**.

The largest amount of new housing is allocated for sites to the south of the town (Riverside and Baltic Wharf) on adjacent to the River Dart.

Table D.1 – Planned Development in Totnes

Site	Development up to 2016		Development beyond 2016	
	Total Dwellings	Employment Land (ha)	Total Dwellings	Employment Land (ha)
T1 Baltic Wharf	190	-	-	-
T2 KEVICC	50	-	80	-
T3 Totnes Central Area	123*	0.1	20	-
T4 Dairy Crest	60	-	-	-
T5 Land at Dartington	-	-	10	-
T6 Land at Ashburton Road	-	2	50	0.3
T7 Riverside	100	2	-	-
T8 Bourton Lane	-	-	20	-
TOTAL	523	4.1	180	0.3

* 53 dwellings at the Totnes Southern Area (South Gate) are already completed.

Altogether 650 new dwellings are planned in the long term beyond 2016, which represents a growth of 15.5% on the current number of households in Totnes (4160).

D.3 Access to Planned Developments

Providing access for motorised and non-motorised trips to and from the planned development sites is an obvious necessity, and it is the duty of the developer to submit an appropriate strategy to the satisfaction of the highway authority and the local planning authority. Whilst the strategy did not consider the details of access to the individual

⁶ http://www.southhams.gov.uk/totnes_dpd-2.pdf

development sites, it did take into consideration their access onto the main road network and pedestrian/cycle links.

