

Report to	Norwich Highways Agency committee 20 September 2018	Item
Report of	Head of city development services	6
Subject	Transport for Norwich – Earlham Road / Outer Ring Road to Heigham Road safety scheme	

Purpose

To consider the responses from the consultation, approve installation of the Earlham Road / Outer Ring Road to Heigham Road safety scheme and agree advertising and consultation on further improvements described in this report.

Recommendation

To:

- (1) approve the installation of the scheme including:-
 - (a) Earlham Road / ORR roundabout (Appendix 2);
 - (i) Upgrading the existing signalised pedestrian crossing to a toucan crossing;
 - (ii) Building a new cycle zebra crossing on Earlham Road (eastern arm);
 - (iii) Connecting the toucan crossing and cycle zebra with a shared path facility (excluding proposed shared path adjacent to Colman Road) ;
 - (iv) Modifying the central island of the roundabout and splitter islands;
 - (b) Earlham Road between A140 and Christchurch Road (appendix 3);
 - (i) Implementing 1.5m wide light-segregated cycle lanes on both sides of the carriageway;
 - (ii) Creating a new raised table and cycle zebra crossing at the junction with Christchurch Road;
 - (c) Earlham Road between Christchurch Road and Heigham Road (Appendix 4);
 - (i) Introducing a 20mph restriction including the side streets;
 - (ii) Installing a new zebra crossing on a raised table near to Wellington Road;
 - (iii) Building pedestrian priority crossings on side roads;
 - (iv) Making changes to waiting restriction but existing waiting restrictions outside St Thomas Church to remain unchanged;

(d) Heigham Road/ Mill Hill Road / Earlham Road junction (Appendix 5):

- (i) Improving junction including narrowing of the carriageway;
- (ii) Installing cycle zebra over Earlham Road;
- (iii) Constructing a raised table across the junction;
- (iv) The closure of West Pottergate at its junction with Heigham Road /Earlham Road to motor-vehicular through traffic.

- (2) ask the head of city development services to carry out the necessary statutory procedures to:
 - (a) finalise the traffic regulation order for the necessary amendments of no waiting restriction on Earlham Road;
 - (b) finalise the speed restriction order on Earlham Road and side roads;
 - (c) finalise the Traffic Management Order for West Pottergate;
- (3) agree for consultation the proposed extension of the 20mph zone (including traffic calming features) to include the area between Christchurch Road and the Outer ring road (Appendices 6 and 7);
- (4) delegate consideration of any comments received from the consultation to the head of city development services, in discussion with the chair and vice chair of this committee.

Corporate and service priorities

The report helps to meet the corporate priority to provide a safe, clean and low carbon city

Financial implications

The proposed scheme is estimated to cost £1,600,000. This will be funded from £560,000 of pooled community infrastructure levy (CIL) funding and £1,040,000 from Department for Transport (DfT) Cycle Ambition Safety Funding.

The CIL funding has been agreed by the three district councils (Norwich, South Norfolk and Broadland) and was formally signed off by the Greater Norwich Delivery Board on 12 March 2018.

Ward/s: Mancroft, Nelson, University and Wensum

Cabinet member: Councillor Stonard - Sustainable and inclusive growth

Contact officers

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Background documents

None

Report

Background

1. Norwich has seven colour coded strategic cycle routes. The green pedalway runs from Bowthorpe in the west of the city through to Broadland Business Park in the east via the city centre. A feasibility study, funded by Norfolk county council, was completed in January 2018 and identified the locations where design interventions were needed to remedy a poor environment for walking and cycling and a high accident record overall.
2. The scheme area includes the Earlham Road / ORR roundabout and Earlham Road through to and including its junction with Heigham Road / Mill Hill Road.
3. In the 5 years ending September 2017, there were 38 accidents in the scheme area, 18 of which involved cyclists. The main cycle related casualty issues that were identified as needing to be addressed were:
 - (a) Interactions with motor vehicles at the Earlham Road / ORR roundabout; 17 accidents, 7 involving pedal cycles and one involving a pedestrian;
 - (b) Motor vehicles emerging from side roads along the link between Christchurch Road and Heigham Road – 21 accidents 11 involving pedal cycles and 3 involving pedestrians. It should be noted that although it is outside of the five year study period, there was a fatal accident in 2010 involving a cyclist being hit by a car emerging from a side road along this link.
4. The numbers of cyclists along this route are increasing; between 2013 and 2017, the 12 hour cycle count along Earlham Road (east of ORR) more than doubled from 192 to 402. With 2,500 homes due to be built in the next few years needing to access the city centre along this section of the green pedalway, the numbers of cyclists are expected to increase considerably, which amplifies the need to redesign the highway to reduce their exposure to the risk of collisions.
5. In February 2018, the DfT released information about funding for cycle safety schemes that the Cycle City Ambition Cities were eligible to bid for. These cities were allowed to submit up to two schemes that address safety where there is an established recorded injury data for cycling. Two schemes were submitted, these being for the Earlham Road / outer ring road roundabout through to the Earlham Road / Heigham Road junction and second smaller scheme for Earlham Five Ways roundabout. In July 2018 the DfT formally announced that both of funding applications were successful.

Public consultation

6. In June 2018, members of this committee gave permission to advertise and consult on the Earlham Road / Outer Ring Road to Heigham Road safety scheme. This consultation was held from 29 June to 24 July 2018.
7. Details of the proposal were advertised in the local press, road notices were erected, statutory consultees and transportation consultees were directly informed. Local residents and businesses were written to and details were posted on the websites of Norwich City Council and Norfolk County Council.
8. Along with press adverts, stakeholder emails, street notices and webpage content; 2,113 letters were sent to nearby residents and businesses.

Responses

9. In total, 159 responses were received from the consultation, 65 supporting the scheme as it was proposed or supporting but suggesting minor changes, 24 requests for the 20mph to be extended further along Earlham Road, 15 responses with an objection to the mandatory lane and associated parking restriction and 14 people objecting to the 20mph restriction on Earlham Road. The remaining responders commented on associated issues. A summary of the responses can be seen attached in Appendix 1.
10. There was strong support both for the scheme (65 supporting responses) and a clear desire for 20mph to be extended further than proposed (24 responses).
11. There were 14 responses contending the 20mph speed restriction on Earlham Road citing that traffic doesn't travel that fast, the potential to push traffic into side roads and the suggestion of increasing pollution.
12. At the roundabout 15 responses called for an improved or formal crossing facility over Colman Road and 10 people called for an improved or formal crossing over Earlham Road (western arm).
13. From the responses, 12 people called for speed cameras or speed reactive signs to be used and 11 felt there was a danger posed by drivers to those using crossings, some of whom stated a signalled crossing would be better.
14. There was some concern over the removal of the centre line with 11 people citing this would not be desirable, although it was noted that this was partly due to misunderstanding that this scheme would not leave a remaining carriageway that would allow for two passing buses.
15. From the responses 10 people felt that the scheme would encourage more cycling on footway and that some solution was needed to prevent this.
16. Via the Labour group, 16 responses were received where residents had completed a questionnaire on a leaflet provided to gather views from residents. Five gave outright support; five supported some elements of the scheme and five were largely objections.

