Report for Resolution

Report to:	Norwich Highways Agency Committee 26 March 2009	**Item** 9
Report of:	Head of Transportation and Landscape	
Subject:	Unthank Road / Colman Road Junction – Provision of Pedestrian Crossing Facilities and Signal Upgrade Scheme	

Purpose

To consider options for the provision of pedestrian crossing facilities at the Colman Road / Unthank Road junction

Recommendations

The Committee is recommended to approve option 4, the provision of signal stage offset crossings on the Colman Road arm and the Unthank Road (city side) arms of the Colman Road / Unthank Road junction, as indicated on the plan attached as appendix 5..

Financial Consequences

The Local Transport Plan allocation for 2009/10 includes the provision of £100k from the signal upgrade budget for this junction and up to a £170k additional funding for the pedestrian crossing facilities. A further £40k is available from the upgrade budget for the Mile End Road crossing.

Strategic Priority and Outcome/Service Priorities

The report helps to meet the strategic priority “Strong and prosperous city – working to improve quality of life for residents, visitors and those who work in the city now and in the future” and the service plan priority of delivery the Local Transport Plan.

Contact Officers

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Background Documents

Feasibility reports

Report

Background

1. The junction of Colman Road with Unthank Road is an existing signalled junction with no pedestrian crossing facilities. The nearest crossing point to the junction is a well used pelican crossing on Mile End Road, about 60m from the junction.

2. The City Council has received many complaints about the lack of pedestrian crossing facilities at this junction over the past few years. It is currently ranked 8th in the pedestrian crossing priority list.

3. Norfolk County Council are due to upgrade all the signal equipment at this junction and also at the Mile End Road Pelican crossing during 2009/10, as part of their signal upgrade programme. In terms of value for money and lessening disruption to the travelling public, it would be appropriate for the pedestrian facilities to be provided as part of the signalled upgrade programme. Norfolk County Council have indicated that they will provide £100k from the signalled upgrade budget to fund a scheme at the junction and £40k to upgrade the Mile End crossing, with any additional funding being provided by the pedestrian crossing budget, up to a maximum value of £170k[1]

4. Surveys show that the junction is crossed by 500-600 people on a typical weekday between 8am and 6pm. A further 266 cross Unthank Road (city side) away from the junction, and 100 cross Colman Road away from the junction, making a total of almost 1000 people crossing without the benefit of pedestrian facilities. The existing Pelican crossing on Mile End Road is used by over 700 pedestrians between 8am and 6pm.

5. The results of the pedestrian survey are shown as appendix 1.

6. A high proportion of the people crossing at or near this junction are pupils and parents attending the Colman Road First and Middle Schools and Eaton CNS. Many of those attending the Colman Schools have to cross both Unthank Road and Colman Road, and the lack of crossing facilities was highlighted as a problem in the Colman Road School Travel plan. Eaton CNS have also welcomed the fact that pedestrian facilities are being considered at this junction.

7. There is also a Hall on the south west side of Colman Road which hosts various activities and clubs and attracts may pedestrians.

8. The accident record for this junction indicates that there has been 13 personal injury accidents at or near the junction in the past 5 years (12 slight, 1 serious). Five of these 13 accidents involved pedestrians being struck by vehicles.

9. Norfolk County Council has carried out a feasibility study to determine how pedestrian crossing facilities can best be provided for, and what implications there are for all other network users. A number of alternative layouts have been

[1] Subject to Cabinet confirmation in April.

investigated, and these are discussed below.

Options for Consideration

OPTION 1

- **Pedestrian facilities on all arms of the Unthank Road / Colman Road junction (in place of the existing uncontrolled crossing points)**

- **Signal upgrade at junction and at Mile End Road crossing (Mile End Road crossing layout not altered)**

10. The layout is shown on appendix 2

11. This layout would cater for all the pedestrian movements and the crossing points are on the pedestrian desire lines, however it would require an all red phase in the signals. The junction is already operating over capacity and with an all red phase coming up every other cycle (cycle time 120 seconds), the modelling suggests that the queue lengths on Colman Road would be around 660m in the morning peak and 880m in the evening peak. The queue lengths are indicated in appendices 8 and 9.

12. The estimated cost of this option, including the both signal upgrades is £158,000

OPTION 2

- **Staggered crossing on Colman Road at junction, and offset crossing on Unthank Road**

- **Minor road widening on Colman Road / Unthank Road (city side) corner**

- **Signal upgrade at junction and Mile End Road crossing (Mile End Road crossing layout not altered)**

13. This layout is shown as appendix 3.

14. This would satisfy the demand on Colman Road by proving a safe crossing point at the junction. The crossing on Unthank Road (city side) is off set from the junction, however the pedestrian surveys suggest that many people are already crossing away from the junction so an offset crossing would cater for the majority of crossing movements. There would be no crossing point on Unthank Road (county side), although this leg is the least difficult to cross.

15. The impact on traffic congestion would be much less than option 1, but still a lot worse that at present, partly because there is no right turn lane from Colman Road to Unthank Road (county side). The queue lengths are indicated in appendices 8 and 9.

16. The estimated cost of this option including the both signal upgrades is £190,000

OPTION 3

- **Staggered crossing on Colman Road offset from the junction, offset crossing on Unthank Road**

- **Minor road widening on Colman Road / Unthank Road (city side) corner**

- **Signal upgrade at junction and Mile End Road crossing with conversion of Mile End Road crossing to staggered crossing**

17. This layout is shown as appendix 4.

18. The crossing on Colman Road would be offset, which would meet the demands of the Colman Schools but would not be as convenient for people moving from one leg of Unthank Road to the other. As with option 2, the crossing on Unthank Road (city side) would be offset from the junction and there would be no crossing point on Unthank Road (county side).

19. Although the crossing time for a staggered crossing is longer for pedestrians than a non staggered crossing, central islands have the benefit of enabling pedestrians to cross half at a time so will not always need to stop the traffic in order to cross. This helps keep the traffic flowing and reduce delays. Staggered crossings are also more visible to drivers because they have traffic signals on the central island.

20. A central island on Colman Road would reduce the carriageway widths on either side, and create a pinch point for cyclists. On a road which carries HGVs and buses, cyclists prefer a width of 4.5m so that they can be safely overtaken. The lane widths on Colman Road would be in the region of 3.7m.

