

CABINET MEMBER FOR TRANSPORT – 15 FEBRUARY 2007

OXFORD, GEORGE STREET/CORNMARKET STREET – REVIEW OF TRAFFIC SIGNALS

Report by Head of Transport

Introduction

1. In June 1999 major changes to the road network in the city centre were introduced. These changes included the removal of buses from Cornmarket Street, through traffic from the High Street during the day and alterations to a number of junctions to cater for the change in vehicle movements through them.
2. As the effects of these changes became clearer a number of additional measures were introduced to reduce conflicts or improve the operation of various junctions. Some of these measures were not introduced immediately but were included in the rolling programme of Oxford Transport Strategy (OTS) schemes approved by the OTS Working Party, which was a sub-committee of the then Environment Committee. The proposed provision of traffic signals at the George Street/Cornmarket Street junction in the programme was agreed at the meeting of the Working Party on 18 May 2001. The actual provision of the traffic signals was completed in November 2003.
3. Since the introduction of the traffic signals there have been comments received suggesting/requesting that they be removed. Most of these comments raised questions about the need for the traffic signals and the fact that many pedestrians ignore the controlled crossing and cyclists ignore the signals. This report reviews the operation of the traffic signals.

Accidents

4. Annex 1(a) provides a description of the accidents that have occurred at the junction for the three years before and after the installation of the traffic signals. Annexes 1(b) and (c) show the location of these accidents.
5. The level of accidents prior to the provision of the traffic signals was low and do not have a particular pattern to them. However, since the traffic signals have been installed the number of accidents has fallen. This is most notable on the George Street arm of the junction where the controlled crossing point is located.

Traffic Surveys

6. In July 2005 a video survey was undertaken of the junction in order to collect information on pedestrian movements across George Street. The tabulated

results of this appeared to seriously underestimate the number of pedestrians. In November 2006 a further survey was undertaken between the hours of 10:00 and 16:00. This survey collected information on the number of pedestrians that crossed on the 'green' or 'red' man. The data collected is shown in Annex 2(a) together with that of the 2005 survey and one taken in 2001. The results of the 2006 and 2001 surveys are relatively compatible and highlight that the 2005 data did undercount pedestrian movements.

7. Annex 2(a) also provides a more detailed breakdown of the 2006 data. Overall only 29.1% (3 in 10) of all pedestrians actually cross when the green man is displayed. The figure increases to 39.5% (4 in 10) for the disabled and parents with prams etc.
8. The November 2006 survey also counted the number of cyclists in George Street that proceeded on a green or red signal, see Annex 2(b). Overall it was found that 76.4% (3 in 4) of cyclists waited for a green signal before proceeding.
9. Annex 2(b) also includes 12 hour flow of buses and cycles from surveys undertaken in April 2001 and December 2006. The fall in the number of bus movements is accounted for by changes to bus routes. In the past two years some bus routes have had through services split (eg Kidlington to Barton). This has removed two-way movements from George Street as vehicles from the north now terminate/commence their service in Magdalen Street East/West. The other half of the services now terminate/commence in Castle Street/Queen Street. Despite this reduction there is still, on average, 56 bus movements/ hour in George Street. These changes have not affected the number of bus movements in Magdalen Street East/West.

Consultation

10. To gather views on the operation of the traffic signals and the junction in general local City and County Councillors were asked to comment as well as some key stakeholders. These included all bus operators who use the junction, Oxford Pedestrians' Association, cycle groups and the emergency services. Their comments are set out below at Annex 3.
11. Overall 21 responses have been received from a total of 30 letters sent out. A number of the responses received were from Councillors and residents who were not included in the original list of consultees. Of the responses received four suggest the retention of the traffic signals, fifteen suggest removal and two do not commit either way.
12. Of those suggesting removal of the traffic signals the most common reason given is that, in their view, the junction is now more dangerous than without them. While the accident levels were low before the installation of the traffic signals there has still been a reduction in the overall level of accidents since, particularly in the vicinity of the controlled crossing point.