17. The Royal National Institute of Blind People (RNIB) response welcomed the upgrading of the signalised crossing over Farrow Road but highlighted concerns with Toucan crossings and shared paths stating that they should include separation between the pedestrian area and the cycle lane through the use of corduroy paving on the approaches and marked lines through the crossing. The RNIB stated that blind and partially sighted people experience anxiety when interacting with Toucan crossings. The RNIB response did not consider the proposed shared use zebra to be a safe crossing point for blind or partially sighted people because there is no audio or tactile cue and that without separation this was aggravated further. Although traffic calming and pedestrian priority over side roads was welcomed, concerns were raised over the proposed raised table from the perspective of cane users and guide dogs who find flush kerbs difficult to navigate.
18. The Norwich Cycling Campaign (NCC) welcomed the improved facilities for crossing the Earlham Road / Outer ring road roundabout and the redesigned geometry to slow vehicle speeds. However it was felt that the delay in using the Toucan crossings was still unreasonably long and improved timings were requested. They also made a case for continuing cycling facilities along Earlham Road between the two proposed roundabout schemes.
19. The NCC were disappointed that a segregated cycle track had not been proposed and cited the recent Magdalen Road scheme to have provided a step change in improvements for cycling in this kind of environment. Concerns were raised as to whether a mandatory lane would be respected by drivers and whether the separators were frequent enough and whether they would be replaced if damaged by vehicles.
20. The proposed shared zebra crossing at Christchurch Road was welcomed by the NCC but it was felt that the 20mph zone/limit should be extended further west and consideration given to the hazard presented by the proximity of the bus stop and the potential for a bus stop island.
21. The NCC welcomed the extended double yellow lines and the pedestrian priority over side roads which it was suggested would make it safer for cycling and walking.
22. The NCC supported the closure of West Pottergate provided that suitable dropped kerbs were in place to allow safe access for cycling from carriageway. There was concern over what type of provision best caters for crossing over Heigham Road and it was felt that the short section by St John's Cathedral should be made part of the 20mph zone.

Considerations

23. Along with the strong overall support for 20mph speed restrictions that were proposed, the 24 responses requesting that more of Earlham Road should be included within the proposed 20mph zone warrants further consideration. The length of Earlham Road between the Outer ring road and Christchurch Road is within the proposed scheme area and forms part of the green pedalway. There

is merit to extending the 20mph zone to include this section and it would encourage better compliance for cars approaching the city. For this restriction to be self-enforcing, additional speed calming would be required and careful consideration of the budget required. The second section of Earlham Road in question, between Heigham Road and Unthank Road, is not part of the scheme area or pedalway network and the pedestrian bridge over Grapes Hill does not allow cycling. It is therefore recommended that a revised proposal that includes taking the 20mph zone west to the Outer ring road along with additional speed calming on this section is to be taken to consultation (Appendix 6).

24. The RNIB response outlined the potential for concerns of blind and visually impaired people caused by Toucan crossings and the need for separation between those walking and cycling. Toucan crossings do not allow for the separation of users through the crossing and it is not possible to design out the potential for paths to need to cross and maintaining a safe crossing that can be used by those walking and cycling over the Outer ring road. Where kerbs are at the same level as the carriageway such as with raised tables, tactile paving will be used in accordance with national practice and will be outlined at the detailed design stage.
25. The concern over waiting times for those using the Toucan crossing raised by NCC has been referred to signal engineers at Norfolk County Council who agree that it may be possible to synchronise signals more closely to reduce waiting times. This will be confirmed as part of the detailed design.
26. NCC raised a question over whether the cycling facilities could be extended to the section of Earlham Road west of the Outer ring road that connects the two schemes. Whilst it is known that this is a popular route for cycling, it is outside the scheme area and did not show an established accident record which was one of the criteria for funding. With the strict need for the scheme to be delivered within budget this is not an aspect we can consider at this time.
27. The NCC were disappointed that a kerb segregated track had not been proposed on Earlham Road between the Outer ring road and Christchurch Road. This type of facility was not proposed as there are concerns over the potential drainage difficulties it would present due to the existing levels and felt that the increased cost to achieve a kerb segregated track on this section would not present good value. The spacing of the segregators and concerns over replacement are noted. To minimise vehicle strikes, the frequency and visibility of the bollards are important considerations and will be investigated at the detailed design stage.
28. The consultation response was overall against the removal of existing double yellow lines outside St Thomas Church (largely due to the safety of those travelling to/from Edinburgh Road) so it is recommended that these changes to these waiting restrictions are not implemented.
29. The significant numbers of responses calling for improved pedestrian crossing facilities over Colman Road and Earlham Road (western arm of roundabout) raises an important point about this busy roundabout. Whilst it is clear that that Colman Road and Earlham Road (western arm) crossings have limited facility, there is very little that can be done here that will not directly impact on the

vehicular capacity of the outer ring road. The transport strategy in Norwich centres on alleviating residential side streets and focusing traffic on the most suitable parts of the highway. As such, the capacity of the Outer ring road must be maintained. Owing to concerns regarding the safety of cycling across Colman Road, the proposed sections of shared path either side of Colman Road are no longer being proposed. A signalised Toucan crossing across Farrow Road will be provided that will cater for walking and cycling across this junction. Further to the changes in geometry of the roundabout shown in the consultation proposals; an additional tightening of the radii to reduce speed and shorten crossing distances will make crossing of Colman Road less challenging than at present. A revised outline design for consultation is shown in Appendix 6.

30. The significant objection to the mandatory lane on the northern side of Earlham Road due to the loss of on street parking is noted and poses a key challenge for the scheme. Safe and efficient movement of people along Earlham Road has been the chief objective and providing a safe and viable cycle facility is needed. If this lane is regularly parked in, the safety benefit will be substantially reduced. All properties fronting the cycle lane have off street parking. Loading will be maintained but a small amount of parking from residents and their visitors may be displaced to the side roads.

Conclusion

31. The proposed Earlham Road / Outer ring road to Heigham Road safety scheme should be installed as advertised except for the existing no waiting restrictions outside St Thomas Church which will remain.
32. The proposed extension of the 20mph zone (including traffic calming features) between Christchurch Road and the Outer ring road to be taken to public consultation following approval from this committee.
33. To delegate consideration of any comments received from the consultation to the head of city development services, in discussion with the chair and vice chair of this committee
34. To ensure that the spend profile of the bid is met; construction will take place in 2019.