21. Central islands can also make road maintenance more difficult (eg gully emptying and resurfacing works) because when a vehicle is stopped alongside the island, traffic is unable to get past.

22. The provision of a staggered crossing on Mile End Road would improve safety for pedestrians and help to reduce delays to Ring Road traffic, but would disadvantage cyclists.

23. This option results in shorter queues than option 2 and the modelling suggests that queuing would not be much worse than existing. The queue lengths are indicated in appendices 8 and 9.

24. This is the most costly option and is estimated to cost £240,000, including the signalled upgrade of both the junction and Mile End Road Crossing

OPTION 4

- **Non-staggered crossing on Colman Road offset from the junction, offset crossing on Unthank Road**

- **Minor road widening on Colman Road / Unthank Road (city side) corner**

- **Signal upgrade at junction and Mile End Road crossing (Layout of Mile End Road crossing not altered)**

25. This layout is shown as appendix 5.

26. A non-staggered crossing on Colman Road would have a shorter overall crossing time for pedestrians, however the waiting time may increase because pedestrians would have to wait for the signals to change in order to cross safely.

27. The absence of a central island would be safer for cyclists and reduce problems for road maintenance, but due to the width of the road, the crossing may be less conspicuous to drivers. It would also result in more delays to traffic because traffic in both carriageways is stopped at the same time.

28. Delays and congestion with this option are slightly worse than option 3 but are considered to be acceptable. The queue lengths are indicated in appendices 8 and 9.

29. The estimated cost of this option including the both signal upgrades is £183,000

OPTION 5

- **Staggered crossing on Colman Road offset from the junction, offset crossing on Unthank Road**

- **Minor road widening on Colman Road / Unthank Road (city side) corner**

- **Signal upgrade at junction and Mile End Road crossing (Layout of Mile End Road crossing not altered)**

30. This layout is shown as appendix 6.

31. This is the same as option 3 but without the conversion of the Mile End Road crossing to a staggered crossing, as this element of the scheme is desirable but not essential.

32. Congestion and delays are about the same as option 3. The queue lengths are indicated in appendices 8 and 9.

33. The estimated cost of this option including the both signal upgrades is £192,000

OPTION 6

- **No further provision of pedestrian facilities**

- **Signal upgrade at junction and Mile End Road crossing (Layout of Mile End Road crossing not altered)**

34. The layout is shown as appendix 7.

35. The junction would remain without any pedestrian facilities and this option would not meet the requirements of the brief or address the accident problem.

36. Norfolk County Council's signal upgrade scheme would go ahead as planned. Previous experience has shown that when the opportunity is not taken to include pedestrian facilities as part of an upgrade scheme both the City and County Councils have been criticised. Given the high priority in the pedestrian crossing list of this junction it is anticipated that considerable criticism will be received

37. The existing queue lengths are indicated in appendices 8 and 9.

Conclusions

38. Option 1 is the best layout for meeting pedestrian demand as all the crossing points are on the desire lines, and is the cheapest option. However the all red phase every other cycle necessary to make this option work has a huge effect on delays to traffic, creating queue lengths on Colman Road of up to 900m in the peak periods.

39. Option 2 caters for pedestrians crossing Colman Road with the provision of a staggered crossing facility at the junction, and also for crossing Unthank Road (city side) with an offset facility. This option however, results in long delays on Mile End Lane in the morning peak.

40. It is clear from the modelling work undertaken that the only way pedestrian facilities can be provided with minimal impact on delays is by considering offset crossing facilities, however these are less convenient for pedestrians as they are off the desire line for certain crossing movements.

41. Option 3 caters for crossing Colman Road and Unthank Road with off set facilities, and also improves safety at the existing Mile End Road crossing by converting it to a staggered facility. This option is the most expensive at £240,000.

42. Option 4, which has the non staggered crossing on Colman Road, is better for cyclists and future road maintenance but is not as convenient for pedestrians and would delay traffic more than option 3. However the effect on queuing is roughly the same as options 3 and 5.

43. Option 5 is the same as option 3 without the conversion of the Mile End Road crossing to a staggered crossing. This is estimated to cost about £192,000, which is £48,000 cheaper than option 3. It does not result in any extra delays or congestion.

44. Option 6 (do nothing) is not considered acceptable as it does not cater for pedestrians and would receive considerable criticism.

45. Options 3, 4 and 5 all meet the requirements of the brief to provide acceptable pedestrian facilities at the junction and have minimal impact on this already over capacity junction. Increases in delays and queuing will be minimised by co-ordination of the signals with the crossings and by the incorporation of pedestrian demand detection.

