

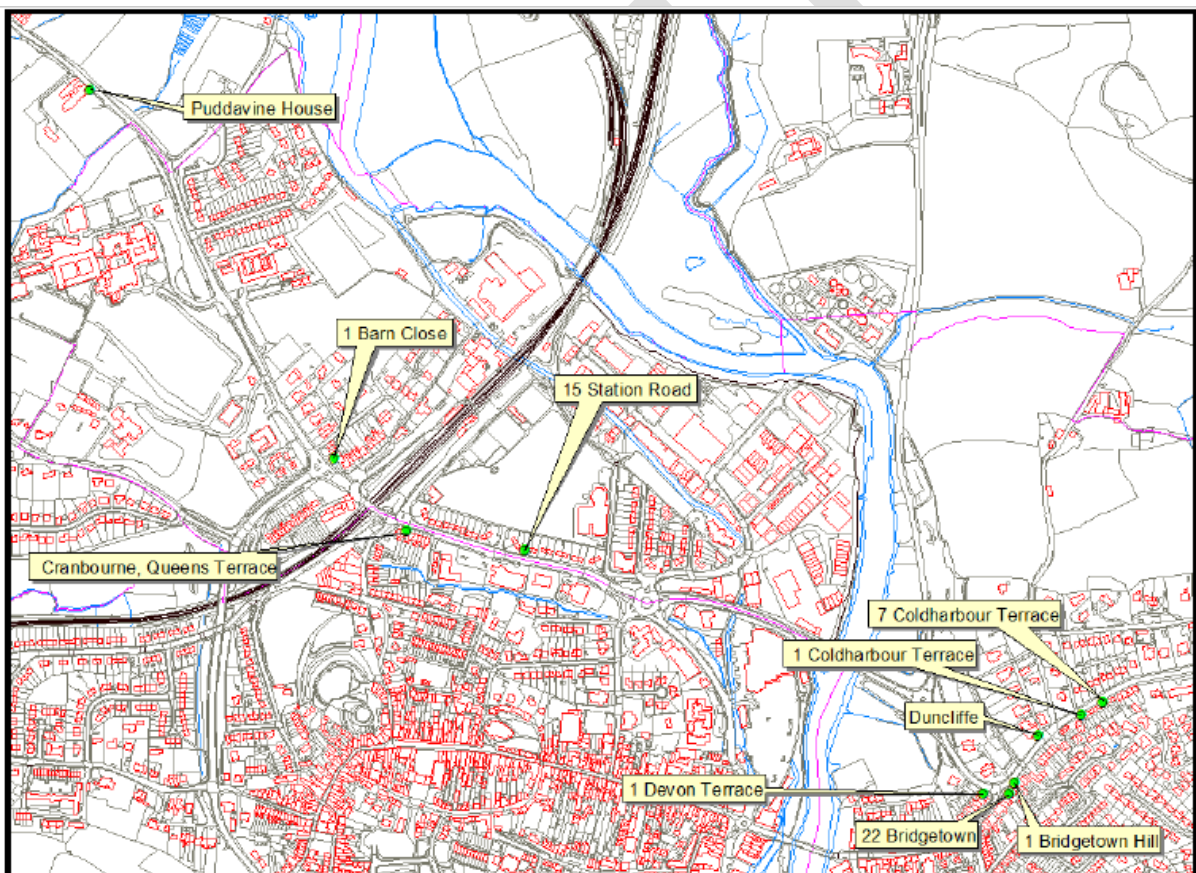
Air Quality Action Plan for Totnes

The options below recognise the limited opportunities for improvements to the stretch of road within the AQMA, and the fact that journeys along this route have a number of different starting locations and destinations (i.e. it is not as simple as Torbay to Plymouth, or Totnes to Plymouth).

Source apportionment

Some work was commissioned by South Hams in 2010 to identify the types of vehicles responsible for the poor air quality in Western Road. This was used to formulate options for the air quality action plan.

