

Exeter HATOC – Report from the Congestion Management Working Group

Report of the Head of Highways and Traffic Management

Please note that the following recommendation is subject to consideration and determination by the Committee before taking effect.

Recommendation: It is recommended that the report is noted.

1. Summary

This report updates this Committee on the workings of the Congestion Management Working Group.

2. Background

The Working Group was set up in November 2009 by this Committee to consider various congestion related issues in the City. An update was given to this Committee in November 2011. The group has met twice in the last year, and agreed at the last meeting that the notes of those meetings should be brought before the Committee. These notes are attached at Appendix I and II.

Additionally the Group asked that two specific items be brought to this Committee on Resident's Parking and Park and Change.

3. Resident's Parking

Members will recall that this Committee last considered priorities for Resident's Parking in November 2010, and that the following locations should be considered for Resident's Parking when resources permit.

1. Burnthouse Lane near Doctors' Surgery – because of Hospital commuter parking.
2. Crossparks and Whipton Lane – because of Hospital commuter parking.
3. Fore Street Heavitree area – because of Hospital commuter parking.
4. Toronto Road – because it's near city centre.
5. Polsloe Road – because of displacement from neighbouring scheme.
6. Polsloe: St Johns Road, Commins Road – because of displacement from neighbouring scheme.
7. Alphington area – because of Marsh Barton Industrial Estate.
8. Wardrew Road – because of changes to School Access.

A scheme for Toronto Road has been implemented.

The Committee may wish to indicate which of the identified schemes are considered the most important to local Members.

The Congestion Management Working Group was concerned about the amount of parking problems being caused near the RD&E hospital. It was agreed that the Chairman would meet with representatives from the RD&E to discuss the issues and see if any solutions were available. The Chairman will provide a verbal update of this meeting at the Committee.

There is no dedicated funding stream identified for introducing Resident's Parking Schemes. Individual schemes for Residents Parking will need to be assessed against many competing priorities for the available budgets. Potential sources of funding include:

On Street Parking Account – Competing priorities include new Pay and Display schemes, school crossing patrols, and Park and Ride running costs. The inclusion of Pay and Display parking within a residents' parking scheme would assist in justifying its priority for funding from this source;

Local Transport Plan – Potential schemes would need to demonstrate that they contribute towards the objectives of the Local Transport Plan, e.g. supporting the local economy, promoting better health etc.

Developer funding – As with the University area and Toronto Road, development proposals impacting on parking arrangements may provide the opportunity for S106 contributions towards the introduction of Residents Parking Schemes.

4. Park and Change

Park and Change was included in the 2011 to 2026 Devon and Torbay Local Transport Plan. Compared with Park and Ride, the concept aims to provide a wider variety of travel options for people travelling into key employment and retail centres. Park and Change sites will benefit those who do not live close to an existing bus route and do not want to drive the full distance to their destination in Exeter. People may choose to park and catch a local bus, park and carshare or park and walk or cycle.

Using Local Sustainable Transport Funding (LSTF), Devon County Council's consultants are currently undertaking a study, which will identify a range of park and change options for Exeter, Newton Abbot and Totnes. To date, the work has included a map based study to identify key corridors and catchments using travel to work data. It has identified potential sites along these routes and an evidence-based scoring system has been developed to assess the advantages and disadvantages of each location. This takes into account the potential for use, deliverability of the site and opportunities for car share, bus, cycle or walk and provides a methodology for exploring further options elsewhere in the county.

In Exeter, the A377 Cowley Bridge Road northern approach to the city, which serves Tiverton (A396) and Crediton (A377) is being investigated. This is in line with the Local Transport Plan aspirations, which has recently become more important following the changes to New North Road and the desire to limit the amount of city centre traffic passing through the St James' area. Historically, flood constraints have meant that it has been difficult to find any suitable sites in close proximity to this corridor. The revenue costs associated with running a traditional park and ride site are likely to be substantial on this route, taking into account the lower traffic levels and lower patronage levels compared to other Park and Ride corridors. It is recommended that, where possible, existing bus services are used to serve the site. The proximity to St David's Station also offers opportunity for park and cycle for onward rail travel both within the city and to the rest of the country.

The park and change sites that are being investigated are small scale, low cost and are likely to be delivered through co-operation from local businesses or landowners who have existing land or car parks where typically there is capacity during the working week, e.g. public houses. Depending on the location, small scale facilities may be provided such as secure cycle parking, security cameras, bus waiting areas and signing to enhance the attractiveness of the sites.

