

<b>Report to</b>	Norwich highways agency committee 18 July 2013
<b>Report of</b>	Head of city development services and Director of environment transport and development
<b>Subject</b>	Options for end-of-life signalled crossings

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**Item**

**7**

## **Purpose**

This report proposes that consideration should be given to replacing signalled crossings that are in need of refurbishment with alternative facilities such as a zebra crossing or pedestrian refuge where appropriate. It also seeks authority to consult on the proposal to replace the signalled crossing on Unthank Road by Essex Street with a zebra crossing.

## **Recommendation**

The committee is recommended to

- (1) Agree that when any signal crossing is due for refurbishment consideration is given to replacing the signalled crossing with an alternative facility such as zebra crossing or pedestrian refuge where pedestrian numbers and traffic levels are suitable.
- (2) Ask the head of city development services to carry out a public consultation on the proposal to replace the existing signalled crossing on Unthank Road with a zebra crossing and to carry out the necessary statutory procedures for amending the 20mph speed limit as shown on the plan attached as appendix 2.

## **Corporate and service priorities**

The report helps to meet the corporate priority: A safe and clean city and the service plan priority of delivering the Norwich Area Transport Strategy (NATS).

## **Financial implications**

The cost of replacing a signalled crossing with a zebra crossing or pedestrian refuge is less than that of refurbishing the existing signal equipment. The ongoing maintenance costs of a zebra crossing or pedestrian refuge are also less than those of a signalled crossing

The proposed replacement of the signalled crossing on Unthank Road by Essex Street will be funded by the traffic signals replacement budget.

Ward/s: All wards

Cabinet member:

City Cllr Stonard – Environment, development and transport

County: Cllr David Harrison – Environment, transport, development and waste

**Contact officers**

City: Joanne Deverick Transportation & network manager 01603 212461

County: Dave Stephens Team Manager Network 01603 222311  
Management (Analysis & Safety)

**Background documents**

Unthank Road pedestrian crossing assessment feasibility report

# Report

## Background

1. Across the city there are a variety of measures that have been introduced to help pedestrians cross the road. These include pedestrian refuges, raised crossing points, zebra crossings, and signalled crossings. Many signalled junctions also have pedestrian crossing facilities incorporated in their design.
2. The equipment in many of the signalled facilities was introduced 20 or more years ago and is now in need of replacing as the equipment is obsolete. The county council has a programme of signal replacement works both for junctions and crossings.
3. In the 1960s and 1970s there was a move in the city to signalise as many junctions and crossings as possible. At that time it was believed that this offered the most capacity for vehicles and helped traffic flow. This resulted in most of the zebra crossings in the city being replaced with pelican crossings and roundabouts on the ring road replaced with signalled junctions.
4. Thinking has moved on since then however; under the Norwich Area Transport Strategy (NATS) pedestrians and cyclists are a higher policy priority and whereas a signal controlled crossing may not always best serve their needs creating unnecessary delays. Also the ongoing costs of maintaining the signal equipment are proving to be a strain on revenue budgets.
5. The return to the use of zebra crossings has become more widespread in the city in the last ten years. These offer higher priority for pedestrians as there should be no delay in crossing the road and they are more economical to install and maintain. They are also less visually intrusive than signals. It is therefore suggested that consideration is given to replacing the signalled crossings with zebra crossings at locations where conditions are suitable for a zebra crossing.

## Choice of crossing

6. The Local Transport Note 1/95 'the assessment of pedestrian crossings' (LTN 1/95) issued by the Department for Transport (DfT) gives guidelines on how to decide what type of crossing is suitable for the crossing point.
7. The advice given by the DfT suggests that signal-controlled crossings are used where:
  - vehicle speeds are high and other options are thought unsuitable;
  - there is normally a greater than average proportion of elderly or disabled pedestrians;
  - vehicle flows are very high and pedestrians have difficulty in asserting precedence;
  - pedestrians could be confused by traffic management measures such as a contra-flow bus lane;
  - there is a need to link with adjacent controlled junctions or crossings;
  - pedestrian flows are high and delays to vehicular traffic would otherwise be excessive.