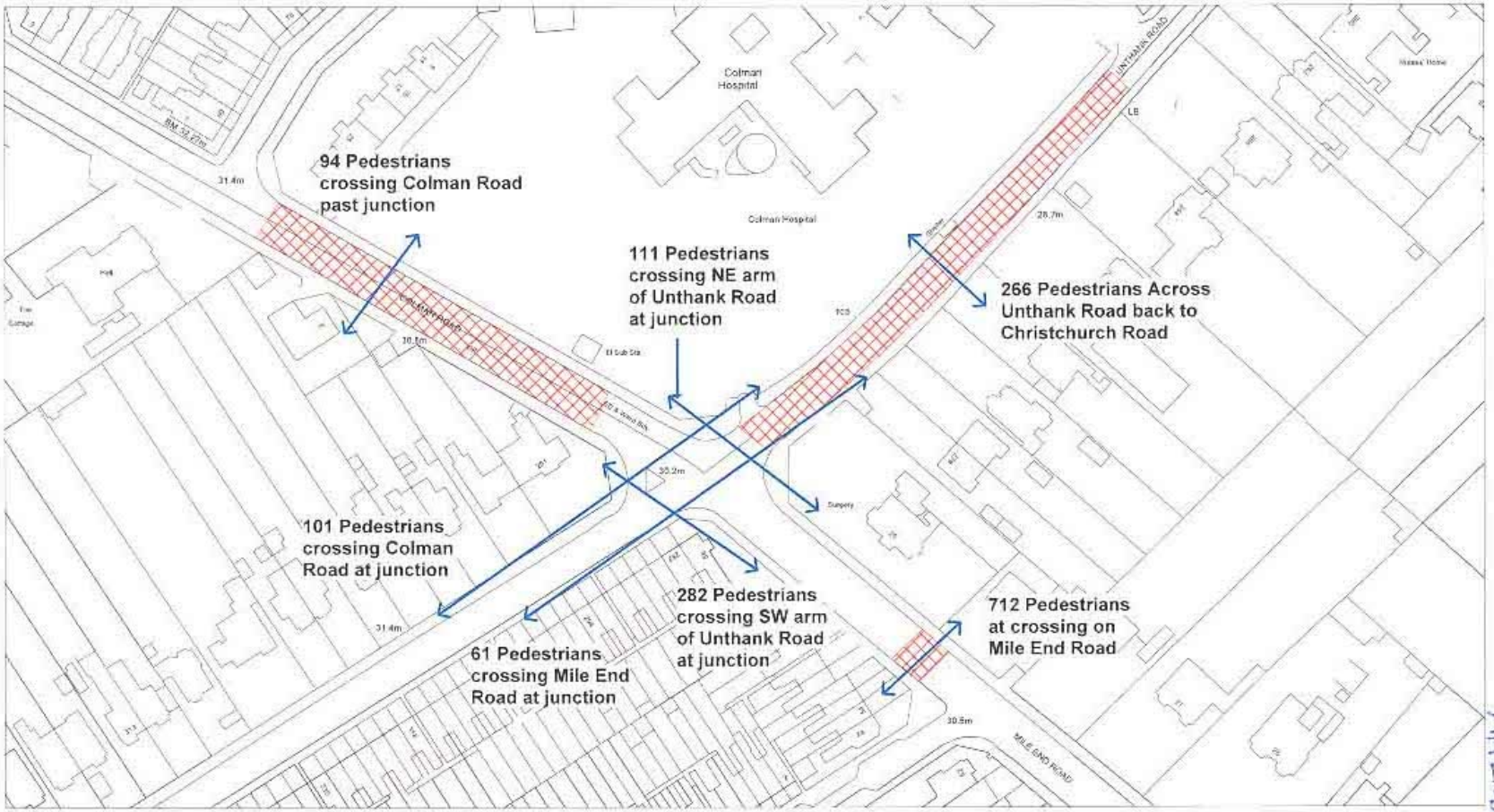
46. Taking all aspects into consideration, Option 4 (offset, single stage crossings) is recommended to be progressed, as it does not have a detrimental impact on cyclists, it makes future maintenance relative easy and represents best value for money, requiring a £43k contribution from the pedestrian crossings budget.

Ward Member Comments

47. Comments from Eaton and Nelson ward members are currently being sought and will be reported orally at your meeting. However in recent years there have been several requests from local members for pedestrian crossing facilities at this junction.

Timetable

48. Should members agree to progress option 4 further detailed design work will be undertaken, including considering the most appropriate locations for the bus stops on both Colman Road and Unthank Road (city side) in relation to the new crossings. Public consultation will be carried out and it is anticipated that the works will take place during the school summer holiday.

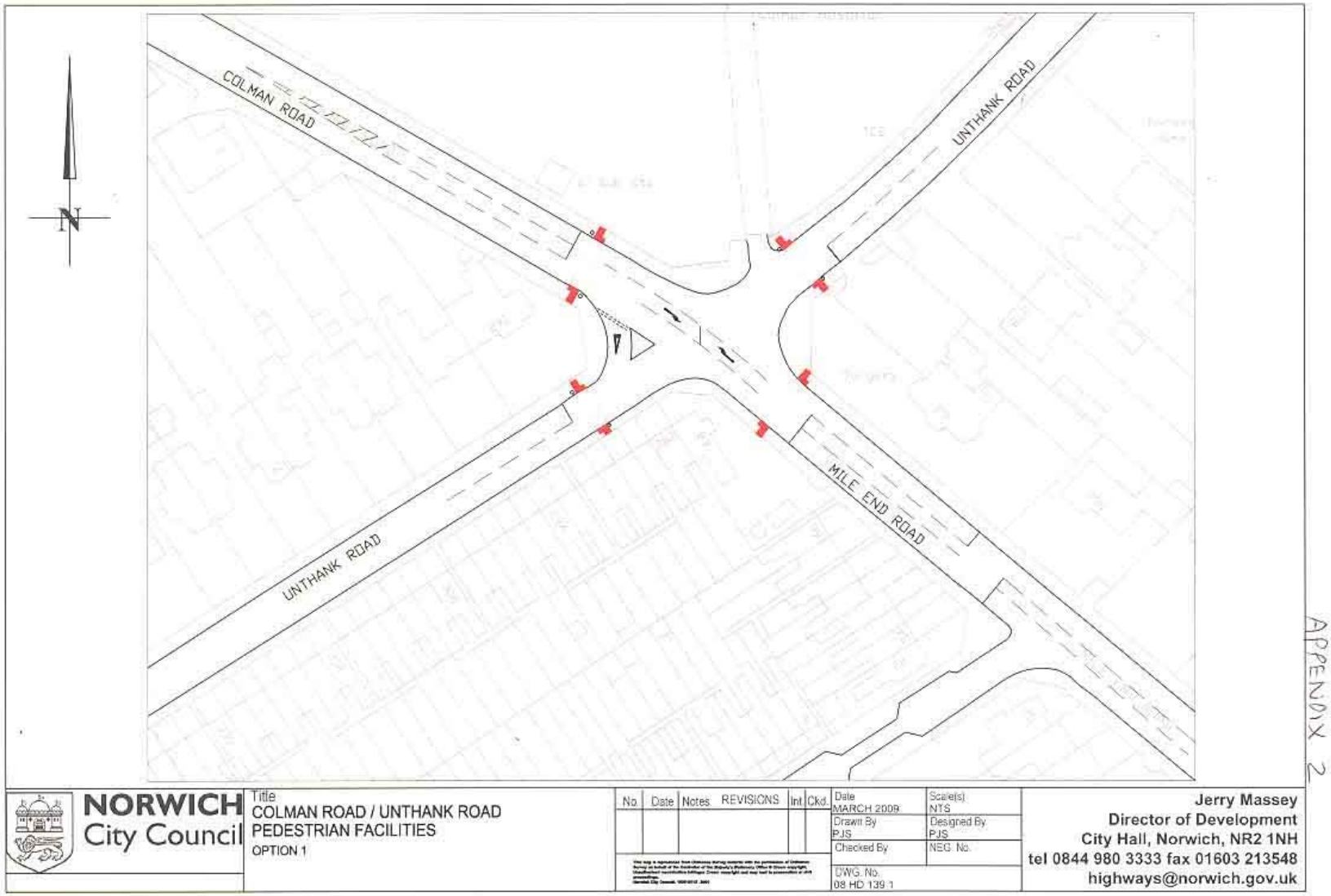


NORWICH City Council

Pedestrian Crossing Survey 8am to 6pm
Unthank Road, Colman Road & Mile End Road Junction