The map below shows the receptor locations assessed;



Receptor No.	Receptor Location
1	1 Barn Close
2	Cranbourne, Queens Terrace
3	22 Bridgetown
4	1 Bridgetown Hill
5	Duncliffe, Bridgetown Hill
6	1 Coldharbour Terrace
7	7 Coldharbour Terrace
8	Puddavine House
9	1 Devon Terrace
10	15 Station Road

The table below shows the results of this source apportionment work;

Receptor	Annual Mean Concentration ($\mu\text{g}/\text{m}^3$)							
	Bkgd	MCL	Cars	Bus	LGV	OGV	HGV	Total ^a
1	9.8	0.1	8.6	1.5	2.8	5.8	2.3	31.0
2	16.6	0.2	10.7	2.0	3.2	6.2	2.5	41.4
3	16.6	0.1	8.4	1.3	2.5	3.5	1.2	33.5
4	16.6	0.2	11.4	2.0	3.4	5.1	1.6	40.2
5	10.2	0.2	9.5	1.8	2.8	4.5	1.3	30.2
6	10.2	0.2	12.8	2.4	3.8	6.0	1.7	37.2
7	10.2	0.2	12.1	2.3	3.6	5.7	1.6	35.7
8	9.3	0.1	9.1	1.6	2.2	5.6	2.6	30.5
9	16.6	0.2	9.9	1.6	3.1	4.4	1.5	37.3
10	16.6	0.2	10.6	1.9	3.0	5.7	2.3	40.3
	Bkgd	MCL	Cars	Bus	LGV	OGV	HGV	Total
1	31.7	0.4	27.8	4.8	9.0	18.7	7.5	100
2	40.0	0.5	25.8	4.8	7.8	15.0	6.0	100
3	49.4	0.4	25.0	3.8	7.3	10.4	3.7	100
4	41.2	0.5	28.2	5.0	8.4	12.8	4.0	100
5	33.7	0.5	31.4	5.9	9.4	14.8	4.4	100
6	27.4	0.6	34.5	6.5	10.3	16.1	4.7	100
7	28.5	0.6	34.0	6.4	10.1	15.9	4.6	100
8	30.5	0.4	29.9	5.2	7.3	18.2	8.5	100
9	44.5	0.4	26.7	4.2	8.2	11.9	4.1	100
10	41.1	0.5	26.3	4.7	7.4	14.3	5.7	100

Considering the source apportionment work that has been carried out, a significant proportion of the pollution in Totnes is due to car travel. Therefore the options available should consider means of reducing the reliance of private motor vehicles.

Officers worked with Devon County Council to assess the costs and effectiveness of the proposed actions for reducing air pollution and these have then been given a subjective score out of 5 for both the impact on air quality and cost benefit. The air quality score is based on the scale of improvement expected to occur by delivering the option.

The cost score is a subjective assessment of the cost of implementing the option, with 5 being a very low cost (£100's) and 1 being very high (£000,000's)

The two scores will be amalgamated to form a cost effectiveness value as shown below;

		Cost				
		5	4	3	2	1
Air Quality Impact	5	Very High	Very High	High	Medium	Low
	4	Very High	High	Medium	Low	Low
	3	High	Medium	Medium	Low	Very Low
	2	Medium	Medium	Low	Low	Very Low
	1	Medium	Medium	Low	Very Low	Very Low

[Totnes option 1: Changes to the nature of pedestrian crossings along the A385](#)

In 2012, Devon County Council published a Totnes Transport Strategy. This report highlighted the difficulties with the A385 corridor through Totnes, including the number of pedestrian crossings and potential impacts of traffic at peak times.

Some of the work has been done such as improvements to the pedestrian crossings at Redworth Junction.