Integrated impact assessment



NORWICH
City Council

Report author to complete

Committee:	Norwich Highways Agency committee
Committee date:	20 September 2018
Director / Head of service	David Moorcroft/ Andy Watt
Report subject:	Transport for Norwich – Earlham Road / Outer Ring Road to Heigham Road safety scheme
Date assessed:	9 August 2018
Description:	To present the results of the consultation and seek approval to proceed

	Impact			
Economic (please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Finance (value for money)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Scheme will reduce risk of accidents and is largely funded by the DfT. Scheme is well located to maximise gain in walking and cycling
Other departments and services e.g. office facilities, customer contact	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
ICT services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
Economic development	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Improving the access to education and employment along key transport corridor to UEA and housing development
Financial inclusion	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Improving the access to low cost transport options
Social (please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Safeguarding children and adults	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
<u>S17 crime and disorder act 1998</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
Human Rights Act 1998	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
Health and well being	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Increasing safety for walking cycling will promote health and well being

	Impact			
Equality and diversity (please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Relations between groups (cohesion)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
Eliminating discrimination & harassment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
Advancing equality of opportunity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lowering speed and offering separation where appropriate benefits all users. A purpose built facility will better cater for walking and cycling.
Environmental (please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Transportation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Improves facilities for walking and cycling along key transport corridor close to UEA and new housing development, working towards our transport objectives
Natural and built environment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
Waste minimisation & resource use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
Pollution	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Will encourage use of zero emission transport
Sustainable procurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No specific comments
Energy and climate change	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Will encourage use of zero emission transport

	Impact			
(Please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Risk management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Close monitoring will be required to ensure delivery within budget

Recommendations from impact assessment
Positive
There are a number of positive outcomes that will be achieved with this scheme and it is largely funded by the DfT with the remainder being funded by CIL contributions
Negative
No specific comments
Neutral
No specific comments
Issues
No specific comments

Appendix 1

Objection / comment	Frequency	Response
Supports proposals / supports proposals but has made a suggested change listed below	65	Noted
20mph should be implemented whole of / more of Earlham Road / change of limit is confusing for all	24	The section between the ORR and Christchurch Road will require speed calming and will be considered for further consultation on extending the 20mph zone. The area between Heigham Road and Unthank Road is not within the scheme area with fewer walking and cycling journeys taking place and this would not warrant the significant cost of installing speed calming.
Object to the mandatory cycle lane (and associated parking restrictions): it will create problems for residents / put pressure on side roads / make it harder for less able occupants / scheme looks good but would not want to lose parking provision / benefit doesn't warrant the loss of parking where would visitors and trades people park / it will force parking onto the wide southern verge damaging trees / people will pave over the front gardens / how will this affect loading	15	Safe movement of people along Earlham Road has been the chief objective for this scheme. To provide a safe and viable cycle facility, a lane here is needed. If this lane is regularly parked in, the safety benefit will be substantially reduced. All properties in this section of Earlham Road have off-street parking. Loading will be maintained but a small amount of cars from residents visitors may be displaced to side roads.
Crossing of Colman Road is needed within design / crossing over Colman Road is wholly inadequate / splitter island is not adequate for this location	15	Whilst it is clear that that Colman Road crossing has limited facility, there is very little that can be done here that will not directly impact the outer ring road. The transport strategy in Norwich centres on alleviating residential side streets and focusing traffic on the most suitable parts of the highway. We cannot simultaneously impose congestion and delays onto the Outer ring road. We have proposed a further tightening of the radii to make crossing of Colman Road less challenging and a revised shared path facility. A signalised crossing across Farrow Road will be provided that will cater for walking and cycling across this junction.

Objection / comment	Frequency	Response
20mph not needed on Earlham Road / can't travel this fast / increased pollution / will push traffic into side roads	14	A 20mph zone will reduce speed, along with the likelihood and severity of accidents. Driving consistently at these lower speeds will reduce, not increase pollution and the design encourages driving at a steady speed. The 20mph is in place or proposed on all side roads.
Need speed cameras to enforce the 20mph limit / cars are being driven at speeds of 40mph or more / more police enforcement needed / use speed reactive signs	12	We do not have the authority to install speed cameras. The scheme will bring design speeds down through using speed calming to help make this 20mph self-enforcing as much as is practically achievable
Why remove centre line? / The treatment on The Avenues will not work here / Could the centre line be placed equally between the remaining carriageway space after parked cars taken into consideration / will the safety of this change be reviewed	11	The existing centre line is poorly located when the parked cars are considered and serves to give outbound traffic a false sense of priority. Removing the centre line on a 20mph B classified road is an established way to calm speeds. The proposals leave two running lanes with width for two buses to pass without encroaching the cycle lanes. The scheme proposals have been safety audited and will be subject to a safety audit after construction.
Danger posed by drivers to people using crossings / At present cars are not slow enough to register the zebra crossing / crossings should be made signalised	11	Zebra crossings are appropriate for this type of residential environment. The addition of raised tables and a 20mph is expected to increase compliance of zebra crossings further. We will make Norfolk Police aware of this issue highlighted by the responses

Objection / comment	Frequency	Response
<p>Too many people cycle on the footway / plans may encourage more cycling on footway can physical calmers be used on the footway? / Preventing cycling on pavements is needed / can shared paths be segregated</p>	10	<p>There is limited shared path on the proposed scheme and it has been used to provide safe crossings to avoid the objective risk posed by motorised transport. Segregation on shared paths is sometimes appropriate but usually trades low speed conflict for higher speed conflict and removes much needed flexibility on a route. At the detailed design stage we will consider what signage can be used to manage this issue as well as it can be whilst being mindful that only police enforcement has the potential to tackle this issue where signs are ignored. Physical speed calming on a footway or shared path are rarely the preferred solution making it unnecessarily difficult for all users especially those with mobility difficulties and disabilities.</p>
<p>Crossing of Earlham Road (western arm) is needed within design</p>	10	<p>See above response. The design aims to improve the pedalway route of Earlham Road to Gypsy Lane. Additional formal crossings would have an adverse effect on the outer ring road capacity and the nearby pedestrian refuge provides a crossing facility</p>
<p>No need to close West Pottergate to vehicles if you require vehicles from Heigham Road or Earlham Road to give way / Concerned that access to garages at The Shrublands on West Pottergate may be made more difficult / Existing West Pottergate junction layout works well, proposed design will reduce capacity / remaining access to the east is unsuitable / At West Pottergate junction would a simple 20mph limit suffice?</p>	10	<p>Without a suitable crossing and clearer access for walking and cycling into the city this would not be sufficient. Loading will be maintained on West Pottergate but some loading on Earlham Road is expected and is acceptable</p>
<p>Concern over effect of proposals on emergency vehicles</p>	8	<p>Noted. The emergency services have been consulted on these proposals.</p>