SCALE	1 : 1250
DATE	18/02/2009
DRAWING No.	PL/TR/3578/788
DRAWN BY	CS

APPENDIX 4



NORWICH City Council

Title
COLMAN ROAD / UNTHANK ROAD
PEDESTRIAN FACILITIES
OPTION 1

No.	Date	Notes REVISIONS	Int	Ckd.

Date MARCH 2009	Scale(s) NTS
Drawn By PJS	Designed By PJS
Checked By	NEG. No.
DWG. No. 08 HD 139 1	

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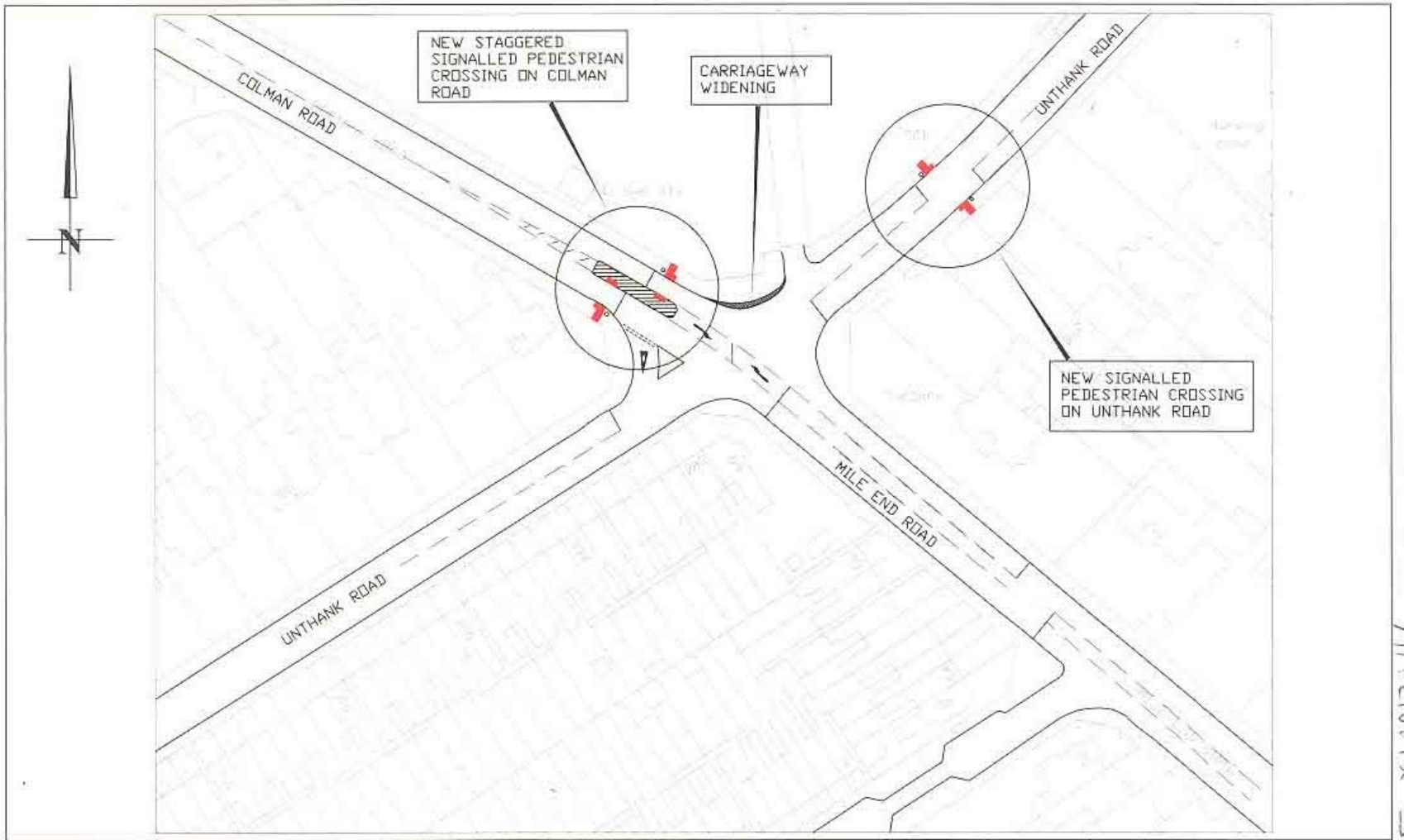
APPENDIX 2



NORWICH City Council

Title
COLMAN ROAD / UNTHANK ROAD
PEDESTRIAN FACILITIES
OPTION 2

No.	Date	Notes REVISIONS	Int.	Ckd.

