



Meeting: Transport Working Party

Date: 13th August 2015

Wards Affected: All Wards in Torbay

Report Title: Policy for Replacement of Signalised Junctions

**Executive Lead Contact Details: Councillor R Excell, Executive Lead for
Community Services**

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1. Purpose

1.1 To recommend a policy to consider whether current signalised junctions in Torbay could be replaced with alternative junction arrangements, such as roundabouts

2. Proposed Decision

2.1 That the junctions identified in item 5.7 to this report are considered for replacement with an alternative arrangement, such as a roundabout, as future funding initiatives or when the existing signal apparatus has reached the end of its residual life., and

2.2 That signalised crossings identified in item 5.8 are considered in the same manner for replacement with lower maintenance crossing options such as Zebra Crossings.

3. Action Needed

3.1 Once a recommendation is obtained from this Working Party, any approved schemes will be considered within future funding opportunities.

4. Summary

4.1 The Mayor of Torbay has requested that the use of signalised junctions within Torbay is reduced and considered for replacement with roundabouts or similar arrangements.

4.2 A desktop study was carried out by Highways Officers in 2014 and presented to the Mayor for information.

4.3 There is currently no funding in place for a programme of replacement of Traffic Signals, however signal apparatus has a residual lifespan, following which they will require replacement to avoid becoming a future maintenance liability.

Supporting Information

5. Position

- 5.1 A study has been carried out on existing sites where traffic signals are present, either acting as signal controlled junctions or as signal controlled crossings. The purpose of the study is to ascertain whether any of the sites can be considered for future schemes to remove the traffic signal apparatus and replace with options that provide equivalent or improved traffic flows with less of a maintenance burden to the Authority.
- 5.2 For junctions, the consideration is whether existing signals can be replaced with a roundabout or similar arrangement. This has been done previously to the junction of Cadewell Lane and Newton Road in Torquay, where the signals reached the end of their residual life and, due to more recent changes to local traffic flows were no longer deemed the most appropriate means of controlling traffic. The junction is now a mini-roundabout, which has worked successfully since implementation.
- 5.3 Unfortunately there are a number of issues that also need to be considered when looking at whether traffic signals could be replaced. They include, but are not restricted to the following.

Pedestrian facilities. Pedestrians find roundabouts very difficult to cross and on many junctions controlled pedestrian phases are built into the signals. This is particularly relevant to major roads and high pedestrian usage areas such as Town Centres and Schools.

Visibility. Where inter-visibility between arms of a junction is restricted there is no opportunity for a roundabout to operate.

Balanced traffic flows. Roundabouts operate more efficiently where arms of a junction have similar traffic flows. On the major flow route, drivers can start to ignore vehicles from minor arms when using a junction frequently as they get used to not having to give way. Also flows on arms to a roundabout assist in creating gaps to the traffic around the roundabout.

Junction layout. Roundabouts require approaches to provide some form of deflection on the approaches to reduce speed and place a vehicle in the correct position to see approaching traffic. Where junction arms converge at unusual angles to a junction, or where space is limited, roundabouts can be technically unworkable.

Available Space. The space required for roundabouts is dependent on traffic flows and inter-visibility. Whilst mini roundabouts can be used in some instances, they are not suitable for more heavily used junctions and often signalised junctions can provide equivalent or greater capacity to a roundabout in a much smaller area.

- 5.4 For crossings the consideration is whether a signalised crossing can be changed to a zebra crossing or a non-controlled crossing. Again there are a number of issues to consider:

Pedestrian usage. Where pedestrian usage is high, crossings should be signalised. If a zebra crossing is used in these instances then a continuous flow of pedestrians would cause increased traffic problems. Signalised crossings can regulate high pedestrian flows.

Speed of road. On roads where 85th percentile speeds are above 35 mph, signalised crossings should be used.

Visibility. There are instances where crossings do not allow easy visibility to a waiting pedestrian, but signals may be more visible.

Vulnerable users. Certain vulnerable users prefer signalised crossings as there are visual tactile and audible facilities that can be added to aid the crossing of a vulnerable user.

- 5.5 In terms of evidence of safety, there is no evidence to suggest that a signalised crossing is any safer than a zebra, however this assumes that the appropriate crossing is in place taking all site issues into consideration.

5.6 **Study**

The study forms an assessment of each site using the site constraints, usage and age of the signals. It is noted that in the majority of instances there is no technical case to support the removal of signals, however areas that are deemed as possible are identified in more detail below. All sites would in any case require further investigation, including some traffic modelling by the Council's partner consultant to show whether there are any likely traffic flow issues. All sites would also benefit from a business case prior to considering further. The age of the signals is also considered as there would be little business case in removing signals when they are relatively recent, however aging apparatus does become more of a maintenance burden on the authority.

5.7 **Signalised Junctions Considered Possible for Change**

Hele Road/Broomhill Way

This junction serves two retail areas and is in close proximity to the Lowes Bridge Junction. It does suffer from congestion at peak times although this is often due to queuing back from Lowes Bridge.

There are no controlled pedestrian facilities here, although there are fairly well used uncontrolled crossing points.

It is however likely that due to the nature of the approach roads, any roundabout here would require some additional private land acquisition. The junction and signals were however only implemented around 15 years ago and are therefore still well within their useful lifespan.

It is therefore recommended that the junction should be looked at as a long term option as there is little advantage in the short term.

Torbay Road/Rathmore Road, Torquay (Grand Hotel)

The junction was implemented in 1987 and previously worked as non signalised junction with a gyratory rather than a standard roundabout.

Whilst this would technically work as a roundabout it would mean that the existing signalised crossing outside of the Grand Hotel, which forms part of the junction, may need to be relocated or removed, which may cause issues due to the relatively high pedestrian use in the summer season. In addition thought will need to be given to the position of the bus stop, as this currently sits within the junction and would not work within a roundabout.

