

Alphington Road/Sydney Road, Exeter

Report of the Head of Highways, Capital Development and Waste

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

Recommendation: It is recommended that the detailed design of a staggered pedestrian crossing of Alphington Road on the north side of the Sydney Road/Alphington Road Retail Park junction be progressed, for consideration for implementation as part of the 2016/17 Local Transport Plan programme.

1. Summary

It was resolved at the July 2014 meeting of this committee that the Chairman and local members and officers meet on site to identify options for a pedestrian crossing to be evaluated for a future report to this Committee. This report is to provide that evaluation and seek approval to undertake a detailed design for a staggered pedestrian crossing.

2. Background

There is a pedestrian demand for the crossing of Alphington Road at the Sydney Road junction. The existing crossing facility is uncontrolled, and pedestrians cross in gaps in the traffic or during inter-stage periods. This is sufficient for many pedestrians, but the crossing is difficult for people who are visually and mobility impaired and other vulnerable users, including parents with young children/prams. The demand for crossing the road has recently increased due to the introduction of food retail outlets into the Alphington Road Retail Park.

Alphington Road is a key strategic route into the city and additional stopping of traffic for a formal pedestrian crossing will increase queues, journey times and pollution. At busy times this may impact on the Marsh Barton trading estate, the A30, and main roads in the city centre.

An existing pedestrian crossing at Ebrington Road provides access for pedestrians from the south; however it is not on the desire line for many people walking either from Sydney Road or from the city (i.e. from Exe Bridges) towards the retail park. Travelling from the city, the only safe pedestrian route is via the railway arch on the western side of Alphington Road; however, there is currently no signal controlled crossing point for accessing the retail park.

The introduction of a staggered crossing could potentially provide pedestrians with a suitable signal controlled crossing. A number of options for a staggered crossing on the north side of the junction have been assessed to consider the needs of pedestrians crossing Alphington Road and balancing these against the impacts on congestion by providing such a facility. The most effective option is presented in this report. For completeness a brief outline of the impact of a straight through crossing is included.

3. Options

3.1 Staggered crossing (see Appendix I)

The preferred location for a staggered crossing is between numbers 16 and 20 Alphington Road.

The crossing is on the desire line for pedestrians to and from the north and it is reasonable to expect all of these people to use the crossing, although not all will wait for the green man.

From the south, particularly Sydney Road, it is likely that able bodied pedestrians will continue to cross to the central island from Sydney Road, and may choose not to use the crossing.

Inbound, the junction can be exit blocked on occasions which would result in slow moving or stationary traffic on the crossing of the inbound carriageway when the green man appears, there may therefore be a conflict on occasions between pedestrians and motorists on the crossing. This is a similar situation to the situation that occurs at the pedestrian crossing of Alphington Street at the Haven Road junction.

Vehicles will be unable to turn right into or out of the northern access to number 20, resulting in more movements at the southern access within the junction. The left turn out of the northern access will be difficult due to the location of the signal pole.

It will be difficult to turn into and out of number 16, and there is potential for conflict between vehicles accessing the property and pedestrians waiting to cross.

The cycle lane on the outbound approach to the junction will be removed.

Capacity implications

Currently, at busy times of day the junction operates on a 120 second cycle time, which typically comprises 10 seconds of lost time, 10 seconds green time to the side roads and 100 seconds green time to the main road.

The traffic flow on Alphington Road is typically 1,000 vehicles per hour in each direction.

Outbound

Outbound there is a little exit blocking but traffic generally flows freely, and a staggered crossing at this location will have little impact on the capacity of the junction for outbound traffic.

Inbound

The loss in capacity on the inbound carriageway is dependent on the frequency of demand for the pedestrian phase. Each time the pedestrian green man phase is used, approximately 14 seconds green time is lost to inbound traffic, which equates to 5 vehicles.

It is considered the likely use of the pedestrian crossing phase would result in 10% reduction in capacity for inbound traffic affecting approximately 100 vehicles per hour.