13. It is also suggested that without the traffic signals vehicles could proceed through the junction, with caution, without endangering pedestrians. Prior to the provision of the traffic signals the junction operated under such a regime. With this type of operation it was not uncommon for pedestrians to only be able to cross half the road and then wait for a gap in the opposing traffic flow to appear. This often resulted in pedestrians being stuck between the two flows of traffic or forcing their way between stationary vehicles. The present arrangement has removed this danger. Whilst pedestrians do cross against the red man this is done with caution and in larger gaps created by the traffic light operation.
14. As part of the traffic signal installation, which took place during the Cornmarket Street works, the kerb lines on both corners of Cornmarket Street were altered to provide more footway space. Also when Debenhams was refurbished the footway on the northern side of George Street was widened slightly. The combined result of these works is that the available carriageway space at the junction has been reduced. Buses turning left from George Street and entering George Street from Broad Street have been plotted and are shown at Annex 4. It can be seen that if these movements take place together there is an overlap of the vehicle envelope. It is not possible therefore to operate the junction without some form of control or by reverting to narrow footways as previously. Prior to the installation of the traffic signals and the widening of the footways opposing buses could pass through the junction together, albeit with care.
15. A suggestion has been made by some respondents that the traffic signals should be removed but replaced with a Pelican crossing on George Street. To provide such a crossing it would need to be moved approximately 5 metres west from its current position and away from the most desired line for pedestrians. This would be required to provide sufficient visibility of the signal head for traffic exiting Cornmarket Street. This positioning could result in even more pedestrians ignoring the 'green' man and is likely to increase the accident rates. Vehicles (buses) stopping at the stop line would trail back into the junction which would block movements from Broad Street. This tailing back would also affect pedestrians who would then have to cross between stationary vehicles.

Officer Comment

16. Although a significant number of pedestrians do not wait for the green man before crossing George Street the provision of the pedestrian phase does provide a safe (controlled) crossing point, which is important for more vulnerable road users. The reduced space within the junction, due to various works in the vicinity, now also means that providing an uncontrolled junction would result in conflict between large vehicles, such as buses, negotiating the junction.
17. The north-south crossing on the east side of the junction does not have a pedestrian stage. Nevertheless the phasing of signals also assists pedestrians crossing at that point.

18. Respondents to the consultation rightly point out that congestion is quite common; this is frequently caused because buses are unable to turn into Magdalen Street West due to the close proximity of stationary buses loading at the stops (and in particular those closest to the junction); this problem would continue irrespective of whether or not the traffic signals were removed.
19. If the traffic signals were to be removed it would be necessary to alter the junction to provide additional space for vehicle manoeuvres. This would require changes to the footway on the corners of Cornmarket Street both of which were paved as part of the environmental enhancement works on that street. Given the very high numbers of pedestrians in this area the wider footways are considered essential on safety grounds.

How the Project Supports LTP Objectives

20. The provision of the traffic signals has had a positive effect on accident levels. Their provision also assists in the operation of bus priority making public transport provision into the city centre more attractive.

Financial and Staff Implications

21. If the recommendation is agreed there are no financial implications. However, if a decision is made to remove the traffic signals an additional budget provision in the LTP programme of around £50,000 will need to be made in the future. There are no staffing implications.

RECOMMENDATION

22. **The Cabinet Member for Transport is RECOMMENDED to retain the traffic signal control at the George Street/Cornmarket Street junction and ask officers to continue to monitor the safety record at the junction.**