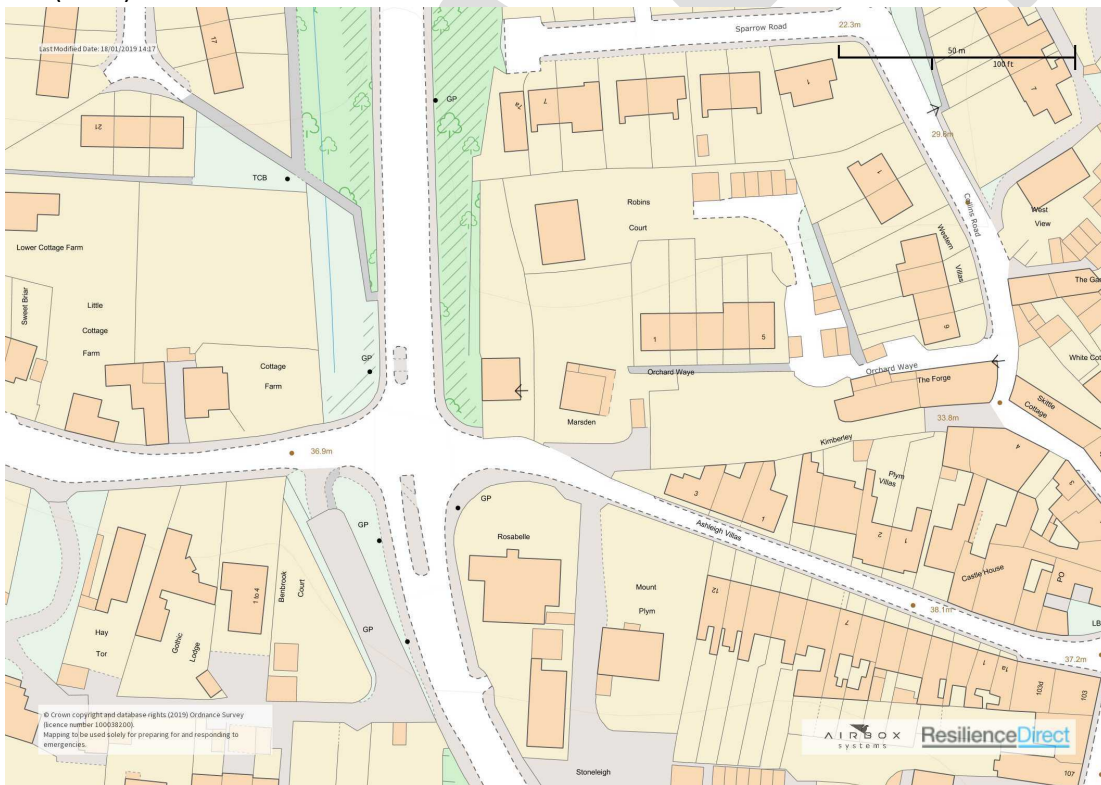
There are also a number of other crossings in the Totnes area that if improved would make pedestrian journeys more comfortable and safer. Careful consideration needs to be given by Devon County Council and South Hams District Council to proposals to ensure that they are safely designed, and achieve a benefit to air quality.

The following are a list of proposed crossings that would warrant further investigation;

- Changeover of traffic light controlled crossing on Bridgetown Hill to a Zebra Crossing



- Consideration of a new pedestrian crossing closer to the junction of Blackpost Lane to serve the new developments at Great Court Farm.
- Review of pedestrian crossing options on junction of Plymouth Road and Western By-Pass (A381)



The earlier report commissioned by Devon County Council also considered a new pedestrian crossing utilising an underpass from Totnes Train Station across the A385. However having discussed with Devon County Council they are not minded to proceed with this option due to the technical difficulties of infrastructure projects adjacent to railway lines, they have also highlighted some of the other constraints with this project which they foresee as being; the high cost of the project, the

potential limited expected use of an underpass, the strategy proposed to retain the existing crossing facility, and the limited air quality benefit.

The local community still would like this crossing considered, and have requested that rather than completely ignore this option, it should be put on hold and reviewed once expected works at Totnes station are undertaken that may make this option more viable. It is suggested that this option is reviewed in 3 years' time.

Air quality impact of option 1: 2

A previous study on air quality impacts of the Devon County report found through modelling that there would be limited improvements to air quality from highway improvements. This is because the number of pedestrians that will transfer from using the car to walking is minimal even with these improvements to walkways, and the potential improvements to highway flows are not expected to be large.

Cost of option 1: 2 – 4

Depending upon the nature of the changes the cost does vary, replacing a Light controlled crossing to a pelican crossing is likely to be a low and reasonable cost, however options such as a pedestrian underpass to the railway station are likely to be more expensive (£00,000's).

It is therefore proposed to progress to feasibility and design stage of the crossings on Bridgetown hill, and on Plymouth Road/Western By-pass.

