

Report to Norwich Highways Agency committee
16 March 2017

Report of Head of city development services

Subject Transport for Norwich – Angel Road / Waterloo Road
cycling improvements

Item

10

Purpose

To consider responses from consultation and approve installation of the Angel Road / Waterloo Road cycling improvements scheme

Recommendation

To:

- (1) approve the installation of the scheme as shown on Plans PE4122-CO-001, 002, 003 and 005 (amended):
 - (a) traffic calming on Angel Road and Waterloo Road as advertised,
 - (b) an advisory cycle lane on Waterloo Road
 - (c) an amended option 2 of installing two zebra crossings with cycle crossing facilities on Waterloo Road without the raised table at the junction of Waterloo Road / Angel Road, install traffic calming on each approach to the junction and improvements to Shipstone Road.
- (2) ask the head of city development services to carry out the necessary statutory legal procedures to:-
 - (a) confirm the Angel Road / Waterloo Road cycle order
 - (b) confirm the traffic regulation order to replace some permit parking areas with double yellow lines on Shipstone Road as advertised and
 - (c) consult on the proposal to install a 30 minute waiting area outside nos.126/128 Waterloo Road
 - (d) Advertise the necessary road hump notice for the amended Option 2
 - (e) Delegate to the head of city development services, in consultation with the chair and the vice chair, the determination of any objections to the proposed amendments to option 2.

Corporate and service priorities

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

Financial implications

£320,000 to be funded from the City Cycling Ambition Grant and the local safety scheme budget

Ward/s: Mile Cross and Sewell

Cabinet member: Councillor Bremner - Environment and sustainable development

Contact officers

Linda Abel senior transportation planner 01603 212190

Joanne Deverick transportation and network manager 01603 212461

Background documents

None

Report

Background

1. This cycle improvements scheme covers part of the yellow pedalway from Heath Road, to Shipstone Road and onto Angel Road, including part of a neighbourhood route on Waterloo Road from its junction with Magpie Road to its junction with Angel Road.
2. At the meeting on 24 November 2016 members agreed to consult on the Angel Road / Waterloo Road cycle improvement scheme proposing two options for the junction of Angel Road / Waterloo Road and requesting the public to choose their preference between the two options.

Public consultation

3. The consultation period was 27 January to 24 February 2017.
4. Details of the proposal were advertised in the local press, road notices were erected, statutory consultees and transportation consultees were directly informed. 998 local residents and businesses were written to and details were posted on the web sites of Norwich City Council and Norfolk County Council. The letter sent to residents specifically requested them to indicate their preferred option in the proposals for the junction of Angel Road with Waterloo Road. Consultation plans are attached as appendix 2, 3, 4, 5 and 6.

Responses

5. 31 responses to the consultation were received. 25 from residents and six from stakeholders. A summary of all responses can be seen attached as appendix 1.
6. Two objections were given to the 30 minutes limited waiting area on Waterloo Road outside nos.118 and 120 (option 1). One stated the spaces were not needed, the other objected to parked vehicles outside their house and thought that the parking should be outside the local convenience store at 122 where delivery vehicles park.
7. Ten independent respondents preferred Option 1, the Toucan crossing, also a petition with 89 signatures was received from Sewell ward councillors stating support for a signalised crossing to be provided, but positioned on a raised table. The main reason for choosing this option was given that it was felt a signalised crossing would be safer and the existing signals help the flow of traffic turning right out of Angel Road to Waterloo Road..
8. Twelve respondents preferred Option 2, the 2 zebra crossings with parallel cycle crossings. The extra crossing to the south of the junction was thought helpful when crossing to use the local convenience store or travelling west from Shipstone Road to Angel Road. Some, including Norwich Cycling Campaign considered zebras are better crossing options as users have less waiting.
9. Two respondents thought that both options were good.
10. Seven residents from the Patteson Road area requested consideration was given to managing traffic on Patteson Road and Eade Road. These roads are used as a cut

through and parked cars make it impossible for two way traffic. Drivers get very many respondents. Some residents have voiced the opinion that the situation is worse since the installation of the gyratory system on Magpie Road.