STEVE HOWELL
Head of Transport

Background papers: Nil

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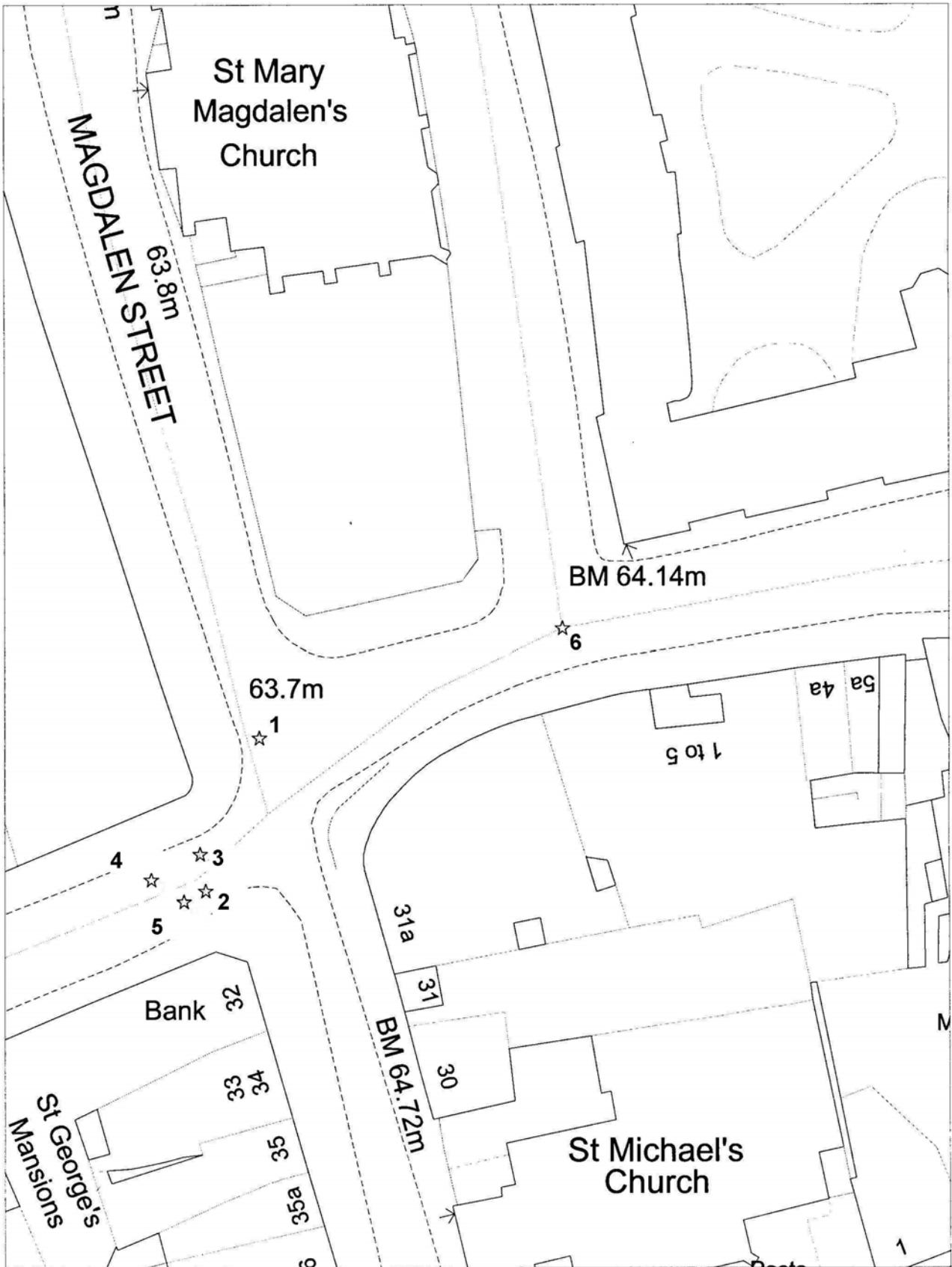
ANNEX 1(a)**Review of George Street/Cornmarket Street Lights****Accidents – 01/11/00 to 31/10/03**

No.	Description
1	Bus turned left from George Street and hit rear of bus at stop. Slight injury.
2	Taxi reversed from Cornmarket Street into George Street and hit pedestrian crossing from south side of George Street. Slight injury.
3	Pedestrian stepped from north side of George Street into path of cyclist travelling east. Slight injury.
4	Pedestrian stepped from north side of George Street into path of bus travelling east. Slight injury.
5	Bus travelling from Broad Street to George Street moved to nearside and hit cyclist. Slight injury.
6	Car travelling turned right from Magdalen Street East into path of cyclist. Slight injury.