There is anecdotal evidence which suggests that some areas along the Cowley Bridge corridor are already being used for park and change on an informal basis. These areas will also be evaluated in line with the strategy.

The first phase of the work is due to be complete by the end of the year. The second phase of work will explore the legal and practical issues of providing the sites, involving discussions and negotiation with landowners. Longer term, we will need to develop an effective branding and marketing strategy to promote the use of the sites. We will also be looking for potential opportunities in conjunction with development sites

There is LSTF and LTP funding available for future years to progress this work.

5. Legal Considerations

There are no specific legal implications.

6. Risk Management Considerations

No risks have been identified.

7. Reason for Recommendation

To inform Members as to the progress of the Working Group.

Lester Willmington
Head of Highways and Traffic Management

Electoral Divisions: All Exeter

Local Government Act 1972: List of Background Papers

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Background Paper	Date	File Reference
1. Minutes of Exeter HATOC	November 2008 November 2009 November 2010	

tm301012exh
sc/cr/congestion management wg
03 301012

Exeter Congestion Working Group

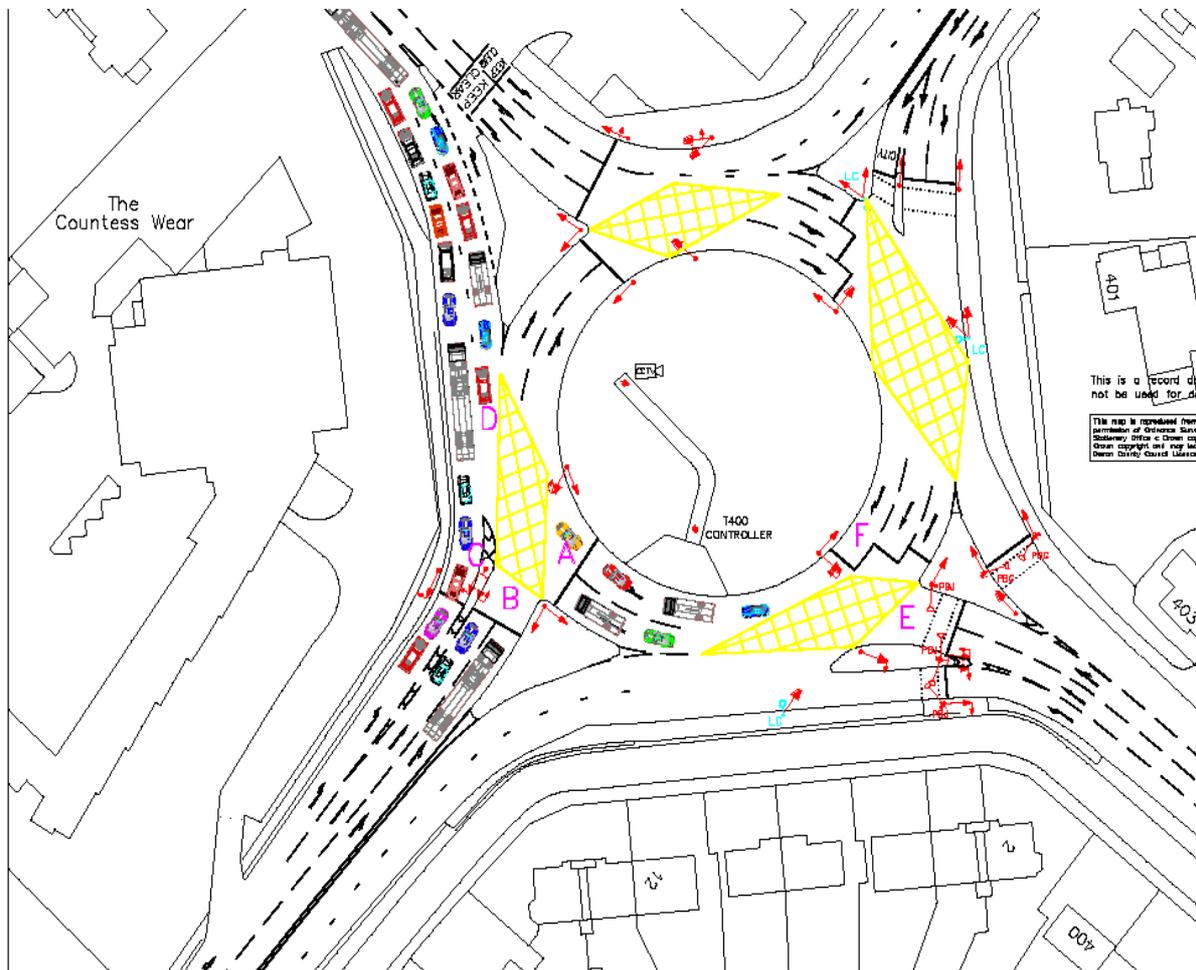
Wednesday 8th February 2012 at 15.30
Clinton Room, County Hall