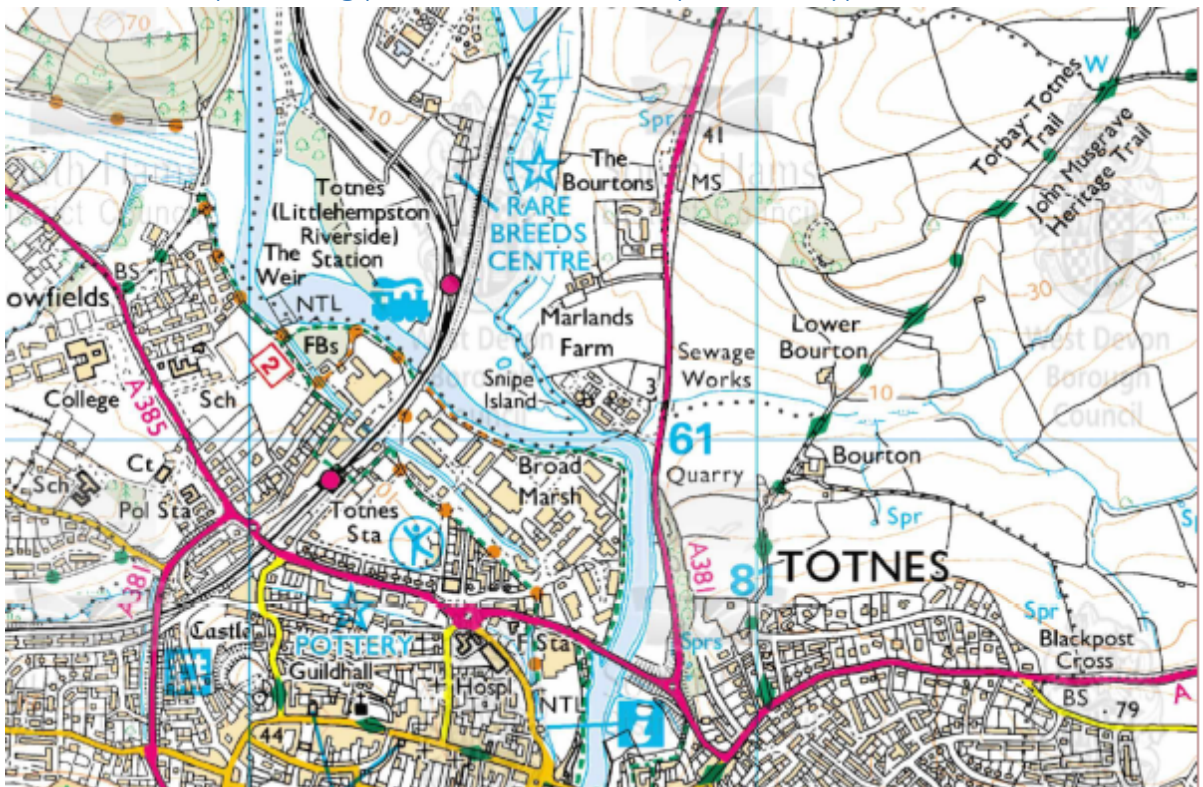
Cost effectiveness of option 1: Medium

[Totnes option 2: A Bypass to Totnes](#)

This option has been discussed in a number of previous air quality action plans, in the 2012 Totnes Transport Strategy a by-pass was excluded on the basis of a very high cost of implementation as well as significant environmental impact. Furthermore, the multiple entry points into the town would require dual bypasses to effectively remove all the through traffic out of Totnes.

There has been no technical work carried out on the basis of the above, however there has been an indicative route produced by a group of residents looking for the by-pass to be brought forward. The considered route went to the north of the A385 through a number of green fields, and required multiple crossings of the river Dart and other streams, meaning a considerable environmental impact would be felt.

Map showing potential location of Option 2 A Bypass to Totnes



Air quality impact of option 2: 4

The level of impact depends upon the amount of traffic that would use the new road, as well as the location of the by-pass. However previous studies have shown that the vast majority (approximately 70%) of journeys on the A385 are through traffic, therefore the potential impact is great, however if we were to progress this option further work on trips would need to be had to quantify the actual benefit.

Cost of option 2: 1

The cost of such a large bypass is likely to be very high due to the technical challenges posed by any route, the need to compensate landowners etc.

Cost effectiveness of option 2: Medium

Whilst this option is possible there would need to be extensive technical feasibility studies undertaken to assess the proposed routes including environmental impact assessments, topographic studies and structural assessments.

Due to the potential cost, impact to the environment, and unquantifiable benefit to air quality it is not felt appropriate to explore this option further at this time.

