Portsmouth Cycle Forum
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Traffic Light Controlled Junctions in Portsmouth

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ctc
working for cycling

Administration page

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Executive Summary

Background

This document has been produced on behalf of CTC, the UK's national cycle campaign body, and Portsmouth Cycle Forum. The document is intended to inform the recently announced Portsmouth City Council review of traffic light controlled junctions in the city.

Cyclists and pedestrians often depend on traffic light controlled junctions in order to negotiate heavy flows of motor traffic. It is essential that the needs of pedestrians and cyclists are considered before traffic lights are modified or removed.

The purpose of this report is to identify which traffic light controlled junctions inadequately cater for cyclists and/or pedestrians. The report also identifies areas where there are demand lines of pedestrians and cyclists which have difficulty crossing flows of motor traffic due to the absence of traffic signals.

Government Regulations & Guidance

The Department for Transport (DfT) has a defined methodology for determining if a signal controlled crossing is required at a given location. This methodology takes into account the traffic density and speeds, speed limits, number of people wanting to cross and the impact on connectivity of route networks. It is self-evident that a similar process must be undertaken to modify or remove a junction that serves as a crossing point for pedestrians and/or cyclists.

Junctions Requiring Improvement

There are numerous specific examples of signal controlled junctions in need of improvement. There are also many locations where there is currently no signal controlled crossing but where there is a clear need. Analysis of these sites should be undertaken to determine if a signal controlled crossing is required.

Conclusions and Recommendations

A formal methodology with which to assess the effectiveness of traffic light controlled junctions should be adopted and applied. This methodology should be fully compatible with the DfT methodology discussed in LTN 1/95 and LTN 2/08 and must be agreed with community and economic stakeholders.

There are many traffic light controlled junctions in Portsmouth requiring attention or modification before they are satisfactory for the use of pedestrians and cyclists. Problems of inadequate detection, excessive waiting times, short crossing times and poor routing of non-motorised traffic abound. These issues must be included in the current review of traffic lights in the city.

Timings at pelican and toucan crossings practice should be adjusted so that the waiting time for pedestrians and cyclists is short providing that the lights have been green to traffic for some time. This approach would be consistent with the DfT's hierarchy of needs.

There are many instances where need exists for cycle and pedestrian traffic to cross busy roads but no facilities are provided. These locations should be included in the review and an agreed long-term plan for each site devised.

Inadequate or non-existent crossings are a proven cause of road casualties. The effectiveness of crossings at the junctions highlighted in this report is therefore of high importance. This factor must be give due weighting when traded against the wish to speed traffic flow.

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1 Introduction

1.1 Origin and Purpose

This document has been produced on behalf of CTC, the UK's national cycle campaign body, and Portsmouth Cycle Forum (PCF). The document is intended to inform the recently announced Portsmouth City Council (PCC) review of traffic light controlled junctions in the city.

The city council's review was announced to the general public in an article in the Portsmouth News on 31st December 2010. The executive member for traffic and transportation, Cllr Jason Fazackarkley stated that:

> *"The city's roads weren't designed to take as much traffic as they do now. Space pressures mean we can't always make things much better, but we can improve traffic flow by making sure lights work as they should, and removing those which are superfluous."*

Cyclists and pedestrians often depend on traffic light controlled junctions in order to negotiate heavy flows of motor traffic. It is therefore essential that the needs of pedestrians and cyclists are considered before traffic lights are modified or removed. This must be balanced against the desire to speed the flow of traffic.

The purpose of this report is to identify which traffic light controlled junctions inadequately cater for cyclists and/or pedestrians. The report also identifies areas where there are demand lines of pedestrians and cyclists which have difficulty crossing flows of motor traffic due to the absence of traffic signals.

Portsmouth Cycle Forum wrote to Portsmouth City Council on 6th January 2011 to offer support in the review. This offer was not taken up and so this report is being provided in lieu of proper engagement..

1.2 Scope

This document considers all junctions where competing traffic flows are controlled by signal lights, whether those flows be of pedestrians, cyclists, motor vehicles or mixed mode. Zebra, pelican/puffin and toucan crossings are therefore within the scope of this document.