Minutes

No.	Decision or Action or Message	Who?	When?	Who needs to be told?	Action completed?
	<p>Attendance Councillor Leadbetter (Chair), Councillor Newcombe, Councillor Brock, Councillor Taghdissian, Meg Booth, Dave Huxham, James Anstee</p> <p>Apologies Councillor Spence</p>				
1	<p>Previous site visits to congested junctions</p> <p>(a) Livery Dole – No further action</p> <p>(b) First & Last Cowick Street – meeting had been held with Councillor Hannaford and Stagecoach, to look at location of bus stop. Agreed to investigate moving the bus stop marking by a few metres, but otherwise monitor only concerns raised.</p> <p>(c) Red Cow Crossing – works identified completed, but a request for information about what is happening at St Davids Station, to report to next meeting.</p> <p>(d) Exe Bridges – bus lane – agreed to bring an update report to next meeting about the use of bus lanes on Exe Bridges as well as more information about the Exeter bus priority system (green wave at signals) and SCOOT</p>	DH MB MB	July '12 July '12 July '12	Working Group Working Group Working Group	
2	<p>Part Time Traffic Signals</p> <p>Group reviewed the previous discussions about Countess Wear, and agreed not to progress trial. Previous paper on the subject was asked to be recirculated, and a copy is appended to the end of these notes.</p> <p>Discussion then focussed on the usage of alternative routes to bypass Countess Wear Roundabout, and agreed that this would be discussed at the next meeting.</p>	MB	July '12	Working Group	
3.	<p>Flashing Amber at Portsmouth</p> <p>Still no progress on this – monitor and report back to Group if scheme progresses.</p> <p>Query raised on how the loops at traffic lights work, on right hand filter lanes work. Agreed to report to next meeting.</p>	MB	July '12	Working Group	

No.	Decision or Action or Message	Who?	When?	Who needs to be told?	Action completed?
4.	<p>Green Light on Main Routes and Signal Faults</p> <p>Agreed no further action from previous response reported at HATOC.</p> <p>Issue raised about the functioning of Southbrook Road/Topsham Road traffic lights and the pedestrian crossing.</p> <p>Issue also discussed about the green filter arrow and the detectors at Alphington St into Haven Way clarification to be provided.</p>	<p>MB</p> <p>MB</p>	<p>July '12</p> <p>July '12</p>	<p>Working Group</p> <p>Working Group</p>	
5.	<p>Traffic Signal Upgrade</p> <p>Explained that priority for replacement in Exeter was partly based on waiting for DfT authorisation for different traffic lights and the red light violation cameras. As we upgrade the TLs, the lamps are changed from the old 50W to the new LED, which use less electricity, and have low current flow, so any slight fluctuation causes monitoring issues, hence the DfT authorisation. If this isn't resolved then the priority will be for replacement pedestrian crossings. Agreed to advise effected local members once schemes identified.</p>	<p>DH</p>	<p>Aug '12</p>	<p>Effected Councillors</p>	
6.	<p>Items for future Meetings</p> <p>Items as identified above</p> <p>Pinhoe corridor and concerns.</p> <p>New P&R at Alphington (Ide Roundabout) what is the latest?</p> <p>Proposed development near existing P&R what is the situation regarding new development and the Teignbridge Core Strategy and what are the impacts going to be for the Alphington Rd corridor?</p>				

Traffic Signals and Exit Blocking at roundabouts



History

The above plan shows the current layout of Countess Wear roundabout. The signals were first commissioned on 27 June 1991, in response to concerns of safety, particularly relating to vulnerable road users and speed, and a perception from certain motorists that they were being prejudiced against due to unequal queue lengths and delay times on the various approaches.

When the signals were installed, the Bridge Rd approach, and approach from Topsham were widened, and the left turn movements segregated. The central island was made smaller to make the straight ahead movements easier. Today these changes to the kerb lines would cause safety concerns without the signals being present.