Totnes option 3: Promotion of public transport alternatives for commuting traffic

The 2012 report highlighted that Totnes is served by railway station enabling journeys to Plymouth, Bristol, London et al. It was recognised that there are times of the day at which the station is not well served. It is not felt that there would be much support Regionally or Nationally to increasing the number of trains stopping at Totnes.

Other work has been carried out previously to increase the use of public transport in neighbouring authority areas (Torbay) and this work should be supported as it would lessen the number of car journeys on the A385. This work has focussed on ensuring that trains between Torquay and Newton Abbot tie-in with trains to Plymouth to make this an attractive option to commuters.

The report also highlights the potential improvements to signage for bus connections to Totnes for visitors to the area.

Air quality impact of option 3: 1

Whilst the promotion of public transport alternatives to private cars will have some positive impacts on car journey numbers it is not believed it will have a great impact, as not all areas are highly served by public transport.

Cost of option 3: 5 - 3

The suggested improvements in signage are likely to be low cost, whilst any increases in services will be of a higher cost and would need to be assessed for their business case.

Cost effectiveness of option 3: Medium to Low

Totnes option 4: Promotion of Ultra Low Emission Vehicles (ULEVs)

This would be carried out in two ways; firstly a policy that required developers to positively plan for the uptake of ULEVs by providing the infrastructure necessary to support charging points at home. This is viewed as good practice by the Institute of Air Quality Management for all new developments.

It would also involve the Council supporting a low carbon economy through providing charging places in their car parks. The Councils have signed up to a project to obtain funding to provide charging points in all of the main towns within the two districts.

Air Quality Impact of option 4: 2/5 (short term) 4/5 (Long Term)

In the short term (i.e. next 5- 10 years) this is unlikely to have a significant improvement to air quality along A385 due to the current low percentage of ULEVs in the fleet of vehicles in the local area.

However the promotion of the infrastructure will allow for a greater uptake in the future of these vehicles which will have the potential to eliminate the vast majority of local air quality problems.

Cost of Option 4: 5 – 3

The cost of installing electric charging points on new developments is fairly inexpensive (£250/ property). The Council is considering the installation of electric vehicle charging points in its car parks, and has signed up to delivering at least 2 charging points in one of the car parks. Four charging points have been installed at Follaton House.

Cost Effectiveness of option 4: Medium to Very High

Totnes option 5: Promotion of Green Travel Vouchers

This is a Devon County Council policy whereby new developments contribute towards a bus service and bike vouchers for new households. The scheme aims to actively encourage households to consider alternative forms of travel to offset their impact.

The uptake of the scheme by households is hard to quantify and therefore the level of off-setting is not determinable, but this is viewed as good practice. It is suggested in Totnes that the scheme should also include the promotion of rail travel to Plymouth and Exeter through the provision of rail cards, further discussions would be needed with the railway companies on this.

Air Quality Impacts of Option 5: 1/5

Unlikely to have a significant impact on air quality as there is not a sufficient benefit to new homeowners to discourage private car use, however the promotion of these vouchers is seen nationally as good practice.

Cost of Option 5: 5/5

The cost of this scheme is fairly low compared to other options outlined above, and is good practice nationally as recognised by the Institute of Air Quality Management.

Cost Effectiveness of option 5: Medium

[Totnes Option 6: Developers to pay for Green Travel Planning](#)

Currently on larger developments developers will offer to undertake a green travel plan for the new development which actively seeks to promote more sustainable methods of transportation with the new householders.

The quality and delivery of these plans has been varied across the various developments that have happened in Devon. As such it is proposed that in future the production of these plans be secured by planning obligation to the local authorities, the types of development where s.106 contributions would be sought needs to be determined but the following would be an indicative list;

- Development that involves the building of 10 or more residential units or a site area of more than 0.5 Ha
- More than 1000m² of floor space for all other uses or a site area greater than 1Ha

Air Quality impact of option 6: 2/5

The potential impact of this option is dependent upon the alternative options available to householders and employees of traveling to and from work and other key journeys. However currently Totnes is well served by a number of bus routes, and is a serviced stop on the South West railway, allowing access to Plymouth and Exeter City centres.

Cost of option 6: 3/5

The cost of delivering green travel plans is currently held by developers. By proposing to make this a planning obligation, this enables a more consistent quality of green travel plans and supports the aim of Plymouth City Council and South Hams District Council to offset the impact of current and future developments on the road network in both areas.