After Accidents – 01/11/03 to 31/10/06

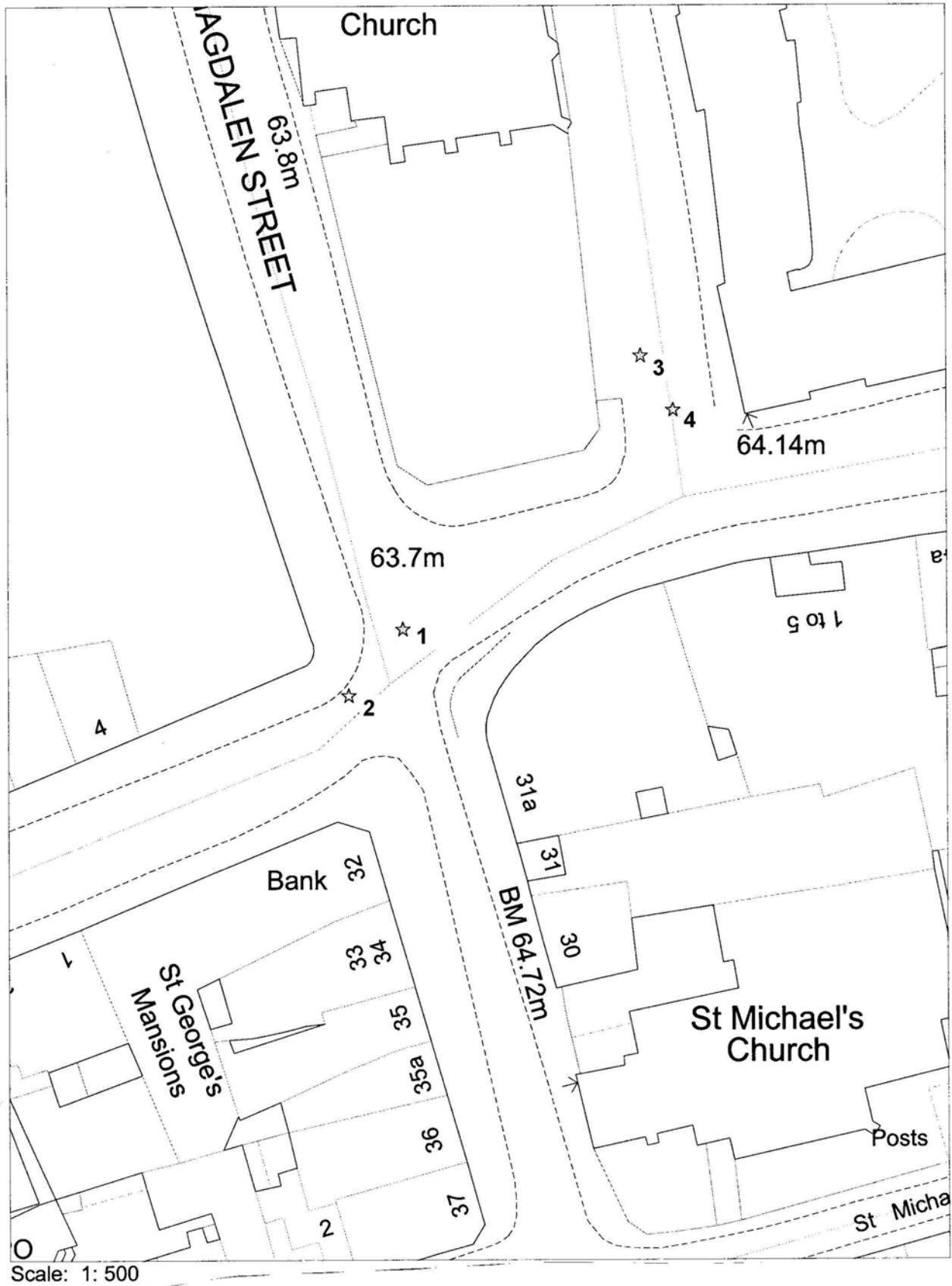
No.	Description
1	Bus turned right into Magdalen Street West and hit cyclist. Slight injury.
2	Pedestrian stepped backwards from north side of George Street into path of bus about to turn left into Magdalen Street West. Slight Injury.
3	Police vehicle travelling south on Magdalen Street East stopped and then reversed to chase suspect and collided with car. Slight injury.
4	Bus travelling south on Magdalen Street East overtook cyclist and collision occurred. Slight injury.