Objection / comment	Frequency	Response
Earlham Road cycle lane should be on shared pathway on southern carriageway (raised to avoid tree routes) / Two-way cycling facility on southern side of Earlham Road only would be better than the proposed lanes	8	Whilst a shared path on this section would offer some benefits it would not provide as direct a facility. A long section of shared path may increase footway cycling where we cannot provide a continuation of the facility. An on-carriageway two-way cycle lane on the southern side would present a need for far more crossing movements by cyclists where city bound cyclists would be required to cross Earlham Road before crossing back at the junction with Christchurch Road.
Do not want yellow line removed by St Thomas Church , parking here causes unnecessary issues / congestion and makes turning in or out of Edinburgh Road less safe.	7	Noted – This proposal will not be progressed
20mph on side roads is positive	7	Noted
Waste of council tax or tax payers money / there are pot holes you could be fixing that would encourage cycling / social services are starved of resources / the funding should be spent improving the drainage on Earlham Road / cyclists don't pay road tax / are there enough cyclists to justify this expenditure/ proposals just for students of the UEA	7	The money we have been awarded as a result of our successful bids cannot be used for general maintenance or by other services. Where any unsafe surface condition is identified in the scheme area it will be addressed. Vehicle tax ('road tax') is based on the level of pollution a vehicle creates, cycling creates zero emissions. Roads are heavily subsidised by general taxation. Any improvement that leads to more people walking and cycling safety is a benefit to the whole city.
Residents permit parking is needed / The side roads would benefit from parking restrictions to allow only on one side or at least make cars park in the road / Commuters park outside houses on Earlham Road near to Christchurch Road junction / Earlham Road used as a free park and ride as there are no parking restrictions	7	This is not part of the proposals but may be considered for consultation at a future date
Lane is where it is least needed / lane is too brief / road is wide enough so lane not needed /short section of mandatory lane is of limited benefit	5	Unfortunately it is not possible to accommodate a cycle lane on the section where there are large amounts on cars being parked on road owing to the lack of off-road parking. Providing a lane where vehicles are entering Earlham Road from the outer ring road provides suitable protection.

Objection / comment	Frequency	Response
Zebra crossing by police station too close to roundabout , needs a revised design to allow two-stage crossing, new location	5	The proposals include a zebra crossing which is 20m from the junction which is well above accepted minimum of 5m. A two-stage crossing would provide less facility for walking and cycling which this scheme is intended to provide for.
Cycle lane should be extended further / could the cycle lane continue to West Pottergate by widening the pavement making a shared path? / Are cyclists supposed to join the pavement?	5	Those cycling will remain in carriageway but as it is not possible to provide a lane owing to space limitations and parked cars, a 20mph zone along with side road treatment is being recommended.
Farrow Road crossing should be single stage and nearer to the roundabout. A solution for car drivers like this would not be proposed / can the timing be optimised to offset this crossing detour?	5	A single stage crossing is not possible within the constraints posed by outer ring road capacity outlined above. Although placing the northbound crossing nearer to the roundabout would provide more convenience to those walking and cycling, it would create an inadequate space for queueing vehicles on the outer ring road. Signals engineers have confirmed that in principle the signals can be adjusted to allow for a reduced waiting time on the second crossing and this will be fully investigated as it provides benefit with very little effect on capacity.
Shared paths are risky for pedestrians / how will you monitor the effect on pedestrians?	5	Shared paths have a good safety record. Any implemented scheme will be subject to further safety audit. To facilitate safe crossing over busy roads by those walking and cycling, some level of shared path is essential.
Too many pedestrian crossings on Earlham Road, no new crossings needed	5	Earlham Road is highly residential with many houses on either side as well as schools, shops and bus stops that all require safe walking routes.
Drainage issues due to raised tables / what is being done to improve drainage / will new measures have impact on potential flash flooding	4	Drainage will be fully considered at the detailed design stage to address these issues.
Proposed cycle zebra crossing on Christchurch Road junction should be left as a refuge and zebra could be placed nearer to the bus stop / shared design creates conflict	4	It was felt that the shared use zebra will provide a more suitable crossing facility for cycling and walking, particularly if with children or in small groups or on bikes with trailers etc.

Objection / comment	Frequency	Response
Implementing cycle path / reducing the speed on Earlham Road between the two roundabout schemes should be considered	4	Potentially this could provide a benefit but it must be noted that this does not form part of the pedalway network and outside the scope of the budget at this time.
At West Pottergate, narrowing the carriageway and loosing central lozenge island may make it more difficult for pedestrians to cross / Narrowing carriageway will increase risk to those cycling	4	Reducing the distance and number of roads people need to cross is more simple and safer. Lanes much above 3.2m wide and below 4m wide encourage close passing by drivers. Lanes of 3.2m wide and below do not allow a car to pass and are suitable for short sections where this is favourable for safety. This scheme must also allow for two buses (around 2.6m wide) to safely pass each other
Negative effect of 20mph on bus timetables / If you narrow the bus lane the buses will be delayed further	4	Whilst we expect maximum speeds to reduce, average speeds and journey times are unlikely to change significantly. Bus companies have been consulted on the proposals. Any potential change to bus timetables would be small and manageable.
Shared paths are suitable for very low speed cycling only , what can be done to avoid anti-social driver behaviour towards cyclists that sensibly continue to cycle in the road?	3	We need to increase the proportion of people that walk and cycle and cannot rely on facilities that do not provide for less confident users. Shared path around crossings and junctions provides a safe way for less confident or those new to cycling to negotiate more challenging locations. Initiatives such as Norfolk County Council's <i>Mind Out for Each Other</i> campaign help to promote a better understanding between different users.
Do not want yellow lines outside the private parking by the Mitre / having a restriction here will prevent fellow visitors parking behind cars in the private spaces creating pressure on nearby areas / not unless it's for church vehicles only	3	This area of highway is directly in front of an area of private parking. The blocking in of vehicles is not acceptable and a <i>church vehicles only</i> restriction is not manageable or appropriate.

Objection / comment	Frequency	Response
Pink pedalway / Avenues is perfectly adequate / The green pedalway route should avoid Earlham Road	3	For some journeys but this depends very much on start and end points of the journey. Earlham Road is identified as a strategic cycle route. It is not viable for a highly residential, direct and reasonably level B class road to be unnecessarily restrictive to walking a cycling. The green pedalway connects Bowthorpe, UEA, City centre and Broadland Business Park.
Proposed zebra crossing at ORR roundabout would be safer as a Toucan crossing / should be a camera enforced Toucan crossing	3	A Toucan crossing here would introduce additional delay to both those driving and those crossing the roundabout. It would also raise costs for which there is no additional budget
Work needs to minimise noise and disruption	3	Noted
Side road treatments not really needed /will not deter rat runners but will cause issues for refuge lorries / will create footway parking where kerbs are level	3	The side road treatments will reduce speeds and provide priority crossings for pedestrians. There is a recorded fatality caused by a car failing to give way from a side road on this section of Earlham Road. The tables will be constructed to allow for all necessary access. The existing no waiting restriction will remain.
Footways on south side of Earlham Road are extremely narrow and should be widened	3	To do this it would require a sizeable section of the southern footway to be realigned at substantial cost. This is not possible within the scope or budget of this scheme.
Side road treatments will make it hard to pull out safely / Using set back give way markings on side roads will mean drivers cannot see to pull out	3	The side road treatments will slow vehicles. Drivers are expected to give way to crossing pedestrians and can then proceed forward to make observations for vehicles travelling along Earlham Road
Addressing untended hedges on Earlham Road would improve safety / Trees in need of maintenance leaving footways dark in winter	3	Noted
At the roundabout, there needs to be a filter to make re-joining carriageway safer when cycling on Earlham Road (west) ideally as far as the pinch point for the crossing refuge	3	Will we consider whether space allows for this at the detailed design stage