Date MARCH 2009	Scale(s) NTS
Drawn By PJS	Designed By PJS
Checked By	NEG. No.
DWG. No. D8 HD 139 2	

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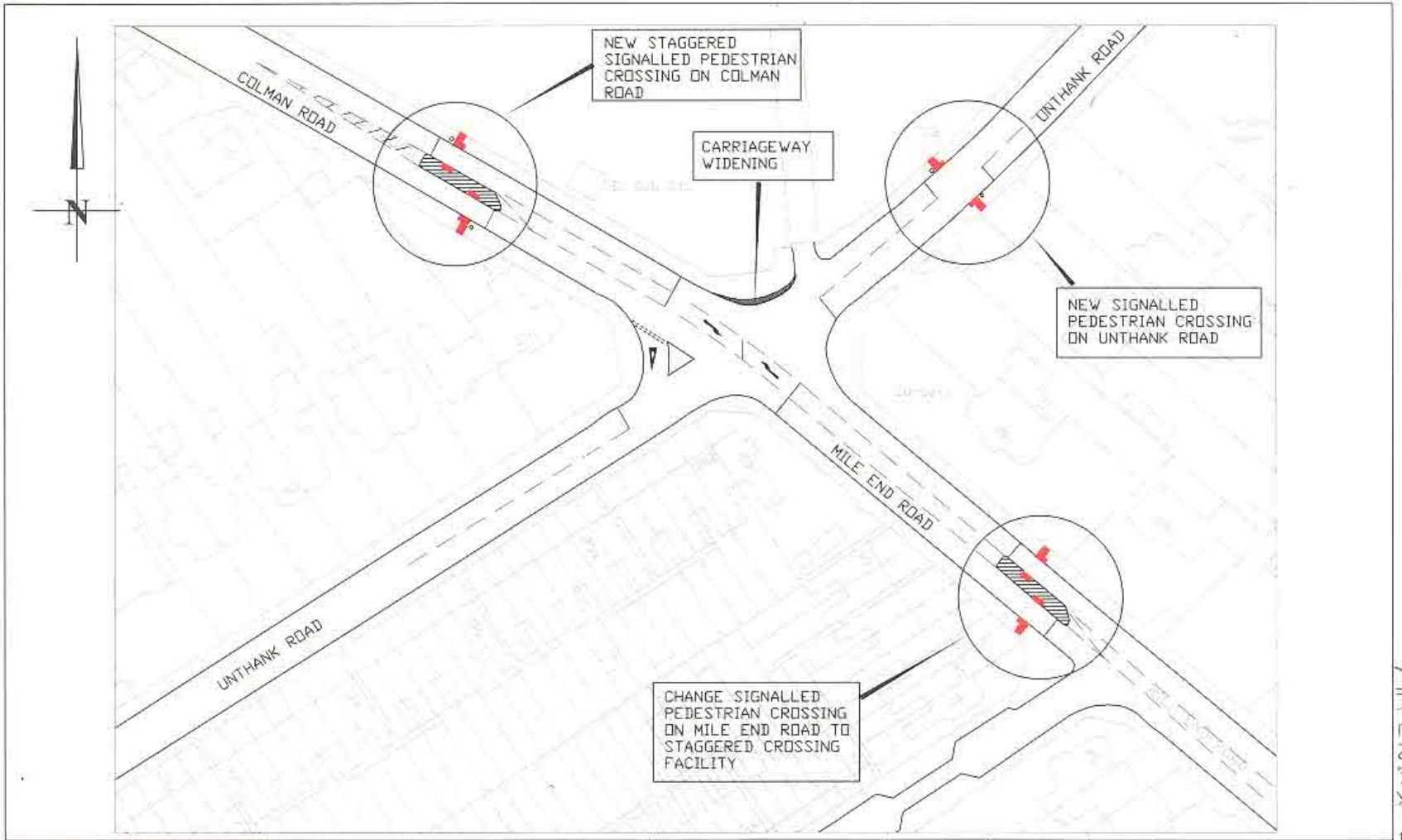
APPENDIX 3



NORWICH City Council

Title
COLMAN ROAD / UNTHANK ROAD
PEDESTRIAN FACILITIES
OPTION 3

No.	Date	Notes REVISIONS	Int.	Ckd.

Date MARCH 2009	Scale(s) NTS
Drawn By PJS	Designed By PJS
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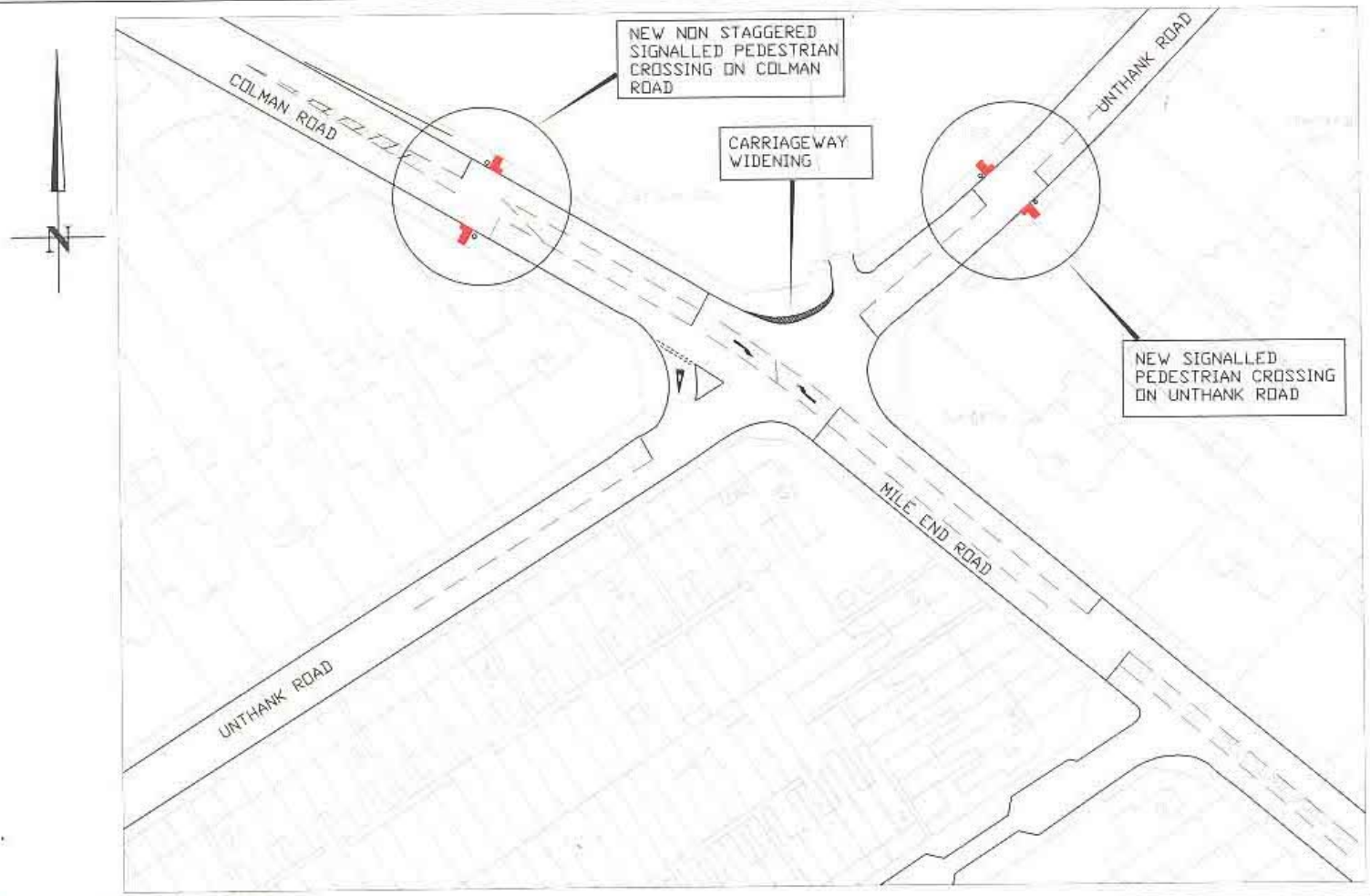