8. LTN 1/95 suggests that signalled crossings should be used when there is a need for cyclists to use the crossing. However Sustrans is working with the DfT to enable cyclists to use widened zebra crossings. The recently installed zebra crossing on Drayton Road is designed to accommodate cyclists.
9. Zebra crossings are considered suitable when traffic levels are moderate, pedestrian numbers are not excessive and the 85th percentile<sup>1</sup> traffic speed is below 35mph.
10. If the advice in LTN 1/95 were applied to many of the signalled crossing sites in the city they would not meet the criteria above. If these crossings were installed today then it would more likely be that a zebra crossing and in some instances a pedestrian refuge would be provided.
11. In terms of the relative safety of each crossing type LTN 1/95 advises that “there is little difference in the average rate of personal injury accidents at Zebra and signal-controlled types. There are various factors which will affect the accident rate at the crossing; such as speed, volume of traffic, numbers of pedestrian movements etc. The key is that each site is assessed properly on its merits and subjected to a Safety Audit in the normal manner”
12. Some members of the public perceive that signalled crossings are superior to any other form and consequently they are reluctant to see signalled crossings removed. This Committee has previous experience of this with the petition for the conversion of the Waterloo Road Zebra to a puffin and the petition against the change of the Unthank Road pelican crossing by Gloucester Street to a zebra crossing. However, since these petitions were received (which was some years ago), the use of Zebra Crossings in the City has increased significantly, and they are now relatively commonplace. There is no evidence to suggest that in Norwich zebra crossings are any less safe than signalised crossings. In the example of St Andrews Street where the signalled crossing was replaced by a zebra crossing in 2008, the accident rate dropped from 8 pedestrian accidents in the 5 years prior to the switch to 1 in the 5 years since.
13. There are a number of streets in the city where there is a mixture of crossing types within a relatively short distance. Examples of this include Earlham Road, Unthank Road, Ber Street, Drayton Road and Hall Road. This can be distracting for drivers and give the streetscape a confused feel.
14. There will be sites, primarily on the ring road and the main radial routes (A roads) where a signalled crossing is the only feasible option. However on much of the B and C class network a zebra crossing or pedestrian refuge may be more suitable as it affords the pedestrians a higher priority and can have a traffic calming effect, reducing vehicle speeds. This is due to the driver's uncertainty when they approach a crossing if any pedestrian will stop to cross in front of them. With signalled crossings drivers tend to accelerate towards a green signal to ensure they get across before it changes to red. It is therefore recommended that, rather than automatically replacing old signalled crossings with a new signalled crossing an assessment is carried out to determine which type of crossing is most suitable for that location.