Objection / comment	Frequency	Response
Zebra crossing over Earlham Road not needed at West Pottergate junction / West Pottergate raised table seems expensive way to calm speeds	3	It will serve to create a more useful crossing rather than just calm speeds and will provide a clearer message to drivers to exercise caution and to be aware of those walking and cycling
How will you reduce the number cars traffic on Earlham Road	2	This scheme will not actively reduce the number of vehicles on Earlham Road but by providing safe and viable alternatives more people will choose alternatives over car use.
At Christchurch Road junction double yellow lines should be extended a short distance south into Christchurch Road of the proposals to keep visibility clear / Yellow lines needed around Hadley Drive as parking here is a safety issue	2	<i>No waiting</i> restrictions are used where there is a demonstrable safety need and the junction and dropped kerbs are effectively covered are enforceable
Double yellow outside the Mitre is welcome as cars are often parked blocking patrons in	2	Noted
Can the area outside St Thomas's Church be for church vehicles only	2	This restriction on the highway would not be manageable or appropriate
Wider use of speed humps needed for 20mph	2	A higher density of road humps would provide little extra speed calming benefit but could have unnecessary negative effect on buses and emergency vehicles
Road humps difficult for those cycling	2	The road humps will be installed at around 75mm and a design speed of 20mph, users below this speed will experience limited disturbance.
Can there be more 2 hour visitor parking at the businesses by the Earlham Road / West Pottergate junction.	2	We aim to maintain a balance across the available parking places between residents and suitable parking for nearby businesses. The parking restrictions will be considered as part of a future review of parking
Zebra crossing on Heigham Road should be located further north to allow one vehicle to clear junction before reaching the crossing / large vehicles will create a blockage of this crossing	2	The location of this crossing is unchanged from the existing crossing. Setting it further north would increase the distance from the junction and a key crossing point for those walking to and from the city
Proposed zebra crossing on ORR roundabout needs a central island / splitter to make crossing safer	2	Including a splitter island into a zebra crossing would present a confusing priority that has potential to present a safety issue

Objection / comment	Frequency	Response
Danger posed by people cycling to people using crossings / what is this term 'cycle zebra'	2	Cycle zebras already exist in Norwich and across the UK. They have an excellent safety record
A Dutch roundabout should be considered	2	The transport strategy in Norwich centres on alleviating residential side streets and focusing traffic on the most suitable parts of the highway. We cannot propose a design that would impose congestion and delays onto the outer ring road. A toucan crossing across Farrow Road, new shared path facility, and cycle zebra will be provided that will cater for walking and cycling across this junction.
Walking and cycling should be promoted as the number one priority / city is blighted by cars	2	We need to increase the proportion of people that walk and cycle but we must remain aware of the need to make schemes that allow for all users including buses, cars and commercial vehicles.
Cycle parking would be useful at the West Pottergate junction to serve local businesses	2	Agreed, we will look to install cycle parking here as part of this scheme
Closure of West Pottergate not needed / will push loading vehicles onto Earlham Road	2	Loading will be maintained on West Pottergate but some loading on Earlham is expected and is acceptable
Second zebra needed near Mill Hill Road needed / dual crossings at Unthank Road and Park Lane work well	2	Noted, we do not consider this to be necessary at this junction with the additional crossing provided within the proposals
Need to see modelling of how point closure will affect traffic flows / West Pottergate junction changes will slow down outbound traffic on Earlham Road	2	Right turning traffic movements are unlikely to substantially affect the capacity of Earlham Road.
Loss of additional parking will devalue our house	2	The Highways Authority are under no obligation to provide parking for residents.
Entrance into Gypsy Lane needs to be made wider to make it safer. Those leaving Gypsy Lane are not visible to drivers approaching on Farrow Road.	2	This feature is likely to form part of detailed design and will be outlined on the revised drawings (Appendix 6).
Are blind and partially sighted people considered within these proposals?	2	Yes. An impact assessment appropriate use of tactile paving will form part of the detailed design.
Will the cycle lane reduce the width of the verge	1	No

Objection / comment	Frequency	Response
Loss of parking due to mandatory lane will push cars onto the southern side of Earlham Road	1	The southern side of Earlham Road will be protected by a <i>no waiting</i> restriction which will cover the footway and verge.
A facility through the cemetery with a Farrow Road crossing should be considered	1	The route through the cemetery provides a useful route but not a route that is suitable for 24 hour use. With capacity on the Outer ring road being a critical issue and a new signalised crossing likely to cost in excess of £100k this change cannot be justified.
With the available road space the 1.5m wide lanes is not compatible with police enforcement of close pass	1	Operation Close Pass has been viewed as a success however it is not possible to accommodate a wider cycle lane of 2.25m here. Drivers are not expected to drive up to the mandatory lane and the separators will provide additional protection.
Segregators would be trip hazards	1	The segregators will be clearly visible. With two additional zebra crossings being provided these crossing movements are likely to be infrequent.
At the roundabout the two lanes on the eastern arm should be on the exit to allow for the bus stop	1	It is not possible to accommodate two exit lanes and a cycle lane and footway. Whilst in use, the bus stop will present some obstruction but this is only occasional and the scheme must strike a balance of the needs all users.
At Christchurch Road junction double yellow lines should be extended further east of the proposals to keep driveways and visibility clear	1	<i>No waiting</i> restrictions are used where there is a demonstrable safety need and we cannot use them solely to keep exits to properties clear.
Could yellow lines be extended slightly further into side roads to improve safety and make passage easier?	1	<i>No waiting</i> restrictions are used where there is a demonstrable safety need and the junction and dropped kerbs are effectively covered are enforceable.
Parking bays need to be marked on Earlham Road to ensure parking is not on the footway	1	Only a limited low level of parking on the footway is observed here, to mark waiting bays would be costly and unnecessary.
Mitre car park creates conflict with pedestrians	1	We cannot prevent parking on this private parking area.
Need yellow box at the Unthank Road roundabout	1	Outside the scope of this scheme.
20mph should start at Earlham House shopping centre	1	This would encourage higher speeds in a highly residential area than are desired.