As a roundabout the junction operated well, out side the peak periods. In the evening peak the junction coped with the traffic flows, but was virtually impossible to cross as a pedestrian, and in the morning peak was a horribly congested "free for all", due to the exit blocking from Topsham Rd (inbound)

Change

Has anything changed that would remove the reasons why the signals were installed?

There have certainly been changes that would have influenced the decision making process, but I believe the conclusion today would still be the same.

Traffic flows have changed in the morning peak. In the 1980s the outbound flow on Topsham Rd was lower than it is today. The junction was exit blocked inbound, and there were queues on Rydon Lane, Topsham Rd and Bridge Rd. A fundamental feature of roundabout control is “give way to the right”. With lower flows coming out of the City, it was easy for Rydon Lane traffic to enter the roundabout, but this traffic could not leave the roundabout because of the exit blocking. This resulted in queuing on the roundabout, making it very difficult for traffic to join from Topsham. Because of the need to “give way to the right”, Bridge Rd traffic had to give way to traffic from both Rydon Lane and Topsham, and so always experienced longer delays.

Today, an increase in outbound traffic flow on Topsham Rd may well counteract the effect of Rydon Lane traffic taking over the roundabout, so there may be fewer problems for motorists than there used to be in the morning peak, but the problems for pedestrians seem to be increasing year on year as general traffic growth and peak spreading leads to increased traffic flows at off peak times.

Bridge Rd southbound has been narrowed to a single lane to allow for a cycle lane. This has caused problems in the afternoon, evening peak and at weekends, as the restricted capacity of the road means that Bridge Rd now exit blocks Countess Wear roundabout as well.

Exeter has actively promoted walking and cycling and consequently the number of pedestrians and cyclist have increased. Pedestrians are more reluctant to use footbridges than in the past, and society has adopted an approach to the highway of “design for all” rather than design for the majority. There are more pedestrians and cyclists at this junction than there were 20 years ago.

Roundabouts and yellow box markings

Direction 35 of the TSRGD prohibits the use of yellow box markings on roundabouts. An explanation is given in paragraph 8.39 of Chapter 5 of the Traffic signs manual. Yellow box markings are permitted on roundabouts under traffic signal control.

Yellow box markings on roundabouts would present a number of difficulties.

1. Give way to the right.

A well understood rule of roundabout operation is priority to the right. In the instance where a roundabout is exit blocked, a yellow box marking raises the question, who has right of way? I suspect that the legal answer would be traffic on the roundabout, but common sense says that if traffic on the roundabout can not move, then motorists entering the roundabout should have right of way, a direct contradiction. Thus legally a yellow box marking on a roundabout creates a situation that the motorist can misunderstand, is difficult for the police to enforce, the CPS to prosecute, and the County Council to defend if legal action is brought against it.

2. Yellow box markings on roundabouts raise safety concerns when the roundabout is exit blocked.

Vehicles on the roundabout give way to those entering the roundabout because they can not move forward. Vehicles entering the roundabout assume right of way, so a situation arises where queuing traffic is stationary on the roundabout with entry traffic in free flow, as shown on the plan above.

Motorcyclists or cyclists approaching from points E and F to exit at D will be making their way through stationary traffic, possibly high side vehicles. As a consequence these vulnerable road users may be obscured by vehicles, and so not visible to traffic entering the roundabout. The

vulnerable road users have right of way, and as they are on small vehicles can exit the roundabout. They will attempt to push their way across the traffic entering from B which can lead to accidents, which can be serious as they involve vulnerable road users.

Eventually the exit blocking will clear, and the motorists at A will want to move, but they are now faced with a stream of traffic entering across the front of them from B and C. This causes frustration as motorists at A perceive that motorists from C are pushing in front of them. At the same time the entry traffic is now free flowing and motorists entering from B may be “racing” to get through the roundabout before the circulating traffic starts to move. The consequence can be collisions as the circulating traffic tries to regain control of the roundabout, some of which can be T-bone type collisions which have a high severity rating.

Differences between signalled and ordinary roundabouts

Standard roundabouts are designed to provide capacity and safety by using priority operation, and balancing safety and capacity by the deflection and approach widths provided. Deflection is the principal of focusing the motorists attention on the central island, and aligning the approach in such a way, that motorists slow down when approaching the roundabout. Consequently they enter the roundabout at an appropriate speed.