Location of Before Accidents



Scale: 1: 500

Location of After Accidents



ANNEX 2(a)

Pedestrian flows across George Street

Time	29 & 30 Nov. 2006			4 July 2005	26 April 2001
	With green	With red	Total		
10-11	351	1013	1364	204	1140
11-12	412	1263	1675	320	1286
12-13	644	1522	2166	431	1714
13-14	582	1240	1822	580	2136
14-15	690	1374	2064	542	1799
15-16	586	1543	2129	708	1910
Total	3265	7955	11220	2785	9985

Breakdown of 29 and 30 November 2006 pedestrian flows

Time	Crossing on green			Crossing on red			Total
	Disabled, prams and pushchairs	All others	Sub total	Disabled, prams and pushchairs	All others	Sub total	
10-11	43	308	351	102	911	1013	1364
11-12	42	370	412	106	1157	1263	1675
12-13	100	544	644	116	1406	1522	2166
13-14	72	510	582	55	1185	1240	1822
14-15	56	634	690	54	1320	1374	2064
15-16	25	561	586	84	1459	1543	2129
Total	338	2927	3265	517	7438	7955	11220
	%age disabled, prams and pushchairs crossing on green		39.5	%age disabled, prams and pushchairs crossing on red		60.5	
	%age all others crossing on green		28.2	%age all others crossing on red		71.8	
	Total %age crossing on green		29.1	Total %age crossing on red		70.9	

ANNEX 2(b)**Breakdown of 29 & 30 November 2006 cycle flows in George Street**

Time	Eastbound			Westbound			Total
	On green	On red	Sub total	On green	On red	Sub total	
10-11	58	26	84	53	6	59	143
11-12	43	10	53	53	18	71	124
12-13	82	25	107	84	14	98	205
13-14	48	22	70	79	8	87	157
14-15	46	37	83	51	17	68	151
15-16	67	29	96	62	12	74	170
Total	344	149	493	382	75	457	950
%age	69.8	30.2	100.0	83.6	16.4	100.0	
	Total %age on green		76.4	Total %age on red		23.6	

12 hour Bus and Cycle flows

Date	Buses			Cycles		
	E/bound	W/bound	Total	E/bound	W/bound	Total
26 April 2001	588	623	1211	795	698	1493
7 Dec. 2006	335	339	674	779	908	1687

Review of George Street/Cornmarket Junction Lights

Summary of comments received

Comment No.	Respondent	Comments	Officer Comments
1	Oxfordshire Association for the Blind (telephone)	The junction operates better with the traffic lights. They make it easier for those with visual impairments to cross the road.	Noted.
2	City Cllr Cook (e-mail)	I think the junction could be improved by the removal of the traffic lights.	Noted.
3	City Cllr Tanner (e-mail)	<p>I think the traffic lights should be removed.</p> <p>I suggest that traffic proceeding with caution is what we want. Before the lights pedestrians effectively had priority which seems to be a good thing.</p> <p>What would help is banning the right turn out of Ship Street and the left turn out of St Michael's Street.</p>	<p>Noted.</p> <p>Without the lights there was conflict between vehicles and pedestrians both 'assuming' priority. Signals make the situation clear.</p> <p>It is not clear how this would help. This traffic when exiting Cornmarket Street is banned from turning left and does not therefore conflict with the heavy pedestrian movement across George Street. It should also be noted that vehicles entering Cornmarket Street from the side roads has to turn northward. This was introduced to prevent a rat-running movement from Broad Street to High Street/St. Aldates.</p>