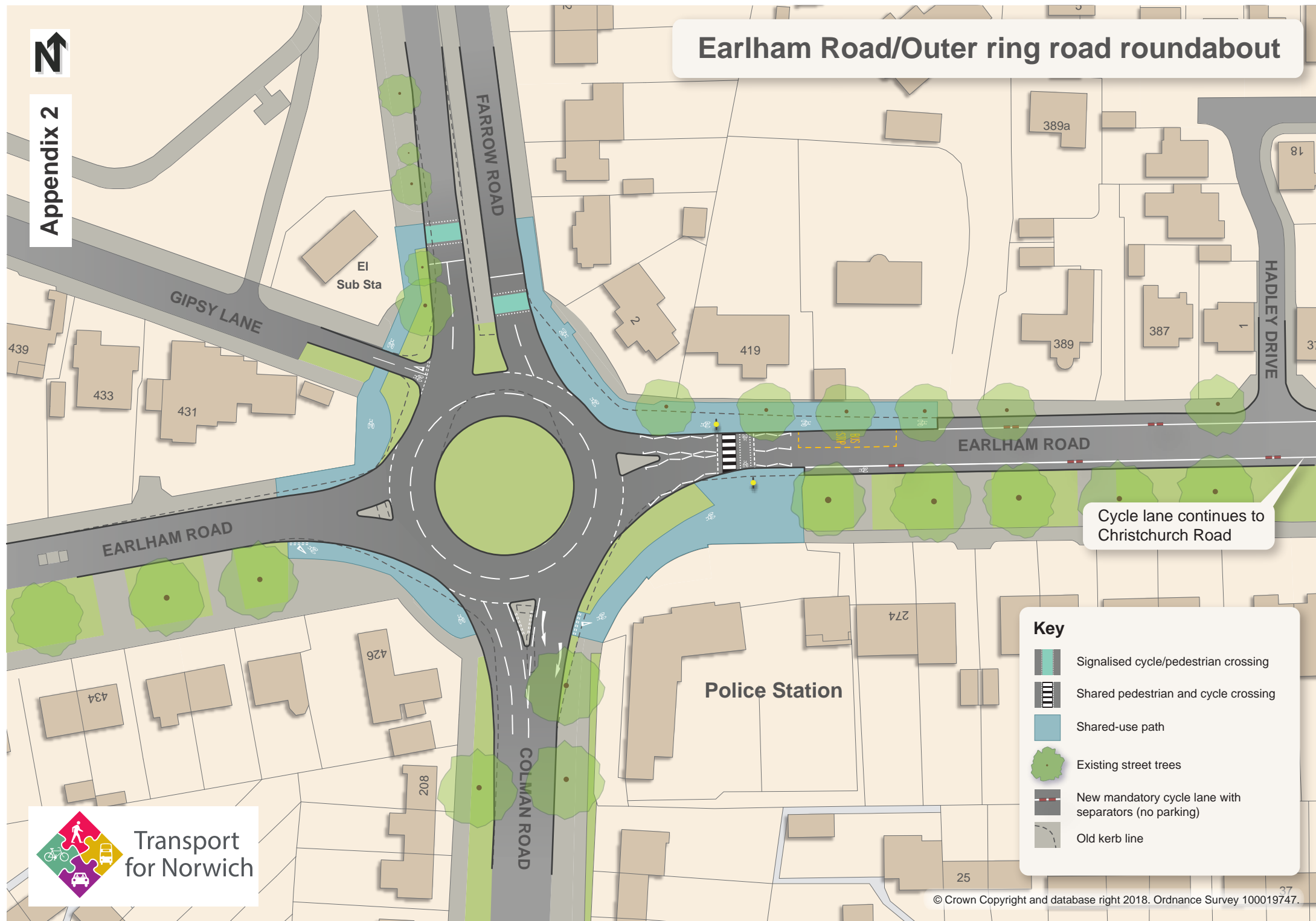
Objection / comment	Frequency	Response
Please ensure the trees are protected as part of this scheme	1	We will aim to retain all street trees including the tree where the shared use zebra is proposed by Christchurch Road if this is possible.
Please ensure the build quality is higher than previous schemes delivered in the city	1	Noted
With the Broadland Northway now open it is the time to close Earham Road and Dereham Road at their junctions with the inner ring road?	1	Making a change of this severity would create many unintended consequences for those living on more minor and residential roads whilst isolating residents and businesses.
Will existing accesses to private parking areas be maintained?	1	Yes
Parking pressure on residents from 2 hour parking and visitor parking	1	We aim to maintain a balance across the available parking places between residents and suitable parking for nearby businesses. The parking restrictions will be considered as part of a future review of parking
Gypsy Lane exit should have kerbs separating it from the footway	1	It does at present and the design will make access to the lane safer whilst maintaining kerb separation between the lane exiting the roundabout and the shared path
Want the proposed toucan crossing signals on ORR roundabout to be silent with height of signals no greater than at present	1	Signal engineers will provide the specifications in due course but these will need to deliver their intended safety function
Proposed cycle zebra crossing on Christchurch Road junction should be on the east of the junction	1	This is not possible with the driveway that accesses Earham Road at the junction
Proposed cycle zebra crossing on Christchurch Road junction should be a zebra as shared paths do not offer any facility	1	A cycle zebra will provide additional amenity at minimal additional cost or disruption
Proposed cycle zebra crossing on Christchurch Road junction is too close to the junction	1	The crossing will be at least 5m from the junction and close proximity to the junction will mean more people will utilise the crossing rather than cross where they are unprotected
With drivers often cutting through the Farrow Road crossing when it's showing green for pedestrians and the recent fatality there a visible camera is needed there to enforce safety	1	We do not have the authority to camera enforce this junction.

Objection / comment	Frequency	Response
A filter light is needed at the Farrow Road / Bowthorpe Road junction	1	This would adversely affect ORR capacity
Safety could be improved by raising height of diversionary signs at the roundabout to avoid blocking	1	Noted
Cameras should be used to issue penalties to drivers and cyclists that commit offenses	1	We do not have the authority to do this
Earlham cemetery crossing in the wrong place	1	This crossing connects a well-used local centre and cemetery to local residents
Residents permit parking not needed to 'fix' things	1	This is not part of the proposals
Side streets could be blocked to reduce traffic issues	1	Outside the scope of this scheme
The path between the Toucan crossing and the proposed zebra is perfectly adequate as it is	1	It's existing width is well below an acceptable width for a shared path
The path at Christchurch Road is perfectly adequate and there is no need to spend money narrowing the road and creating no parking areas	1	A cycle zebra will provide additional amenity for walking and cycling
Will this scheme move traffic onto Dereham Road?	1	The scheme is not anticipated to do so. It should be noted that Dereham Road is an A road and Earlham Road is a B Road.
Would speed calming be cheaper than road narrowing?	1	We are proposing a combination of the two to achieve the desired outcomes
At the West Pottergate junction there needs to be a dropped kerb to allow transition from Earlham Road to West Pottergate	1	The design will allow for level access
What additional street lighting is being considered?	1	This scheme does not include provision of further street lighting but some consideration will be required when drawing up detailed design
Can public space and landscaping opportunities be maximised at the West Pottergate junction	1	This will be considered at the detailed design stage. Any landscaping budget will need to be agreed in the context of this being a scheme to encourage walking and cycling and any ongoing maintenance that will be incurred as a result.
Yellow lines should not be removed on Earlham Road between West Parade and Mill Hill Road	1	No proposals to remove, existing drawing omitted these lines