1.3 Structure

This document is divided into the following sections:

1. Introduction
   This introduction.
2. Government Regulations
   A brief discussion of government regulations for the installation and modification of signal controlled junctions.
3. Junctions Requiring Improvement
   A listing of junctions in Portsmouth requiring improvement to properly cater for cyclists and or pedestrians.
4. Conclusions and Recommendations

2 Government Regulations & Guidance

2.1 Background

The Department for Transport has a defined methodology for determining if a signal controlled crossing is required at a given location. This methodology takes into account the traffic density and speeds, speed limits, number of people wanting to cross and the impact on connectivity of route networks.

In a densely crowded urban area almost any traffic light controlled junction forms a crossing point for pedestrians and, in many cases, cyclists.

The Portsmouth News, on December 31st 2010, reported that:

> *The council's transport team is now working on a list of lights which need repairs, and Cllr Fazackarley has confirmed those at Eastern Road's junction with Kirpal Road, directly outside Waterside Park, Milton, will be removed. He said: 'There are lights for traffic heading south, then a couple of yards further on, another set, which aren't needed. We'll remove those.'*

The implication of this statement is that the toucan crossing of Eastern Road near Kirpal Road will be removed and that this decision is presented as a fait accompli. It would seem self-evident that if a formal procedure is required to determine whether a controlled crossing should be installed then a similar process must be followed to determine whether or not a crossing is redundant and can be removed.

2.2 Key Guidance Documents

There are a number of useful documents available that assist in determining where controlled crossing points are needed. These include:

- The Department for Transport Cycling Infrastructure Design consultative document in Chapter 9 Assessment of Crossings
- Highways Agency Design Manual for Roads and Bridges Volume 5 Section 2 Traffic Advisory Note 91/05 Provision for Non Motorised Users Chapter 6
- Sustrans Route Planning Guidelines Chapter 5 and also Appendix 2
- Local Transport Note (LTN) 2/08 *Cycle Infrastructure Design*
- LTN 1/95 *The Assessment of Pedestrian Crossings*

In general the guidance for assessing crossings is that the following site characteristics should be taken into account:

- location;
- visibility;
- complexity;
- crossing traffic (e.g. cyclists, pedestrians, or both);
- vehicle flows and speeds;
- road accidents.

When deciding on the most suitable type of crossing, the following factors need to be considered:

- current difficulty of crossing;

- potential delay to traffic using the road;
- potential delay to cyclists crossing the road;
- road capacity;
- correspondence from interested parties;
- installation costs
- operating costs.

Having considered the location and other factors the potential options are:

- do nothing;
- provide a crossing where the carriageway has priority over the cycle track;
- provide a crossing where the cycle track has priority over the carriageway;
- provide a signalised crossing; or
- provide a grade separated crossing.

2.3 Hierarchy of Needs

The DfT defines a hierarchy of road users, and a priority order in which their needs must be considered. In brief this hierarchy is:

1. Pedestrians and disabled people
2. Cyclists
3. Public transport users
4. Motorcyclists and taxis
5. Commercial and business vehicles
6. Car borne shoppers
7. Car borne commuters and visitors

This hierarchy suggests that when flows of pedestrians, cyclists and motor vehicles compete, such as at many traffic light controlled junctions,the needs of the pedestrian should be put first and the cyclist second.

In practice at nearly all light controlled pedestrian and cycle crossings it is assumed that, when the crossing button is pressed, the traffic will continue to flow whilst more pedestrians/cyclists arrive thereby permitting as many people across with the minimum disruption to traffic. In practice this results in excessive waiting time for pedestrians and cyclists despite the fact that the lights may have been green to traffic for a considerable time.

This practice should be changed so that the waiting time for pedestrians and cyclists is short providing that the lights have been green to traffic for some time. Only if the lights have been red to traffic should the pedestrian and cyclists be made to wait.