Comment No.	Respondent	Comments	Officer Comments
4	Resident Observatory Street Oxford OX2 6EW (letter)	Please remove the traffic lights. They are not needed and the way that they work could encourage cyclists to ignore the red lights. Before they were there traffic was quite satisfactory. Now there could be a degree of confusion for buses and car drivers.	It is acknowledged that some cyclists do ignore the red lights and this is unfortunately not confined to this junction. A recent survey suggests that only 1 in 4 of cyclists ignore the red light (see Annex 2(b)). Pedestrians would be severely disadvantaged if traffic signals were removed from any junction where cyclists ignored the red lights. The provision of the traffic lights provides a clear indication for both vehicles and pedestrians who should have priority at a given time.
5	City Cllr Hollander (e-mail)	I understand that the traffic signals were installed to allow safe passage of buses etc. With caution two buses can pass one another but the exercise appears arduous and seems to be made worse by being held up by the lights. The problem could be eased if vehicles could keep moving. "Give and take" of vehicles and pedestrians need not create a hazard in the absence of the traffic signals if they are observant.	The traffic signals were installed to remove the conflict between pedestrians and vehicles. Current junction layout prevents buses passing one another (see para 4 of Annex 4).
6	City Cllr Brundin (e-mail)	I am familiar with the junction and in my view, coming at the end of a pedestrian zone, is particularly dangerous for pedestrians. I believe it was safer	The presence of traffic control measures should aid pedestrians in recognising that they are entering an environment where they do not have as much freedom of

Comment No.	Respondent	Comments	Officer Comments
		before the traffic lights were installed and recommend that they be removed.	movement as the pedestrian zone. Accident rates have dropped since its installation.
7	Oxford Civic Society (letter)	<p>The need for a controlled crossing depends on the volumes of vehicular and pedestrian movement. During the middle of the day traffic should be light here.</p> <p>When the camera enforcement of the restrictions in Magdalen Street East is in place it should be possible to dispense with the Pelican crossing in George Street. Although it may be necessary to retain them during the early morning when commercial vehicles are allowed.</p>	<p>Traffic levels are fairly constant throughout the day.</p> <p>While the camera enforcement in Magdalen Street and George Street should reduce the number of extraneous vehicles in the streets there will still be a significant number of vehicles passing through, particularly buses.</p>
8	Resident No address supplied (letter)	The traffic lights need adjustment as people press the button but the green man does not appear even though traffic is parked. We rely on the button and the green man appearing quickly.	The green man will appear once each cycle of the traffic signals. There is a delay between the green signals for any given approach to permit traffic to clear the junction.
9	Resident Richmond Road Oxford OX1 2JJ (letter)	I support removal of the traffic lights as they have only created more potential for aggressive behaviour. People crossing the road resent having to wait and in practice ignore the	A recent survey suggests that only 3 out of 10 pedestrians wait for the green man before crossing (see Annex 2(b)). However those that do cross against the red man will be taking greater care

Comment No.	Respondent	Comments	Officer Comments
		<p>lights.</p> <p>Buses and cyclists think they have right of way when the lights are in their favour, whereas before they proceeded with more care and consideration for others.</p>	<p>when crossing.</p> <p>Noted.</p>
10	Oxford Bus Company (e-mail)	<p>We are at a loss to come up with ideas for how the junction could be improved for all users. Our observations are that pedestrians and cyclists largely ignore the lights but that buses, cars and delivery vehicles largely observe them and there is conflict with those pedestrians walking on a green light. Beyond a public education exercise, I cannot see how you can manage this.</p>	<p>Noted. An education exercise as suggested would be a national one.</p>
11	Disability Equality Advisor County Council (e-mail)	<p>DEA's would not support the removal of this safe crossing point at such a strategic city location. Indeed we went to lengths to contribute to a good specification/detailed provision at this point.</p> <p>Comment received from Social Services (Sensory Impairment) "This is a crossing which visually impaired clients find particularly difficult to use although to do so without lights there would be almost an impossibility."</p>	<p>This is confirmed.</p> <p>Noted.</p>