Objection / comment	Frequency	Response
Mini-roundabout with pedestrian crossing points is needed at Heigham Road /West Pottergate to reduce congestion	1	This junction could not facilitate a viable roundabout without substantial footway loss owing to lack of space. This would not be a viable proposal.
At the West Pottergate junction a loss of parking on Earlham Road would be detrimental	1	No loss of parking is proposed here
The number of bus stops leaves the cycle lane interrupted and it will give a false sense of security	1	We need to accommodate walking, cycling, driving and public transport along this route. Reducing speeds and raising driver awareness to those cycling will make this route safer for all.
The turning head will put people at risk of reversing drivers	1	The movements of turning vehicles will be slow and the detailed design will need to make it clear that this primarily a space for walking and cycling which will encourage caution to drivers of turning vehicles.



Earlham Road/Outer ring road roundabout

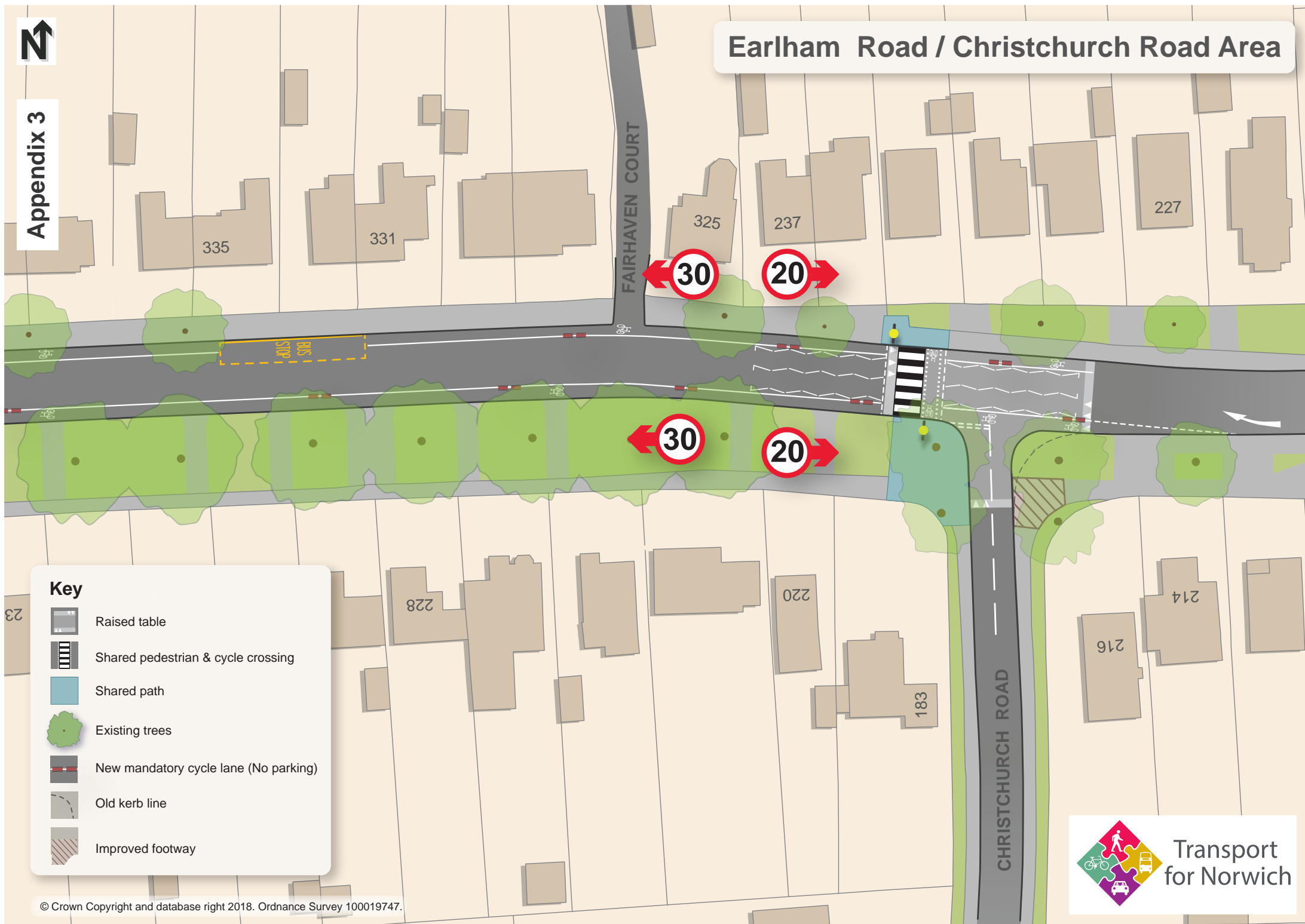


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Appendix 3

Earlham Road / Christchurch Road Area



Key

Typical raised table

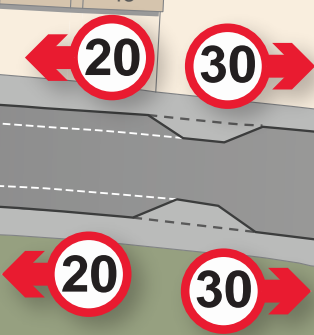
New pedestrian crossing (zebra) on raised table