2.4 Road Safety

The Department for Transport have published a report entitled 'Improving road safety for pedestrians and cyclists in Great Britain'. This document offers the following guidance:

> *Engineering schemes that alter a road's layout can sometimes resolve or alleviate problems which cause or contribute to pedestrian and cyclist casualties. In busy urban streets problems can occur because the road layout*

obscures the pedestrians, cyclists and other road users' vision. Pedestrians may also, for example, cross roads at places other than the designated crossing because they are inappropriately or inconveniently located. On many roads, especially minor residential roads, there are no designated crossing places. Installing or repositioning crossings can help to resolve such problems.

The Birmingham Inner City Road Safety Demonstration Project is addressing accidents in areas of high deprivation, mainly affecting ethnic minorities, and includes a mixture of engineering schemes including traffic calming, junction redesign and one-way systems. Brighton and Hove's smaller North Street Partnership Project is improving several junctions and other features along a length of road. It is widening footways, reducing traffic flows and speeds, providing more crossing facilities closer to where people want to cross and reducing street clutter to reduce pedestrian casualties. In particular, collisions between buses and pedestrians often occurred when pedestrians failed to look properly in advance of crossing the road.

2.5 Previous Reviews

Additionally, there have been a number of reviews of signal controlled junctions in recent years and there must be relevance of these to the present review. The findings of these previous reviews must be incorporated into the outputs of the current review.

3 Junctions Requiring Improvement

3.1 Introduction

This section lists problem locations in three tables:

- Junctions requiring improvement for both pedestrian and cycle use;
- Junctions requiring improvement for cycle use;
- Junctions requiring improvements for pedestrian use.

The tables also include locations where there is currently no signal controlled crossing but where there is a clear need. Analysis of these sites should be undertaken, in accordance with an agreed methodology, to determine if a signal controlled crossing is required.

The specific junctions discussed in this section were identified by polling members of Portsmouth Cycle Forum. This forms a very representative but not necessarily exhaustive list of junctions that fail to fully meet the needs of pedestrians and cyclists in Portsmouth.

3.2 Junctions Requiring Improvement for Cyclists and Pedestrian Use

Junction	Description
Milton Road/Velder Ave/Rodney Road	This junction presents serious problems for both cyclists and pedestrians. It is surprising that a junction designed so recently has so little facility for cyclists and pedestrians. There are crossing facilities on only three of the five arms of the junction, there are no wait ahead areas for cyclists and the detection loops that control the junction outside of peak hours often fail to detect cyclists, which means that cyclists are forced to either run a red light or to get off and walk. There is no pedestrian route from Alverstone Rd in the SW of the junction to Milton Rd at the North. This means that pedestrians coming from areas such as Southsea or Fratton Park have no easy route to Milton Road to get to St Mary's Hospital or Milton Cross School. Presumably the intention is for them to cross three sides of the junction (Milton Rd at the South, Velder Ave at the East, Milton Rd again at the North) which feels extremely tedious. The reality is that many are forced into walking in the road.
Toucan crossing Eastern Rd south of Kirpal Road	The waiting time here for pedestrians and cyclists can be extremely long, encouraging users to take risks and cross against the lights. This crossing provides the access point to the Eastern Road cycle route, one of

Junction	Description
	the major routes into and out of Portsmouth for cyclists.
Junction of Eastern Road and Airport Service Road	There is no facility for cyclists or pedestrians to cross from the Eastern Road shared use path to Airport Service Road at all
Victoria Rd North/Outram Road/Havelock Rd	No facilities for Pedestrians or Cyclists to cross from Havelock/Stansted Road to Margate Rd/Cottage Grove. This is an important E-W route.
St Michael's Rd/Cambridge Road	The crossing times here are too short.
Marriott Junction	Lamppost fouls way for cyclists and pedestrians on Northern island. Multiple cycles of lights required for pedestrians and cyclists to get across the junction.
Southampton Rd/Highbury College Northarbour Centre	No secondary signal head
Southampton Rd/Clement Attlee Way	Poor design and sequencing result in cyclists and pedestrians needing several cycles of lights to get across
Southampton Rd/Port Way	Poor design and sequencing result in cyclists and pedestrians needing several cycles of lights to get across Port Way and Southampton Road.
Eastern Rd/Fitzherbert Road	It takes several cycles of the lights for pedestrians or cyclists to negotiate this junction. There is no clear route from the SE corner (from which direction cyclists originating in Portsmouth come) to the NW corner (which is where they need to get to to continue their journey).
Eastern Rd/A27 Roundabout	The lights on the roundabout at the Junction of the Eastern Road require four cycles to allow a cyclist or pedestrian to cross the whole junction. This means that many take the risk of directly crossing the slip road at the north-east of the junction directly, avoiding two sets of lights. This risks collision with high speed traffic.