Modelling of the junction would also be required to show whether the limited movements out of Rathmore Road, especially towards Paignton, would impact on the success of any roundabout system.

The junction has already been recommended as a study area for short term improvements and a further report on this location is to be presented to the Working Party.

Esplanade Road/Garfield Road, Paignton

The apparatus here dates back to 1983. Garfield Road is a one way street joining Esplanade Road. There are no controlled pedestrian crossing facilities, although pedestrian movements are high in the summer season.

The presence of a one way street has the disadvantage that there will be no vehicle movements into Garfield Road, which means that northbound traffic would have unopposed flows and could result in increased speed and potential ignoring of the roundabout. Also at busy times the free flow of northbound traffic could increase queuing at Garfield Road.

Whilst this technically could work it is likely that pedestrians would be disadvantaged when crossing the junction and as such this may detract from the maintenance savings which would be made from not replacing these aging signals. It is therefore recommended to carry out a brief study prior to the replacement of signals

Brixham Road/Borough Road, Paignton

The apparatus is relatively recent (2002) and the junction has recently been widened as part of the Western Corridor Improvements.

Whilst a roundabout is technically workable it would again be likely to be much larger than the footprint of the existing junction and requiring some additional land. The junction had pedestrian phases added on upgrade to give improved pedestrian connections between the Roselands area and the nearby Paignton Community College and the available retail options.

Whilst this can work as an option it is not considered to be a junction that would benefit in the longer term and would not be recommended at this stage. Also there is the likelihood of further development in the Claylands site, which may require access into this junction in some form.

5.8 Signalised Crossings Considered Possible for Change

Belgrave Road/Church Street, Torquay

The signals date from 1986 and serve the shopping area in the higher part of Belgrave Road. The pedestrian flows are not particularly heavy and under current guidelines would not have been installed in its current location due to the close proximity of the junction.

It is recommended that if the lights are considered for replacement that a zebra crossing is considered. The road width will however need to be narrowed to accommodate this.

Torquay Road/St Pauls Road, Paignton

This was upgraded in 2003 and serves to A3022 through Preston.

The crossing is well used although not too high for a zebra crossing. The road would need to be narrowed to accommodate a zebra and may be considered to the disadvantage of a number of vulnerable users in this area.

It is recommended to consider a change in the long term if signals require replacing.

Esplanade Road/Lower Polsham Road, Paignton

This was upgraded in 2003 and serves a desire line for pedestrians accessing Paignton Sea Front via Lower Polsham Road, which includes some Hotels and the Parkfield Centre.

The pedestrian flows would be likely to support a zebra crossing, subject to the narrowing of the road.

It is recommended to consider a change in the long term if signals require replacing.

Middle Street, Brixham

Installed in 1993, this connects Middle Street shops to the Central Car Park. The current pedestrian flows are likely to support a zebra crossing, however this could change if the car park area is redeveloped in the future.

It is recommended that change should be considered on replacement or as part of any future redevelopment.

Pimlico, Torquay

This was established in 2000 as part of the Union Street Pedestrianisation scheme. The road is one way and fairly narrow. Whilst there are a number of vulnerable users in this area, a zebra crossing would be appropriate in this location.

It is recommended to consider a change this to a zebra crossing when signals require replacement in the future.

Lymington Road, Torquay

The crossing was established in 1982 and connects pedestrians to the Innovations Centre and Coach Station. Pedestrian flows are not particularly high and the site would support a zebra crossing provided the road is narrowed slightly.

It is recommended to consider changing this crossing to a zebra crossing when signals require replacement.

Lymington Road/Wrights Lane, Torquay.

This crossing was added relatively recently in 2006 as part of a safety scheme. The addition of the speed camera and light traffic calming has reduced speed and collisions in this area and as such a signalised crossing may not now be the most appropriate solution.

It is therefore recommended that this crossing could be considered for change to a zebra in the long term, but the equipment in place still has considerable residual life at present.

Hele Road/Truro Avenue, Torquay.

This Pelican crossing was established in 1996. It is in close proximity to a more modern crossing on the same road and does not have a particularly high pedestrian flow. The conversion to a zebra crossing was recommended as part of the recent Hele and Combe Pafford Traffic Action Zone, however the Community Partnership were not in favour of the change based on the usage by vulnerable users. There is also an issue as to whether the footways would support the Belisha Beacons.

It is recommended to reconsider this location when the apparatus requires renewal.

6. Possibilities and Options

- 6.1 **Option 1** – That the traffic signals at the sites identified in items 5.7 and 5.8 to this report are considered for replacement in the future.

6.2 **Option 2** – That the Traffic Signal Junctions identified in item 5.7 to this report only, are considered for replacement in the future.

6.3 **Option 3** – That the signals are not considered for replacement.

7. **Preferred Solution/Option**

7.1 That Option 1 is progressed as part of future funding opportunities.

8. **Consultation**

8.1 Consultation with affected stakeholders will be carried out as part of each individual site study, with the results being presented to future working Party meetings for a recommendation on progression and implementation.

9.0 **Risks**

9.1 Whilst computer modeling will be carried out on any proposed junction site as part of a detailed investigation, the implemented scheme may not deliver improvements to the flow of traffic.

9.2 The replacement of traffic signals at junctions or crossings may show an increase in future road traffic collisions and pedestrian collisions.

9.3 Detailed studies of the sites identified in this report may prove that traffic signals are the appropriate method of controlling traffic.

9.4 Future funding opportunities for these schemes may not be forthcoming.

Appendices:

None.

Additional Information:

None.

Documents available in Members' Rooms:

None.

Background Papers:

None.