Cost effectiveness of option 6: Low

[Totnes option 7: Compulsory/Voluntary Purchase of the principle at risk residential premises.](#)

Poor air quality is determined based on sensitive receptors being exposed to unacceptable levels of air pollution. Sensitive receptors are determined as being residential dwellings, schools and hospitals.

The Council does have powers to compulsory purchase properties, however the impact on the community of forcing people out of their homes cannot be underestimated, and the health benefit of alleviating the air quality exposure step compared to the socio-economic impact could be viewed politically as being unacceptable.

A more moderate option would be for the Council to write to all of the owners of the properties to offer to purchase their property at any point in the future should they be wishing to sell.

Air quality impact of option 7: 5/5

Should all of the properties exposed to unacceptable levels of pollution no longer be deemed as a sensitive receptor then there would no longer be an Air Quality Management Area needed for the area.

Cost of option 7: 1/5

Due to the number of properties in the area exposed to unacceptable levels (approximately 10) and the house values in this area the cost of implementing this option would likely be in the millions. There would however be an asset in the Council's ownership which could be changed to a less/none sensitive receptor such as offices. It is unlikely that s.106 monies could be used to pay for this option and therefore funding would have to be identified from Council reserves, this seems to exclude this option even if it was preferred.

Cost effectiveness of option 7: Low

Totnes option 8: Improvements to cycling routes and connectivity of hamlets to Totnes by cycling

There are currently a low number of journeys into and through Totnes that are carried out on bicycle, this may be due to topography as well as the lack of identified and maintained cycle routes. There are a number of community organisations with aspirations to improve cycling provision to and through Totnes, some co-ordination of effort by the local authorities would be beneficial in progressing some of these projects.

The aspirational routes include;

- A new cycle path linking Totnes to Littlehempston and other villages north
- A safe and comfortable cycle route linking Totnes and Torbay
- A safe and comfortable cycle route linking Kingsbridge with routes north.
- Increase in number of cycle lanes in and around Totnes

Air quality impact of option 8: 1/5

It is not envisaged that significant journeys will be replaced by improving the cycling routes, however where there is no safe route option then there is no alternative currently but to use private vehicles.

Cost of option 8: 1/5 – 3/5

Further work is required to cost some of these routes, some may only require minimal resurfacing works to road surfaces, whereas others may require purchase of land to deliver an accessible route. Devon County Council does have a Cycling and Walking Strategy and none of the above schemes currently sit within this strategy. The strategy has preference when limited funds from national funding schemes become available. There is the potential

that funding from S.106 agreements could be utilised to pay for improvements to cycling infrastructure.

Cost effectiveness of option 8: Low to Very Low

Totnes option 9: Promotion of cycling for shorter journeys

As previously mentioned there are a number of key issues as to why the uptake of cycling in Totnes is not as great as it could be including the lack of cycle infrastructure and topography. However there are cycle paths and routes linking Dartington with Totnes. Therefore the aim would be to consider the uptake of cycling through:-

- The installation of cycle hoops on the Plains and other key locations around Totnes
- Consider the commencement of an e-bike service to install electric bike docking stations and e-bike hire racks in key locations (near Morrison's, Follaton House, and Train Station).

Air quality impact of option 9: 1/5 – 2/5

Previous transport studies have shown that approximately 70% of the traffic on the A385 is through traffic, with only 30% of traffic having Totnes as a destination for their journey. However with the growth of Dartington and Totnes there is a need to off-set as many short distance journeys as possible.

Cost of option 9: 1/5 – 5/5

The cost of some of the proposed measures varies, the installation of bike hoops is likely to be fairly low i.e. £1000's, whereas the cost of each e-bike hub is approximately £40,000 and in order to have the maximum benefit the scheme would require multiple hubs.

On this basis the cost per user of e-bikes is likely to be very high.

Cost effectiveness of option 9: Medium to Very Low

Totnes option 10: Promotion of and support for community bus schemes

There are multiple community bus schemes in the area of Totnes however the main scheme is known as Bob the Bus. This operation is well supported with a large number of volunteer drivers and a number of diverse routes in the local area.

Currently the service only runs 5 days a week Monday- Friday and only between the hours of 09:00 and 16:30. There is an aspiration by the charity that they expand their services to cover additional days and extend their hours, however this would require additional funding.