3.3 Junctions Requiring Improvement for Cyclist Use

Junction	Description
Junction of Eastern Road and Anchorage Road	Minimal consideration for Cyclists crossing from Eastern Rd Path to Anchorage Road. No facility for pedestrians.
Winston Churchill Ave/Isambard Brunel Road roundabout	Lights in the westbound bus lane don't detect cyclists. This means that cyclists are forced to run a red light or squeeze into the narrow lane for motor traffic.
Moorings Way/Velder Ave	Non detection of cyclists trying to turn right from Eastern Rd into Moorings Way - leaves bikes stranded in middle of busy road.
Western Rd/Southampton Rd at Marriott junction	No crossing from south of Western Road for cyclists to access toucans located at the north of the junction. Forces cyclists to merge with high speed traffic. There is an underpass further to the east but this is poorly signed and intimidating for many users.
London Rd/New Road	The detection loop fails to pick up bikes waiting to turn right into New Road
Fratton Rd/Lake Rd/St Mary's Rd	Fratton Road, travelling South to North, there is a traffic light at the junction with St Mary's road. Then there is another one 100 yards away, at the junction with Lake road. These 2 traffic lights seem to be synchronised for motor vehicles. Cyclists nearly always get stopped at both sets. At both junctions there is insufficient space for cyclists to get to the wait-ahead refuges at the head of the queue of traffic. The result is that cyclists can't avoid being squeezed by the heavy traffic when the lights change. At Lake Road the advisory cycle lane is on the far left of the carriageway which puts cyclists (event those travelling straight ahead) to the left of left-turning traffic. This brings cyclists and motor vehicles into conflict.
Victoria Road North/Rugby Road/Bradford Road	The crossing marked with a cycle path was removed in Colas road resurfacing programme in 2009. This has caused break in a major E-W cycle route through centre of Portsmouth.

3.4 Junctions Requiring Improvement for Pedestrian Use

Junction	Description
Elm Grove/Victoria Road South	No crossing for pedestrians to travel between Elm Grove and Albert Rd.
Rugby Rd/Victoria Road North/Bradford Road	The existing crossing near Montgomerie Road is poorly sited and misses the desire line. It should be sited further north, in the area of Bradford road and Rugby Road. It should be upgraded to a Toucan.
Priory school to Cumberland Gate	No facility for pedestrians to cross the dual carriageway section of Victoria Rd North.
Winston Churchill Ave near Middle Street	Crossing times too are short
Market Way (crossing road to Sainsbury)	The wait for pedestrians of about 60 seconds is much too long, encouraging pedestrians to run across between vehicles. Crossing times are too short for pedestrians to negotiate 4 lanes of traffic.
Kingston Crescent near Rudmore Roundabout	No facilities for pedestrians to cross
Goldsmith Avenue near Fratton bridge	Excessive waiting time at pelican Crossings
Goldsmith Avenue near Fratton Station south entrance	Excessive waiting time at pelican Crossings
Goldsmith Avenue near Fernhurst Road	Excessive waiting time at pelican Crossings
Goldsmith Avenue between Fratton Way and Haslemere Road	Excessive waiting time at pelican Crossings
Winston Churchill Ave/Somers Rd	Excessive waiting time at pelican Crossings
Havant Rd/Farlington Ave	No pedestrian phase
Southampton Rd/Allaway Ave	No pedestrian phase
St George's Rd/Gunwharf Road	Excessive waiting times with queuing traffic often blocking the crossing on Gunwharf Rd. There is no crossing on the St George's Rd arm of this junction. Cycles are no longer permitted to turn right from Park Rd onto the Hard (St George's Rd), meaning cyclists are forced to get off and walk.
Stubbington Ave/Copnor Road	No pedestrian phase