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Title
COLMAN ROAD / UNTHANK ROAD
PEDESTRIAN FACILITIES
OPTION 4

No.	Date	Notes REVISIONS	Int	Ckd

Date MARCH 2009	Scale(s) NTS
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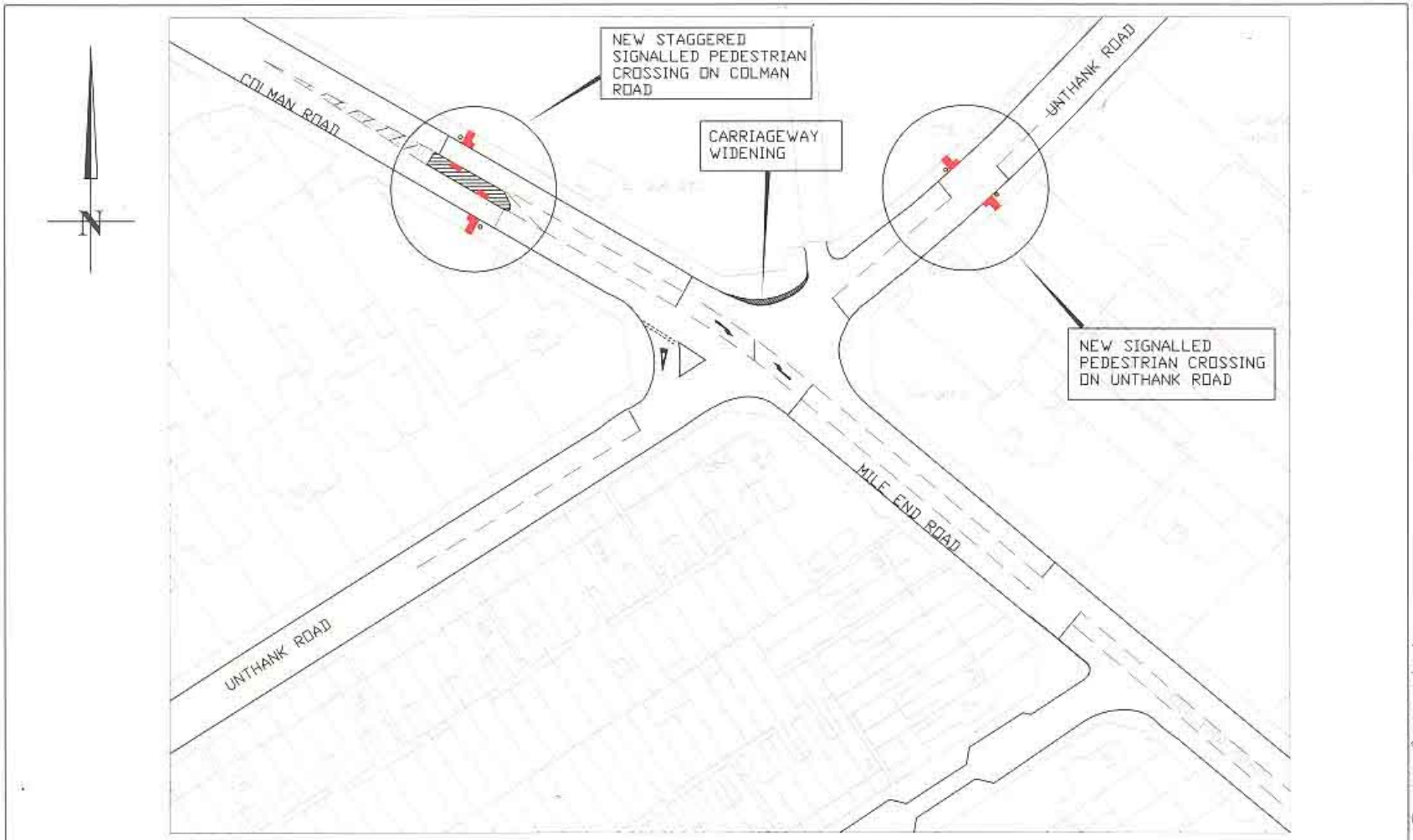
APPENDIX 5



NORWICH City Council

Title
COLMAN ROAD / UNTHANK ROAD
PEDESTRIAN FACILITIES
OPTION 5

No.	Date	Notes REVISIONS	Int.	Ckd.