11. First bus requested confirmation that buses will be able to manoeuvre through the junction without egress onto the path of oncoming traffic.
12. The Norfolk and Norwich Association for the Blind (NNAB) preferred option 1 as they consider the signalised crossing is safer for visually impaired people (VIPs); zebra crossings can stop a VIP from independent travel because of confidence issues. Proposed raised tables across Shipstone Road and at the junction of Angel Road with Elm Grove Road were requested to be removed as they do not give a discernible edge to the road to help navigate. It was suggested the raised table at Shipstone Road was not needed and advance traffic calming could replace the raised table at the Angel Road crossroads.
13. Local ward member, Councillor Julie Brociek-Coulton confirmed a preference for option 1 with a signalised crossing as she considers not only is it safer to cross but also assists traffic to turn right at the junction from Angel Road. A petition of 89 signatures that she collected from residents who use the local school supported this opinion. The statement on the petition was "We the undersigned believe that the crossing at the junction of Angel Road should be kept as a signalled crossing but that a raised table should be added to make it safer for pedestrians and cyclists. The crossing as it is at present helps the flow of traffic coming out of Angel Road. The proposal to change to a zebra crossing would produce more congestion in an already busy area of Sewell ward.
14. Support for option 1 was also received from the Pavilion Playschool on Angel Road.
15. Norwich Cycling Campaign welcomed the 20mph extension with associated traffic calming, but considered in both options the proposed shared footpath / cycle paths were too narrow. They concluded that option 2 was preferable in a 20mph area as there would be less waiting for cyclists, however they suggested the junction should be signalised. The proposed cycle lane on Waterloo Road was not considered helpful, and considerations were given on the details of the Shipstone Road cycle path.
16. The need for the Catton Grove Road bus gate to be enforced was voiced. It was stated many drivers ignore this restriction, adding more traffic to Angel Road at peak morning traffic times.

Considerations

17. The local convenience store has double yellow lines with no loading restriction outside. Whilst this is helpful for deliveries, there is no short term parking available nearby for passing trade for this store or other local businesses. This is an issue that was raised some time ago and a traffic regulation order for a limited waiting bay was advertised and agreed. However implementation was delayed until the design for this cycle scheme was developed.
18. If option 1 is decided the waiting area would best be positioned outside nos. 118/120 as proposed as this would still allow loading outside the convenience store. However, if option 2 is decided, the area of limited waiting could not be provided as

it would be too near to the zebra crossing. Consideration has also been given to proposing an extra area of limited waiting outside nos.126/128 Waterloo Road. This would give further parking facilities to the local businesses and residents, but would also help slow traffic down on this road. It would be necessary to proceed with further statutory consultation for this 30minutes limited waiting area. Both objections to the proposed limited waiting area outside house nos 118 and 120 are not considered justified as this facility would be useful for local businesses and parking outside properties in Norwich is common practice and essential in a vibrant city community.

19. Overall ten individual responses preferred option 1 and twelve responses preferred option 2. This is a majority of individual responses preferring option 2.
20. The petition from Sewell ward councillors obtained mainly from parents with children at nearby schools, has 89 signatures supporting a signalised crossing (option 1), but with an additional raised table. Petitions have to be considered with the assumption that each individual signature is usually given quickly without full knowledge of the situation. In this case the whole scheme with 20mph zone, traffic calming and the alternative option of two zebras at the crossing does not appear on the statement. Acknowledging this, it is still a large "vote" for the signalised crossing which is thought by many members of the public to be safer.
21. It is understood that a visually impaired person, people with less mobility and unaccompanied young children may feel less confident using a zebra crossing and would prefer a signalised crossing. However, in a 20mph area where traffic is physically slowed, DfT guidance advises the use of zebras should be encouraged. In areas where the traffic level fluctuates, a signalised crossing where the pedestrian has to wait for the lights to change can encourage pedestrians to ignore the signals and cross unaided. This is a very dangerous situation as drivers assume as the signal is green they have right of way and will proceed with less attention to the pedestrian or cyclist.
22. Members may recall that the existing signalled crossing on Waterloo Road was originally implemented as a zebra crossing and was changed following pressure from local residents approx. 15-20 years ago. Prior to the introduction of the St Augustine's gyratory there were could be long queues on Waterloo Road, extending back through the crossing point. In these circumstances zebra crossings can be problematic. Now with the gyratory in place the queues on Waterloo Road are less and that issue is no longer considered a problem.
23. The concern from the NNAB of raised tables making the environment more difficult to navigate can be helped by designing a kerb edge to the road. Raised tables are mostly 75mm high, a full kerb is 125mm high. Therefore if a full kerb is possible to be used at the edge of the road, there could be an upstand of 50mm where the raised table meets the road edge. Further discussions with the NNAB have resolved that an upstand of 60mm is preferred; this may be achievable by changing the levels where possible; however there will be some areas where footpath levels and drainage prevent this. It is highly likely that the kerb edge of 60mm will be possible at the junction of Angel Road with Elm Grove Lane. Where a raised table is used as a crossing point the kerb needs to be flush. In this location, tactile paving is used to inform VIPs of the edge of the road and the need to proceed carefully straight across the road. In option 2, the design could be changed to remove the raised table spanning the complete junction, and install traffic calming prior to the two proposed