Any loss in capacity will increase queuing and has the potential to increase disruption to traffic flow in the Marsh Barton trading estate, and increase the likelihood of traffic queuing back onto the A30 dual carriageway, with the associated safety concerns.

Increased delays on Alphington Road inbound may result in some traffic diverting to Cowick Lane and Cowick Street or other alternative routes.

3.2 Straight through crossing (see Appendix II)

In this option the existing central island is left unchanged with the introduction of a controlled crossing.

This is the most effective layout that can be achieved for pedestrians at this location with the best compromise for all desire lines. It is a single crossing and the central island is retained for those who do not want to use the green man signal.

The crossing is close to the northern access to number 20 which may present difficulties for access, conflict with pedestrians and cause maintenance issues for the signal pole and tactile paving.

The junction will remain on a 120 second cycle time, so it is debateable how many pedestrians will be willing to wait and make use of the controlled crossing.

The junction experiences exit blocking, so there will be occasions when the green man appears and traffic is still on, or clearing, the crossing, as per the crossing of Alphington Street near the Haven Road junction.

Capacity implications

The pedestrian crossing would be an additional third stage and a red signal would be shown to all traffic.

As with the staggered crossing the loss in capacity at the junction is dependent on the frequency of demand for the pedestrian phase. It is considered the likely use of the pedestrian crossing phase would result up to a 20% reduction in capacity for main road traffic affecting approximately 200 vehicles per hour in each direction.

This would cause an unacceptable impact on traffic flows in both directions, affecting the Marsh Barton trading estate and resulting in queues of traffic back onto the A30 dual carriageway, with the associated safety concerns. In the outbound direction it would impact on the existing queuing at Exe Bridges and beyond, potentially to the Acorn, and negate the benefits achieved by the investment in widening of Western Way. There would also be an impact on bus services using Fore Street, Exe Bridges and potentially South Street.

The straight through crossing has the potential to be far more detrimental to traffic flow than the staggered crossing, with disbenefits to both inbound and outbound traffic on Alphington Road. This option is not therefore recommended.

4. Financial Considerations/Recommendation

It is proposed that the staggered crossing option be pursued, when a source of funding is identified, as being the most suited to providing for pedestrian safety and having an acceptable impact on traffic flow.

There is no prospect of Local Transport Plan funding for constructing this type of scheme in the 2015/16 financial year. Local Transport Plan funding could be made available for the detailed design of the scheme in the financial year 2015/16, and the scheme could be considered for implementation as part of the 2016/17 Local Transport Plan programme.

5. Sustainability Considerations

Evidence suggests that the proposed changes to provide a staggered controlled crossing point for pedestrians is an appropriate measure, taking into account the vehicle numbers, pedestrian movements and safety concerns in the area.

6. Carbon Impact Considerations

There will be a positive impact of the proposals by encouraging more local travel by walking rather than the private car.

However, increased delays to vehicles on the Alphington Road corridor are likely to have a negative impact potentially increasing carbon emissions and impacting negatively on air pollution on a route that currently exceeds the air quality objective levels.

7. Equality Considerations

No new policies are being recommended in this report. The improvements are anticipated to improve safety and accessibility for people with visual and mobility impairments. No adverse impacts on any particular groups with protected characteristics are expected.

8. Legal Considerations

The lawful implications of the proposals have been considered and taken into account in the preparation of this report.

9. Risk Management Considerations

This proposal will be fully assessed as part of the design process and all necessary action will be taken to safeguard the Council's position.

10. Public Health Impact

The scheme will have a positive public health impact by improving safety and encouraging more people to walk to the retail outlets. Increased vehicle delays may nevertheless offset the benefits by increasing carbon emissions and air pollution.

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Electoral Divisions: All in Exeter

Local Government Act 1972: List of Background Papers

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Background Paper	Date	File Ref.
1. HATOC Report	22 July 2014	Item 72