Date MARCH 2009	Scale(s) NTS
Drawn By PJS	Designed By PJS
Checked By	NEG. No.
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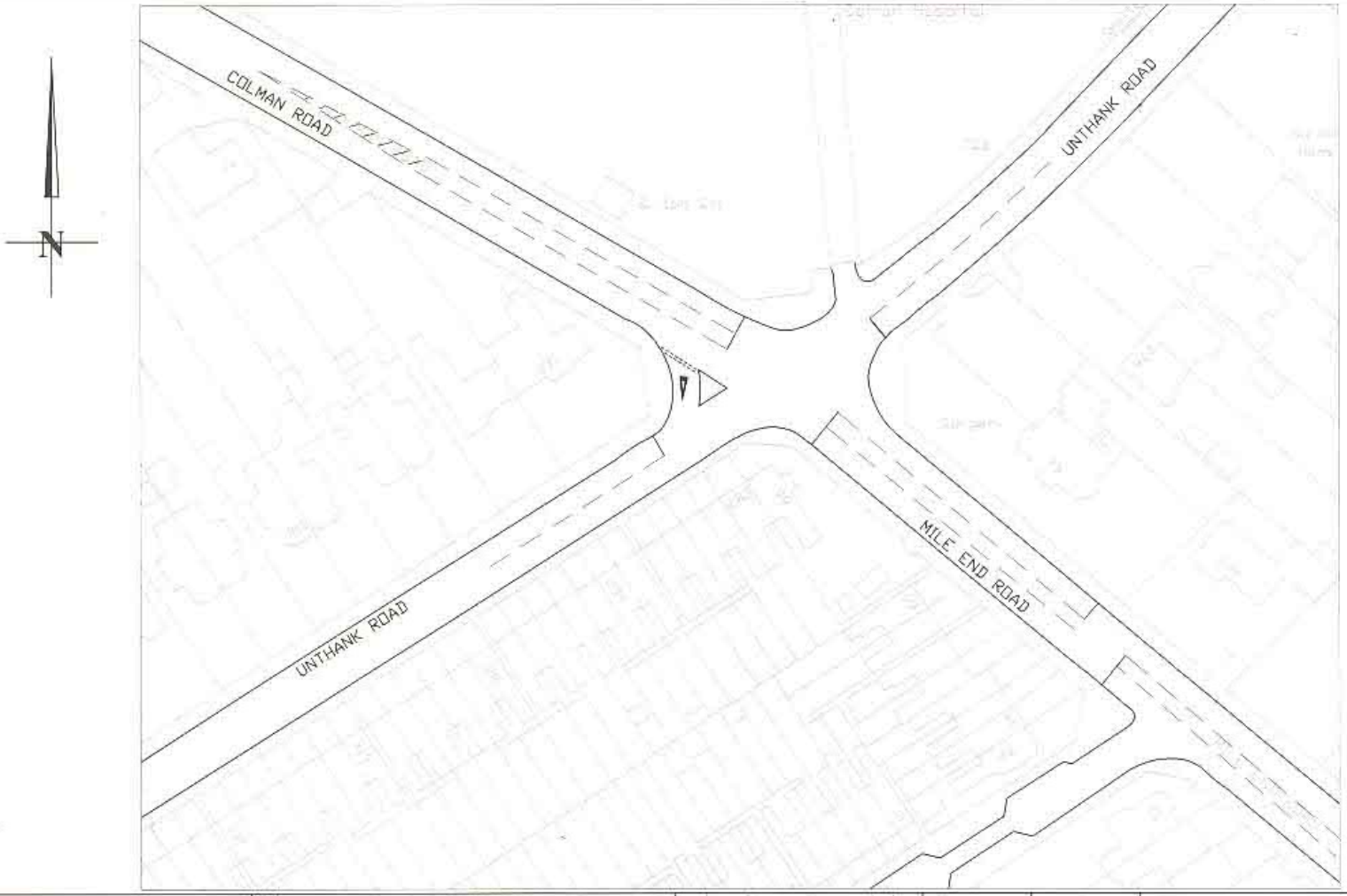
APPENDIX 6



NORWICH City Council

Title
COLMAN ROAD / UNTHANK ROAD
PEDESTRIAN FACILITIES
OPTION 6 (DO NOTHING)

No.	Date	Notes REVISIONS	Int.	Ckd.

Date MARCH 2009	Scale(s) NTS
Drawn By PJS	Designed By PJS
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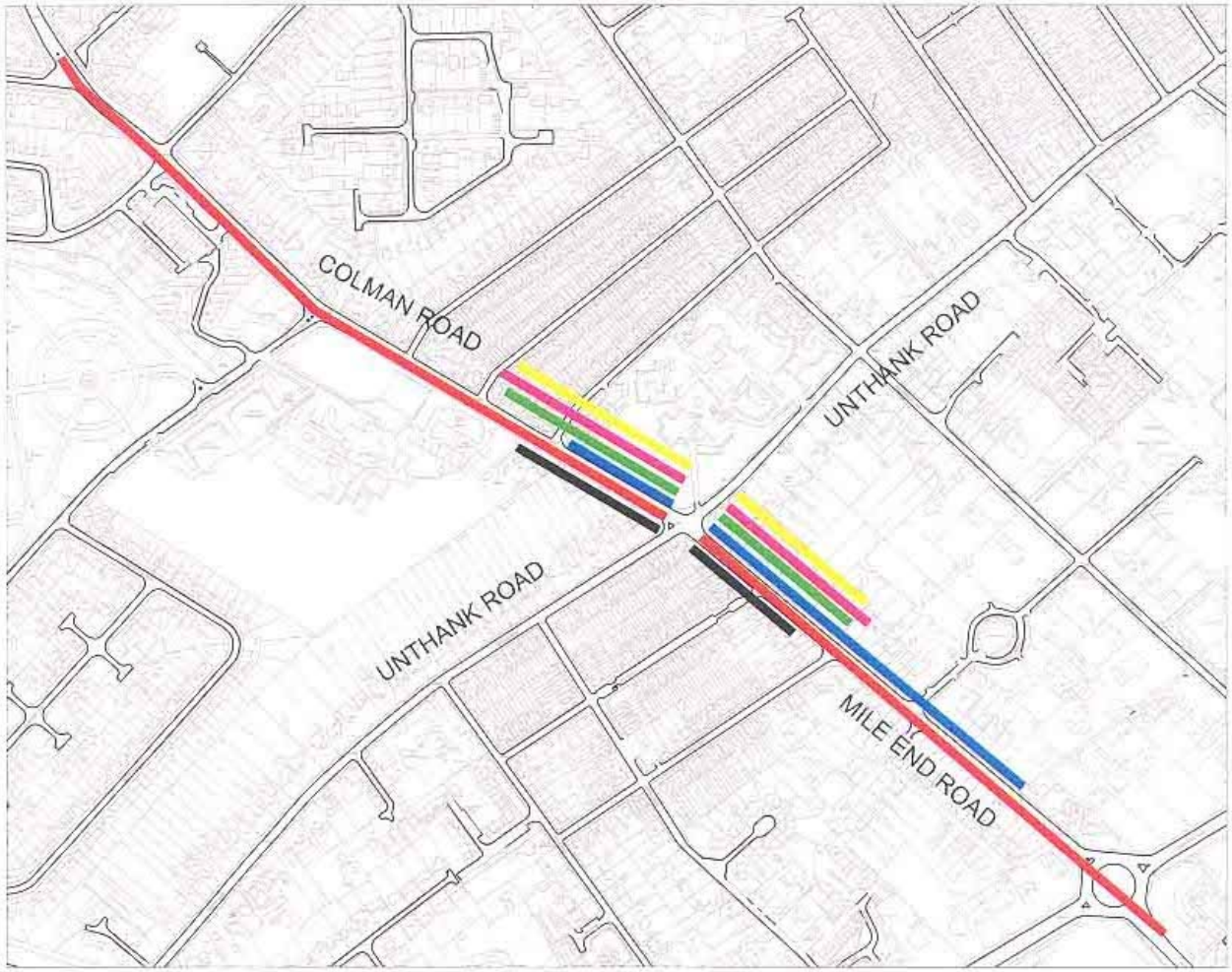
APPENDIX 7