This can only be achieved with narrow approaches, particularly at smaller roundabouts. Provided traffic flows are well balanced across the approaches to a roundabout, the roundabout will accommodate high traffic flows in an efficient manner. When congestion builds at a roundabout the way to address it is by increasing the number of approach lanes, and the width of the circulating carriageway. This is fine provided deflection can be maintained.

Unfortunately at smaller roundabouts, 3 lane approaches frequently lead to a loss of deflection. Thus at quiet times of day, some motorists ignore lane markings, and “straight line” the approach so they can enter the roundabout more quickly, sometimes so quickly that they collide with vehicles already on the roundabout, or are unable to exit the roundabout safely.

Signal controlled roundabouts are designed to provide capacity with multi lane approaches, and alignments that are much straighter, to provide better traffic flows through the junction. The presence of the red signals provides the speed control, and hence the safe operation.

So signalling a roundabout allows capacity to be added in a safe manner, but the safety timings associated with signal operation result, in slightly slower response times for motorists than priority operation would, but overall a signalled three lane approach should provide more capacity than an uncontrolled 2 lane approach.

Signal failure

During signal failure, we receive complaints from the public, some indicating they prefer the roundabout without signals, some indicating they do not.

The general observations are that pedestrians and cyclists find the junction harder to negotiate and motorists find the junction easier to negotiate.

The views of pedestrians and cyclists are self explanatory.

The views of motorists can be interpreted in different ways. The usual response is that “it is always better with the lights off”. In reality it depends on the time of day, which approach a motorist is using, and how competent that motorist is.

More cautious motorists prefer the signals as they take the decision making away from the motorist. Making the highway harder to use for the less mobile, or less confident, could ultimately lead to increased social services costs if alternative provision has to be made for these users.

When the junction reverts to roundabout operation, if the traffic flows are well balanced, then I would expect to see an improvement in traffic flow, due to capacity being maximised, unfortunately this comes with an unacceptable loss in safety.

Exit blocking also has an effect on the roundabout operation, and this can lead to queues on the various approaches being longer, shorter, or unchanged, depending on how traffic queues on the roundabout.

Trials

Trials have been suggested to see how the junction operates without signals. There are a number of issues that would have to be addressed before this could happen, it is not just a case of switching off the lights. Such a trial would have to be treated as a new scheme.

Any trial should last long enough to be meaningful, probably 3 or 4 months and take place during the end of the summer months and autumn so as to cover a variety of different traffic situations. It should set down measurable parameters that can be compared in a before and after study, and have a clear objective of how it will cater for all road users.

Before any trial, decisions would have to be taken on the final layout of the junction if signals were to be removed on a permanent basis. For example if yellow box markings are deemed unacceptable on a roundabout they should be removed for any trial. If it is deemed that approaches have to be narrowed, and the central island widened to provide deflection, then this should be achieved with traffic management measures before such a trial. A risk assessment and safety audit of the temporary arrangements should be undertaken. The signal heads that have to be bagged over should be identified.

During a trial the stop lines should be removed and replaced with appropriate roundabout markings. Signing should be erected to indicate that a trial is in place and the safety of all road users should be monitored by the HOCC, Road Safety and Safety Audit teams.

Any trial or permanent change will require funding. If funding is not available for the permanent changes required, then there is no point wasting money on a trial.

Once the signals are switched off, the pedestrian crossing on the Topsham Side of the roundabout will not be operational. Any trial would have to include mitigation measures for the loss of this crossing.

It will be harder for pedestrians to cross the Rydon Lane arm of the roundabout with the signals switched off.

Conclusions

There are significant differences between the design of signalled and ordinary roundabouts, and it is unlikely that switching off the signals at Countess Wear roundabout will be acceptable, without changes to the roundabout design.

Trialling the roundabout without signals is not a simple case of switching off the signals, should be done in a formal manner to demonstrate differences between the two methods of operation, and will attract a cost.

Public opinion is mixed on the issue, which is often the case involving highway design and operation. Any decisions on the operation of the junction should take account of all public and professional opinion, no matter how contrasting, and should not be unduly influenced by the media.