Comment No.	Respondent	Comments	Officer Comments
12	City & County Cllr Fooks (e-mail)	<p>The lights have made the junction much more congested and dangerous. Buses now wait to exit Magdalen Street East making it very difficult for cyclists to navigate the street.</p> <p>I can see no need to stop traffic which wants to turn north from doing so unregulated by lights. If pedestrians need a crossing then you could keep a Pelican at the entrance to George Street.</p> <p>As only bicycles can go eastward into Broad Street you only need a narrow lane eastward lane. This would enable you to move the island northwards to make it easier for buses to turn north from Broad Street and leave more space for cyclists.</p>	<p>Some bus drivers do pull across the junction before they have space at the stop line and thus obstruct Broad Street creating a hazard for cyclists.</p> <p>If a Pelican crossing were to be provided in place of the traffic signals it would have to be located at least 5 metres west of the present pedestrian crossing point. This positioning would be required to provide a stop line and signal position that could be seen by cyclists exiting from Cornmarket Street. Such a position would not improve the compliance of pedestrians only crossing on a green signal.</p> <p>Broad Street is used by buses in both directions during St Giles Fair and when required as an emergency route. Moving the island as suggested would interfere with these uses.</p>
13	City Cllr Goddard (e-mail)	<p>These signals should be removed for the following reasons:</p> <p>They often delay traffic unnecessarily;</p> <p>Delays caused by the above add to</p>	<p>Noted.</p> <p>Some bus drivers do pull across the junction before</p>

Comment No.	Respondent	Comments	Officer Comments
		<p>congestion in Magdalen Street East where buses need to wait over but there is insufficient space;</p> <p>Pedestrians used to no traffic in Cornmarket Street do not expect to be confronted by traffic lights at this junction so they walk across either unaware or because they judge that there is no danger to them from traffic; and</p> <p>The junction worked more safely and without unnecessary delays when there were no lights.</p>	<p>they have space at the stop line and thus obstruct Broad Street creating a hazard.</p> <p>The presence of traffic control measures should aid pedestrians in recognising that they are entering an environment where they do not have as much freedom of movement as the pedestrian zone.</p> <p>Accident rate has dropped since the lights were introduced.</p>
14	Oxford Pedestrians Association (e-mail)	<p>OxPA considers that the signals are an inappropriate mechanism since the road space does not perform as a road junction in the conventional sense and because the sheer volumes of people on foot render the present attempts at control meaningless. When on foot people demonstrate independent choice and a strong reluctance to observe signal controls.</p> <p>OxPA's view is that while some people may wish to use the protection afforded by the lights the real control of motor vehicles is exercised through the</p>	<p>A recent survey suggests that only 3 out of 10 pedestrians wait for the green man before crossing (see Annex 2(b)). However those that do cross against the red man will be taking greater care when crossing.</p> <p>The junction is on the bus priority route and to provide the form of control suggested would increase delays to buses.</p>

Comment No.	Respondent	Comments	Officer Comments
		<p>prominent presence of people on foot. OxPA believes that the space should be redesigned to reflect its principle function as a pedestrian circulating area through which small numbers of vehicles pass at low speed.</p>	
<p>15</p>	<p>Resident Meadow Lane Iffley Oxford OX4 4ED (letter)</p>	<p>It is my view that these lights have not improved conditions for pedestrians, either in terms of safety or convenience, nor indeed have cycles or buses benefited. It could have been predicted that with such a heavy volume of pedestrian traffic between two pedestrianised areas people would tend not to wait for the lights to change, especially when the traffic is at a standstill.</p> <p>This junction should become an extension of the Cornmarket pedestrian zone. The limited volume of legitimate traffic should move slowly enough to recognise pedestrian priority. The fact that cyclists are outnumbered by pedestrians will tend, as in New Inn Hall Street, to give pedestrians confident priority.</p>	<p>The pedestrianised area stops at this junction. Roads beyond it are designed to operate with a clearly defined carriageway and footway.</p> <p>The junction is on the bus priority route and to provide the form of control suggested would increase delays to buses.</p>

Comment No.	Respondent	Comments	Officer Comments
16	City & County Cllr Armitage (e-mail)	<p>Whatever the reasons for the traffic lights at this junction having been installed they are now more dangerous than helpful, mainly because so many pedestrians and cyclists ignore them. Pedestrians ignore them because they know that otherwise they would have a long wait and that there is little risk from traffic as it will normally wait if they set off from the pavement. Cyclists ignore the lights for similar reasons. Before the lights were installed traffic and pedestrians moved about carefully and mostly gave way as appropriate. There was no evidence of a disproportionately high level of accidents at the junction before the lights were installed.</p> <p>The effect of the constant ignoring of the lights by pedestrians and cyclists is that buses cannot always proceed when the lights are in their favour. This sometimes results in them having to wait for the next green signal.</p> <p>The stretch of Broad Street outside Waterstone's is far too short to take most buses coming from Magdalen Street East.</p>	<p>Accident data does not suggest that the junction is more dangerous.</p> <p>This had not been observed or highlighted by bus companies.</p> <p>Some bus drivers do pull across the junction before they have space at the stop line and thus obstruct Broad Street creating a hazard for cyclists.</p>