Appendix 5





Earlham Road / West Pottergate Area

Closure point to motor vehicles of West Pottergate



Shared pedestrian and cycle crossing

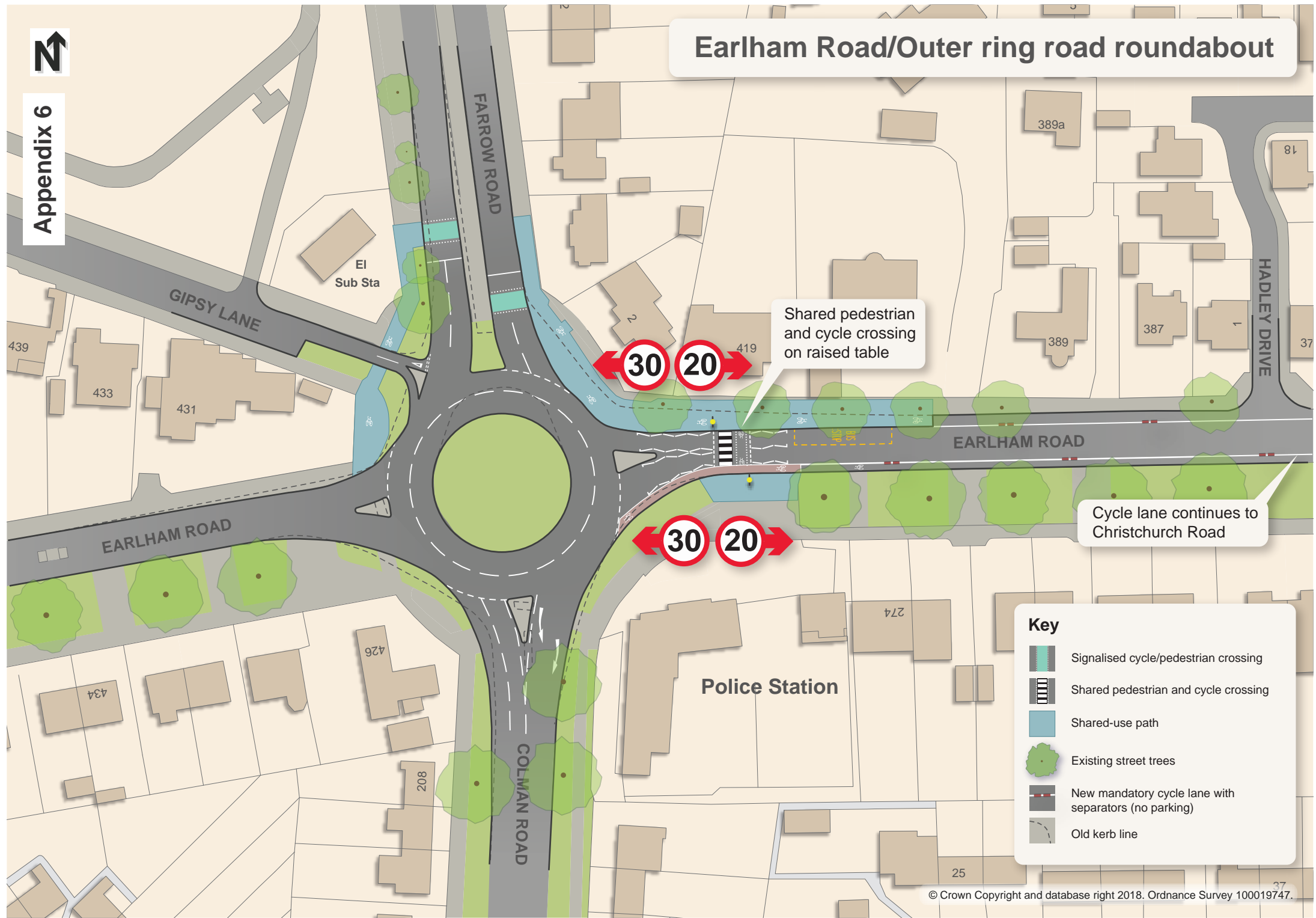
Key

-  Raised table
-  Pedestrian crossing (Zebra)
-  Shared use path
-  Old kerb line



Appendix 6





Earlham Road/Outer ring road roundabout

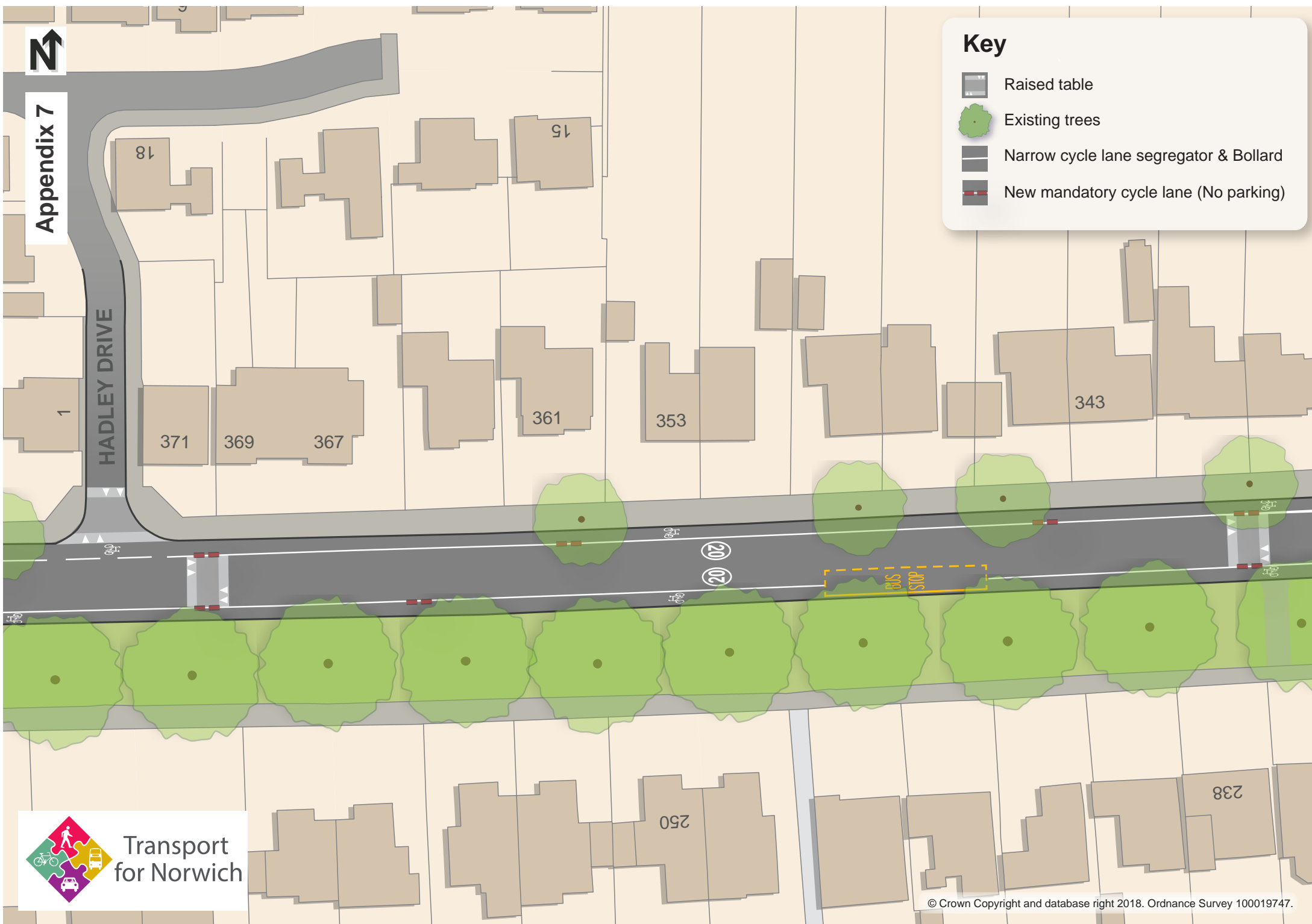




Appendix 7

Key

-  Raised table
-  Existing trees
-  Narrow cycle lane segregator & Bollard
-  New mandatory cycle lane (No parking)



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