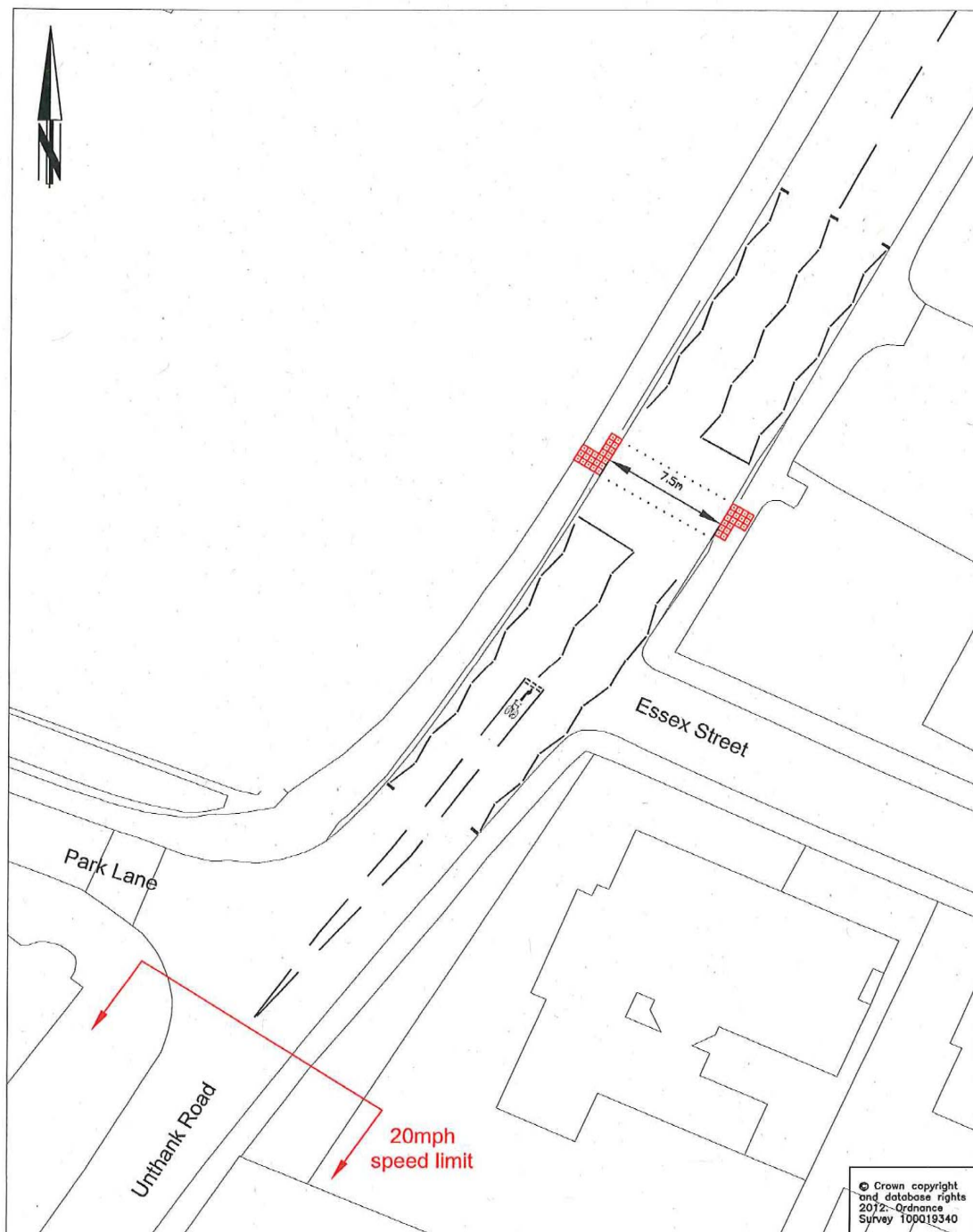
### **The Unthank Road by Essex Street crossing**

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<sup>1</sup> The 85<sup>th</sup> percentile is defined to be the speed that 85% of drivers do not exceed

15. This crossing is due for replacement in the 2013/14 signal upgrade programme. The layout of existing crossing is shown on the plan attached as appendix 1.
16. Norfolk county council have carried out an assessment and have concluded that a zebra crossing would be more appropriate in this location given the volumes and flows of both pedestrians and traffic. A zebra crossing would be more responsive to pedestrian needs and while it is likely that vehicles may have to stop more often, the length of time they are waiting should be less than currently. It would also mean that this crossing matches both the nearby zebra crossings on Park Lane to the west of Unthank Road and Unthank Road south of Park Lane.
17. In addition to the change to a zebra crossing it is proposed that much of the guard-railing is removed to give more usable pavement space to pedestrians and the 20mph speed limit on Unthank Road be extended to include the crossing.
18. This location forms part of the cycle ambition bid that has been submitted to the DfT. At the time of writing this report the announcement on whether the bid has been successful is expected shortly. Should the bid prove successful it is intended that in addition to the proposals described above a raised table be provided on Unthank Road encompassing its junctions with Essex Street and Park Lane.
19. The cost of replacing the signalled crossing with a zebra crossing at this site will be in the region of £40,000. In comparison the cost of replacing the existing signal equipment is around £50,000.

## Appendix One - Existing layout



Existing layout - NTS

# Key / Notes

Widen footway by narrowing carriageway to 6m at crossing point (taper 1:25)

Existing signalised crossing to be removed. Existing ducting to be reused if possible.