Comment No.	Respondent	Comments	Officer Comments
		<p>And they therefore end up stationary blocking the eastbound carriageway. Cyclists cannot therefore pass them without moving to the far side of the road.</p> <p>The problem of providing for disabled people to cross George Street safely can be overcome by providing a Pelican crossing there.</p>	<p>If a Pelican crossing were to be provided in place of the traffic signals it would have to be located at least 5 metres west of the present pedestrian crossing point. This positioning would be required to provide a stop line and signal position that could be seen by cyclists exiting from Cornmarket Street. Such a position would not improve the compliance of pedestrians only crossing on a green signal.</p>
17	City Cllr Pressel (e-mail)	<p>I think the traffic lights are a terrible mistake and should be removed ASAP. They serve no useful purpose and are irritating for cyclists. Traffic flowed much better before they were installed.</p>	Noted.
18	Cyclox (e-mail)	<p>The view of Cyclox is that the traffic lights should be removed. They are unnecessary for road safety and hinder traffic flow, particularly for cyclists. Should it be necessary a pedestrian crossing on George Street could be introduced.</p>	<p>If a Pelican crossing were to be provided in place of the traffic signals it would have to be located at least 5 metres west of the present pedestrian crossing point. This positioning would be required to provide a stop line and signal position that could be seen by cyclists exiting from</p>

Comment No.	Respondent	Comments	Officer Comments
		<p>One suggestion that has been made is to experiment with the removal of all signage at the junction, to see if the result will be more cautious behaviour by vehicles, and priority given to pedestrians.</p> <p>Finally the signage for eastbound traffic at the junction is wrong as it suggests a compulsory left turn, whereas bicycles can go ahead or turn right.</p>	<p>Cornmarket Street. Such a position would not improve the compliance of pedestrians only crossing on a green signal.</p> <p>The signage at this point is correct (a ban on all vehicles turning right into Cornmarket Street, with an exemption for cyclists 6pm to 10am).</p>
19	City Cllr Sargent (e-mail)	I feel that the lights do not improve the safety of pedestrians at all. The nature of the junction with a large pedestrianised Cornmarket decanting pedestrians onto a restricted access junction adds to the confusion and leads to the frustration of pedestrians, cyclists and drivers alike. My strong suggestion is to remove the lights.	The presence of traffic control measures should aid pedestrians in recognising that they are entering an environment where they do not have as much freedom of movement as the pedestrian zone.
20	Sensory Impairment Team County Council (e-mail)	Removal of the lights will be a disaster for visually impaired individuals who rely heavily on this crossing to be able to cross safely. I know that people ignore the lights	Noted.

Comment No.	Respondent	Comments	Officer Comments
		but others have no choice to maintain their safety.	
21	CTC Right to Ride Representative (e-mail)	<p>Although I have got used to the lights I think it would be better as follows:</p> <p>Remove lights and replace with Zebra crossings on 3 of the 4 roads (exclude Cornmarket);</p> <p>Mark the junction with a full yellow box to help reduce buses clogging up the whole junction;</p> <p>(Optional) emphasise the junction with a different colour surface.</p> <p>In Magdalen Street East ensure that buses do not park within 5 metres of the give way line; and</p> <p>Mark the Broad Street/Magdalen Street East junction with a yellow box to stop buses obstructing it.</p>	<p>A pedestrian can establish right of way on a Zebra crossing simply by putting their foot on it. With the high pedestrian flows that exist at the junction this type of control would provide far less time (if at all at peak times) for the legitimate traffic using the junction and hence increase delays to buses on the bus priority route.</p> <p>This only happens rarely as entry into the junction is controlled.</p> <p>Noted.</p> <p>This will be raised with the bus operators.</p> <p>While it is recognised that some buses do obstruct this junction it is not considered appropriate to mark it with a box junction.</p>