There a number of villages in close proximity to Totnes whose residents rely on Totnes for services which currently are poorly serviced by bus provision and therefore utilise private cars and taxis for journeys to/from Totnes.

There is also concerns over the impact of proposed regulatory changes to community bus companies due to the current exclusion of needing a full licence to operate possibly being changed.

This option would look at securing funding for Bob the Bus and other bus providers from new developments to support the extension of the bus network for a period of time with the hope that the new routes become self-sufficient.

Air quality impact of option 10: 1/5 – 2/5

Previous transport studies have shown that approximately 70% of the traffic on the A385 is through traffic, with only 30% of traffic having Totnes as a destination for their journey. However with the growth of Dartington and Totnes there is a need to off-set as many short distance journeys as possible.

A low cost bus service which is convenient to use and cheaper than private car and parking use may help to alleviate this burden.

Cost of option 10: 2/5 – 3/5

The cost of support is likely to be in the 10's,000 but this will depend on the scale of the route proposed and the likely number of passengers who will use the service.

Cost effectiveness of option 10: Very low to low

[Shortlist of options for Totnes](#)

In the short term a study should be undertaken by Devon County Council to consider the safety and designs for the possible pedestrian improvements identified. Also working with neighbouring authorities, the community and cycling organisations a local cycling strategy should be devised so that funding can be sought and allocated where appropriate.

There is the potential for greater use of cycling for short local journeys within Totnes and the immediate area, therefore we need to consider what infrastructure is available to support cycling through the consideration of the installation of cycling racks and e-bike hubs.

The government has been forthright in their promotion of ultra-low emission vehicles and their roadmap to zero carbon emissions from transport. We will seek to support the uptake of electric vehicles through the provision of electric vehicle charging points in our car parks and requiring points on all new housing developments.

There is no intention to consider further the option of compulsory/voluntary purchase at this time. Nor are we considering further the by-pass proposals for Totnes due to the cost and environmental damage caused by the proposals.

Air Quality Action Plan for Totnes

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date
1	Carry out a review of pedestrian crossing points on the A385 corridor and associated highway locations.	Traffic Management and Promoting Travel Alternatives	Promotion of walking	DCC	2019	2020	Carry out a safety and design review of the proposed crossing locations.	Some modelling work done on some of the options have shown a moderate beneficial impact on air quality.	2020
2	Installation of an Electric Vehicle Charging Points within Council car parks	Reduction in Emissions	Other	SHDC	2019	2020	Install two evcp within one of the Totnes Public Car Parks	Grant application made to fund the installation of the EVCP.	2020
3	Promotion of alternatives to private car use through the use of green travel vouchers	Alternatives to Private car use	Other	SHDC	2019	2020	Delivery of green travel vouchers and appointment of green travel planner for new developments.	Conversations had with a green travel planning co-ordinator to estimate costs of a post so that planning contributions can be sought.	2020
4	Installation of bike racks and e-bike hubs in key locations to promote cycling usage to replace short journeys.	Promoting Travel Alternatives and Transport Planning and Infrastructure	Promotion of cycling and Public Hire Schemes	DCC	2019	2021	Delivery of cycle hoops on the Plains in Totnes. Discussions with an E-bike provider to look at installing e-bike hubs at the following locations:- The Plains, Totnes The train station Follaton House Shops at Dartington	The cycle hoops are procured just awaiting installation. Conversation had to get estimates for price of e-bike hubs est. £40,000 per hub.	2022

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date
5	Seeking contributions to support additional community bus routes	Transport Planning and Infrastructure	Bus Route Improvements	SHDC/DCC	2019	2019	Additional bus routes being offered by Bob the Bus and other Community Bus Companies	Conversation with Bob the Bus to seek to support the development at Baltic Wharf, Totnes for a period of 5 years.	ongoing
6	Development of a regional cycling strategy to consider infrastructure improvements	Transport Planning and Infrastructure	Cycle network	SHDC/DCC	2019	2020	Development of a cycling strategy for adoption so that s.106 and other funding can be secured to deliver the infrastructure	Meeting organised with DCC, Torbay Council, Teignbridge District Council, South Hams District Council and Sustrans to gather initial thoughts and aspirations towards delivery of new regional cycling routes	2025