Exeter Congestion Working Group

Tuesday 3rd July at 10am
Roborough Room, County Hall

Minutes

No.	Decision or Action or Message	Who?	When?	Who needs to be told?	Action completed?
	<p>Attendance Councillor Leadbetter (Chair), Councillor Newcombe, Councillor Brock, Councillor Westlake, Meg Booth, Dave Huxham, James Anstee</p> <p>Apologies Councillor Spence</p>				
1	<p>Actions from the last meeting not on agenda</p> <p><u>First & Last Cowick Street</u> Agreed to move Bus stop markings about 1 to 2 metres post resurfacing work</p> <p><u>Traffic signal Upgrade</u> Two priorities identified for this year in Exeter are: Pynes Hill/Rydon Lane Sweetbriar Lane Junction</p>	DH	4/7	Contractor	
2	<p>St David Station Update</p> <p>Network Rail are looking at upgrading the station forecourt, but this needs to be commercially acceptable</p> <p>Request to keep Red Cow crossing barrier operation on the agenda for future meetings.</p>	MWB	Next meeting		
3.	<p>Exe Bridges and the use of bus lanes</p> <p>Study being pursued in 13/14 financial year looking at the area from New Bridge St/Fore Street and looking at the wider impact of traffic management changes to improve bus timetabling.</p>				

No.	Decision or Action or Message	Who?	When?	Who needs to be told?	Action completed?
4.	<p>Exeter Bus Priority and SCOOT</p> <p>3 main corridors with SCOOT, Heavitree Road, Exe Bridges and Alphington Road. The system works simply on local loops in the road which give priority by inhibiting extensions on the other arms of the junction, and demand on the through route can be increased by 10 to 12 seconds. TCS looking at a new system which would be GPS based, further information being available in 2013.</p>				
5.	<p>Countess Wear Roundabout</p> <p>Discussed the issue of traffic using alternative routes to avoid Countess Wear, agreed to monitor, particularly with the changes that will occur with the development of the Bridge Road scheme.</p>				
6.	<p>Update on Southbrook Road/Topsham Road Traffic Lights</p> <p>Discussed the issues of the exiting from Southbrook Road, and the fact that the ped crossing is linked to the traffic lights, so that as soon as the lights go red for Topsham Road traffic the ped crossing lights also go red, restricting about 3 vehicles from exiting. Consequence is vehicles short cutting the lights by using the service roads. Consideration being given to a scheme being funded from the LSTF for resolving this.</p>				
7.	<p>Update on the green filter at Alphington Street into Haven Road</p> <p>The green filter runs on every other cycle, but is triggered by vehicles being on the loops in the road, if a vehicle has moved beyond the Stop line the system no longer sees it.</p> <p>No pedestrian phase on the lights – why not ? (VN)</p>	MWB	Next meeting	Working Group	
8.	<p>Pinhoe Road Corridor concerns</p> <p>Exhibition Way link – reporting to Cabinet in July. LIS diversion onto Longbrook Street is effecting the Polsoe Road junction – can this be looked at? (RW)</p>	MWB	Next meeting	Working Group	

No.	Decision or Action or Message	Who?	When?	Who needs to be told?	Action completed?
	Pedestrian crossing in Black boy Road for the Nichols centre – is it needed any more? (RW)	MWB	Next Meeting	Working Group	
9.	<p>Alphington Park and Ride an update</p> <p>Advised that the planning application was on hold awaiting ECCs consultation on Site Allocations and development management DPD. Consider options to reduce overall cost and also to reduce the footprint and the impact on the green space. Community meeting being arranged for Alphington shortly, to be organised by ECC but facilitated by DCC.</p> <p>Name of officer dealing to be supplied to VN</p> <p>Discussion on Park and Change with request for report to HATOC in November</p>	MWB	6/7	VN	Completed.
10	<p>Impacts of development on the Alphington Road Corridor</p> <p>As above.</p>	MWB	8/11	HATOC	
11	<p>Review of residents Parking – (Reference from HATOC 19th April)</p> <p>General discussion on parking related issues near the RD&E. Request for item on HATOC in November to be linked to the Park and Change report above.</p> <p>AL to organise meeting with RDE to discuss problems being caused</p>	MWB	8/11	HATOC	
12	<p>Other items</p> <p>Sainsbury Junction, Alphington – no pedestrian phasing – why not? (VN)</p> <p>Ebrington Road, Pedestrian crossing, the waiting time is >1 minute Is this correct? (VN)</p> <p>Agreed the group should meet 3 times a year, with the next meeting being in November.</p> <p>Agreed to take the notes of the Group to HATOC.</p>	AL	8/11	HATOC	
		DH DH		VN VN	