KEY

- EXISTING
- OPTION 1
- OPTION 2
- OPTION 3
- OPTION 4
- OPTION 5



APPENDIX D

NORWICH City Council

Title
UNTHANK ROAD / COLMAN ROAD
PEDESTRIAN CROSSING FACILITIES - OPTIONS
MORMING PEAK QUEUE LENGTH

No.	Date	Notes REVISIONS	Int.	Ckd.

Date	Scale(s)
Drawn By	Designed By
Checked By	NEG. No.
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KEY

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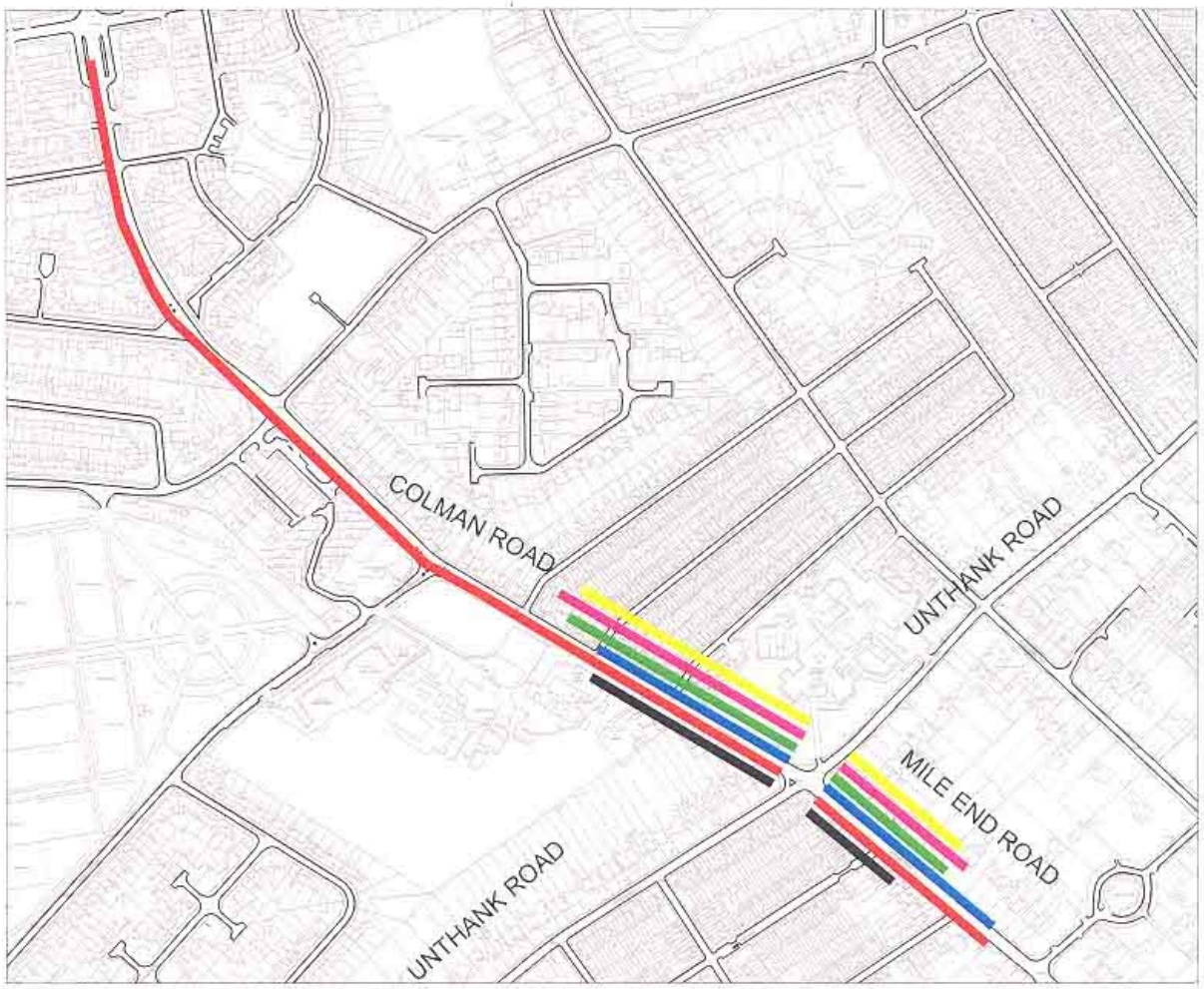
- OPTION 3
- OPTION 4
- OPTION 5



APPENDIX 7

NORWICH City Council

Title
UNTHANK ROAD / COLMAN ROAD
PEDESTRIAN CROSSING FACILITIES - OPTIONS
EVENING PEAK QUEUE LENGTH

No.	Date	Notes REVISIONS	Int.	Ckd.

Date	Scale(s)
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