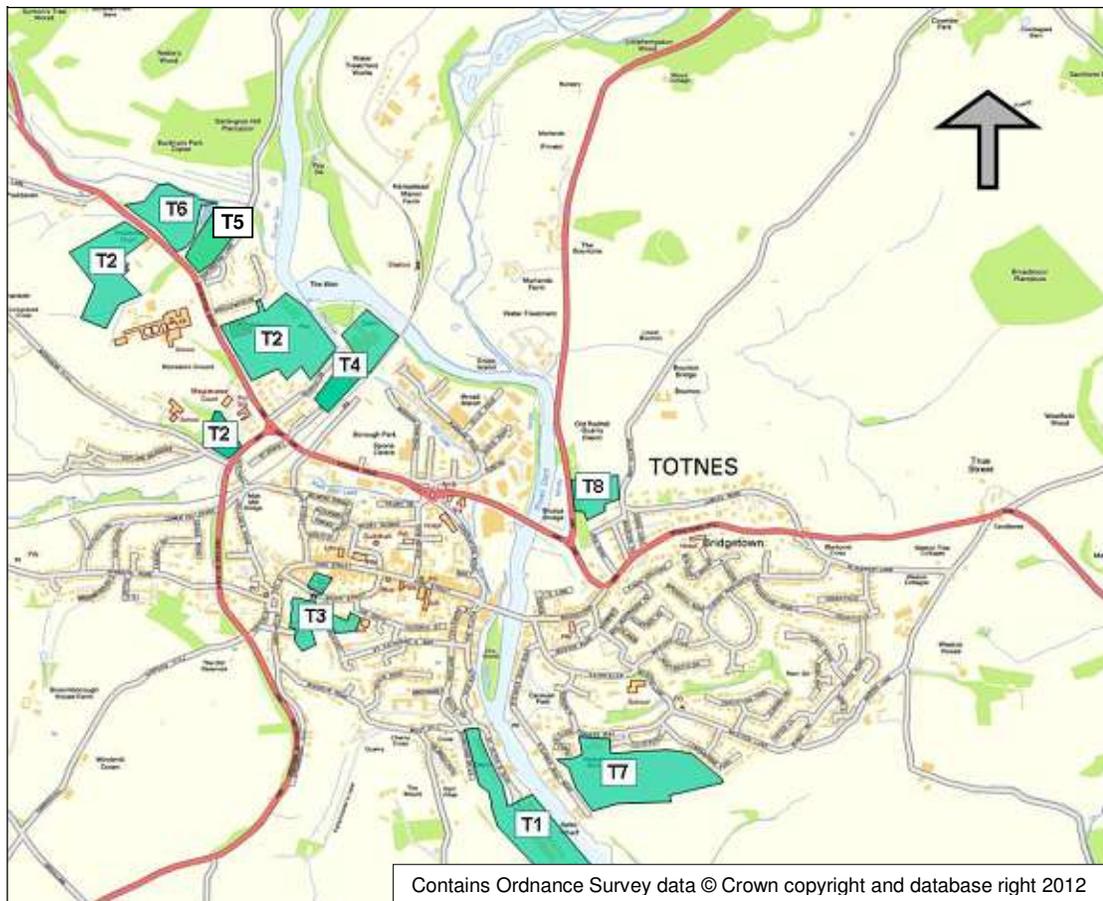


Figure D.1 – Planned Development Sites in Totnes

Likely access to development sites could include:

- **T1 Baltic Wharf**
 - Vehicular access would be via the existing road network along St Peters Quay and New Walk. Pedestrian and cycle access would be along existing footpaths.
- **T2 KEVICC**
 - Vehicular access would be onto the A385 and Barracks Hill. Pedestrian and cycle access would be along existing footpaths, but would be limited as travellers would need to cross main roads and cycle paths are not established in the area.
- **T3 Totnes Central Area**
 - Vehicular access, pedestrian and cycle access would be via the existing road network/footpaths in the town centre.
- **T4 Dairy Crest**
 - Vehicular access would potentially be through the top end of the existing rail station car park and along a route to the north and west. Pedestrian and cycle access would be through the car park and along existing footpaths.
 - Should link to formal cycle route through Totnes.

- **T5 Land at Dartington**
 - Vehicular access would be onto the A385. Pedestrian and cycle access would be limited as the site is quite some way out of Totnes.
 - Should link to formal cycle route through Totnes.
- **T6 Land at Ashburton Road**
 - Vehicular access would be onto the A385. Pedestrian and cycle access would be along existing footpaths, but would be limited as travellers would need to cross main roads and cycle paths are not established in the area.
 - Should link to formal cycle route through Totnes.
- **T7 Riverside**
 - Vehicular access would be via the existing road network in Bridgetown with trips distributed across several routes through the residential area.
 - Pedestrian and cycle access would be along existing footpaths.
- **T8 Bourton Lane**
 - Vehicular access would be via the existing road network.

D.4 Transport Impact of Planned Developments

Transport Assessments for each of the proposed sites will develop in full detail the transport impacts and mitigation measures, and these will be included in individual planning applications which will set out the exact land use for the sites.

For the purposes of quantifying the potential impact for this strategy, a combination of the following four elements were considered, based on the land use in the DPD:

1. The number of trips generated;
2. the trip patterns (ie. origins and destinations)
3. the capacity of the access points and the networks themselves (eg. In the case of the road network it could be limited to the capacity of key junctions); and
4. the mode choice for the trip (car, rail, walk or cycle). More trips can be accommodated in less space if trips are made by rail or non-motorised modes such as walking or cycling.

In order to get a basic estimate of the potential trips generated by the planned developments, a national database of trip rates (TRICS) which is maintained by the Department for Transport was referenced. Based on rates from other similar developments, and on land use assumptions, **Table D.2** provides some indicative values for the potential vehicle trips generated by the planned developments, whilst **Figure D.2** indicates the potential impact in additional trips on the network, based on a high level estimate of potential trip distribution.

Table D.2 – Peak Hour Trip Generation (vehicles) from Planned Development in Totnes

Development Site		AM		PM	
		Arrival	Departure	Arrival	Departure
T1	Baltic Wharf	28	75	71	41
T2	KEVICC	19	51	48	28
T3	Totnes Central Area	17	36	34	22
T4	Dairy Crest	28	34	32	28
T5	Land at Dartington Lane	1	4	4	2
T6	Land at Ashburton Road	84	29	29	58
T7	Riverside	81	47	46	63
T8	Bourton Lane	3	8	7	4
Total		262	284	271	246

It should be noted that some of the developments are regeneration sites (e.g. Baltic Wharf and Dairy Crest), and that the generated trips would be replacing existing trips (either present day or historic).