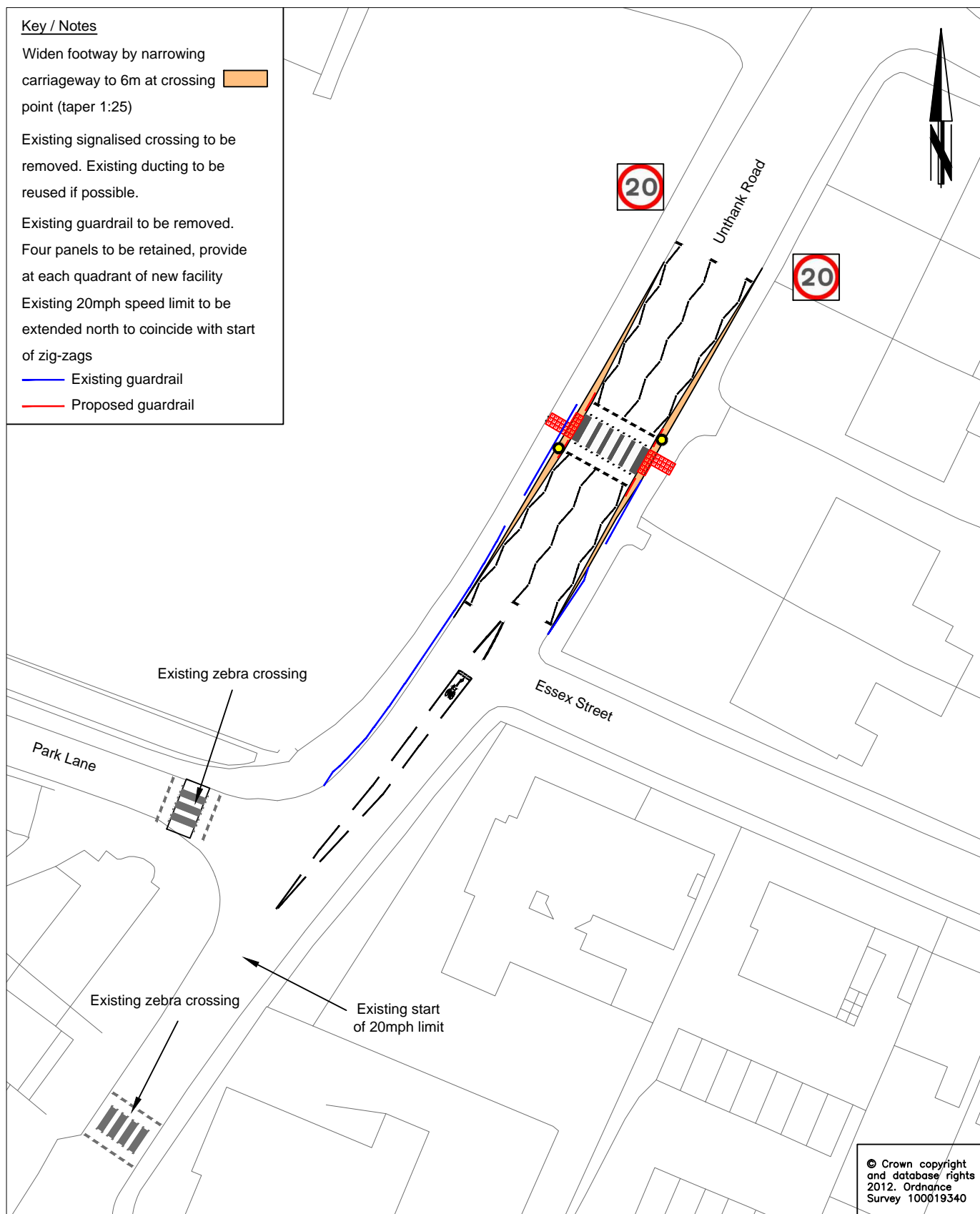
Existing guardrail to be removed.

Four panels to be retained, provide at each quadrant of new facility

Existing 20mph speed limit to be extended north to coincide with start of zig-zags

— Existing guardrail

— Proposed guardrail



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## DRAWING TITLE

Unthank Road Pedestrian Crossing Assessment  
New Zebra Crossing

Mike Jackson  
Director of Environment, Transport  
and Development  
Norfolk County Council  
County Hall  
Martineau Lane  
Norwich NR1 2SG

REV.	DESCRIPTION	CHECKED	DATE

INIT.	DATE	DRAWING No.
SURVEYED BY OS		HI/NS0030/001
DESIGNED BY JF	03/13	PROJECT TITLE
DRAWN BY JF	03/13	Unthank Road
CHECKED BY KJA	03/13	Pedestrian Crossing Assessment
		SCALE
		NTS
		FILE No.
		NS0030