Junction	Description
Copnor Rd near Farmside Gardens	Excessive waiting time. The long crossing here feels very exposed, particular as there are many heavy vehicles on this busy road.
Twyford Avenue near London Avenue	Excessive waiting time
Twyford Avenue near Angerstein Road	Excessive waiting time
Duisburg Way	Footpath running from Castle Road to Clarence Pier Crosses - no controlled crossing
Albert Rd/Waverley Road/Lawrence Road	No phasing safe for pedestrians at these busy lights
Elm Grove/Grove Road	No phasing safe for pedestrians at these busy lights
Milton Road/St Mary's Hospital pelican Crossing	Excessive waiting time
Eastney Rd / Bransbury Rd, Devonshire Rd	Waiting times for pedestrians are in excess of 90 seconds. Most pedestrians ignore the lights and dodge the traffic.
Anglesea Road/Park Road pelican Crossing	Excessive waiting time
Anglesea Road Road/Alfred Road/Queen Street/Edinburgh Road	This normally gives too much preference to road traffic, not permitting pedestrians to have an effect on the lights. This leads to pedestrian frustration and running across road in front of vehicles.
Holbrook Road, close to Arundel Street.	Excessive waiting time for pedestrians.
Northern Rd at Junction with Wayte St/Medina Rd	The pedestrian has a choice here of a long walk over the footbridge, an intimidating and unpleasant subway or climbing the railings and crossing directly. Many choose the latter risking becoming trapped in the flow of traffic by the railings.
Northern Rd, near Junction with Portsmouth Rd	The current crossing, to the north of the Portsmouth Rd Junction, provides a circuitous route from Lynx House to the fast food restaurant and South Bound bus stop located opposite Lynx house. Hence many users take a short-cut directly across Northern Road.

Junction	Description
Coach and Horses Gyratory	There are no crossings here and the whole island is surrounded by a minimum of two lanes of fast, heavy traffic. There is a housing estate on one side and a school on the other. At one point (outside the boy's school) there are four lanes of traffic.

4 Conclusions and Recommendations

Portsmouth City Council should adopt a formal methodology with which to assess the effectiveness of traffic light controlled junctions. This methodology should be fully compatible with the DfT methodology discussed in LTN 1/95 and LTN 2/08 and agreed with community and economic stakeholders.

There are many traffic light controlled junctions in Portsmouth requiring attention or modification before they are satisfactory for the use of pedestrians and cyclists. Problems of inadequate detection of cyclists, excessive waiting times, short crossing times and poor routing of non-motorised traffic abound. These issues must be included in the current review of traffic lights in the city.

There are also many pelican and toucan crossings where crossing times are short, even from the point of view of a fit, able-bodied user. These crossing are particularly challenging for the elderly and disabled.

There are many instances where the need is present for cycle and pedestrian traffic to cross busy roads but no facilities exist. These locations should be included in the review and an agreed long-term plan for each site devised.

In nearly all light controlled pedestrian and cycle crossings it is assumed that, when the crossing button is pressed, the traffic will continue to flow whilst more pedestrians/cyclists arrive thereby permitting as many people across with the minimum disruption to traffic. In practice this results in excessive waiting time for pedestrians and cyclists despite the fact that the lights will have been green to motor traffic for some considerable time. This practice should be changed so that the waiting time for pedestrians and cyclists is short providing that the lights have been green to traffic for some time. This approach would be consistent with the DfT's hierarchy of needs.

Inadequate or non-existent crossings are a proven cause of road casualties. The effectiveness of crossings at the junctions highlighted in this report is therefore of high importance. This factor must be give due weighting when traded against the wish to speed traffic flow.

Initial distribution list

Portsmouth City Council	
Councillor Gerald Vernon-Jackson	Council Leader
Councillor Jason Fazackarley	Cabinet Member for Traffic & Transportation
Councillor Luke Stubbs	Conservative Group Spokesperson for Traffic & Transportation
Councillor Jim Patey	Labour Group Leader & Spokesperson for Environment & Traffic & Transportation
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