The table indicates that the total number of trips that would be generated would potentially be approximately 250 trips either leaving or arriving the morning and evening peak hours.

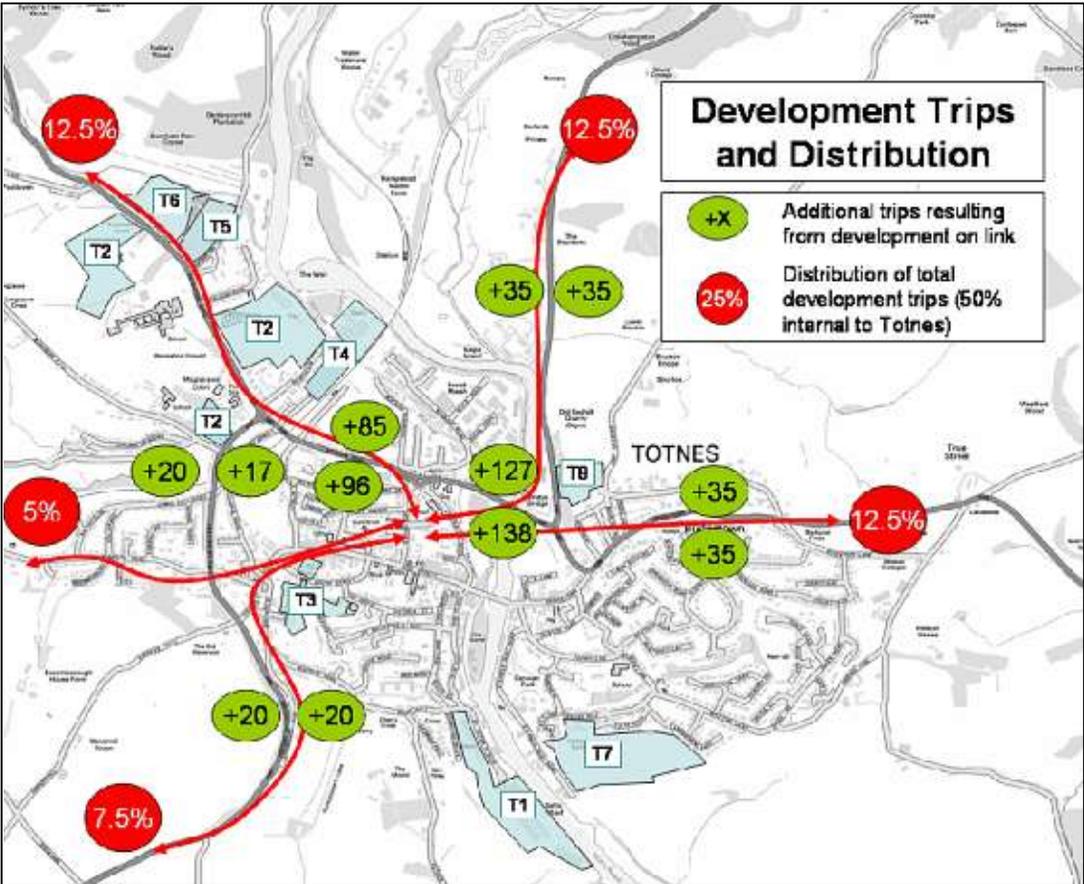


Figure D.2 – Potential Impact of peak hour development trip generation on the network

The figure indicates that the overall potential impact of the additional development trips would be relatively small and can be accommodated in some peak spreading and changes to more sustainable transport modes.

Appendix E Large Map of Strategy Components