zebras to slow traffic down. This would overcome one of the significant concerns the NNAB to option 2. There will also be a need to install traffic calming at the Angel Road approach to the junction. If option 2 is chosen, then the design will be finalised and a road hump notice advertised.

24. The agreement of the 20mph zone and traffic calming is welcomed from Norwich Cycling Campaign. The concern that the proposed advisory cycle lane will not help cyclists due to vehicles driving over it or close to it is understood. The reason for the cycle lane is to remind drivers that there are cyclists in the area and encourage them to give room and be considerate. It also gives the impression of a narrower carriageway and encourages drivers to reduce speeds. The main accident record on this section of Waterloo Road is drivers turning in and out of side roads on the west side of Waterloo Road and striking cyclists. The advisory cycle lane is intended to raise driver awareness of cyclists at these conflict points and reduce the likelihood of collisions. The advisory cycle lane is 1.5m wide, which is the minimum width recommended by the DfT. It is not possible to provide a wider lane due to the existing width of road. The remaining width of road is wide enough to allow most traffic to pass without needing to enter the cycle lane. Larger vehicles may need to enter the cycle lane when passing. Signalisation of the junction was considered, but it was decided that the amount of vehicles and the existing flow pattern did not warrant the expense of installing and maintaining a complex signal junction. It would also introduce unnecessary delays at the times when traffic is free flowing.
25. All details of drainage, road surfaces, bollards etc will be considered and design details amended if necessary to ensure the entire scheme is installed fit for purpose.
26. The issue raised concerning drivers ignoring the bus gate restriction on Catton Grove Road is an on-going concern. Recently a new sign has been erected and Norfolk Constabulary has been contacted requesting enforcement.
27. As has been demonstrated by the recent installation of zebras on a raised table on Unthank Road by the junction with Park Lane, this layout slows traffic down and gives a pedestrian priority over vehicles when crossing. The arrangement which is very similar to proposed option 2 has received positive feedback since it was installed and does not cause undue disruption to traffic. Accident records since the installation in December 2015, show there have been no reported personal injury accidents in the area of the Unthank Road / Park Lane / Essex Street junction with raised table and zebra crossings. This is a limited post implementation assessment period, but does show this type of arrangement operating safely in a low speed environment.
28. A recent independent crossing assessment carried out by Norfolk county council road safety team on the existing crossing at the Waterloo Road / Angel Road crossing concluded it would be of benefit to the pedestrian and cyclist if it was replaced with a zebra crossing with cycle crossing facilities. It was also suggested an extra crossing to the south of the junction (as proposed in option 2) would be of benefit due to the number of people and cyclists seen crossing unaided south of the junction.

Conclusion

29. It is recommended that the Angel Road / Waterloo Road scheme is installed as advertised with option 2 (as detailed on plan no.PE4122-CO-005 attached as

appendix 5.) but with the removal of the raised table coving the junction of Angel Road / Waterloo Road and the installation of traffic calming on each approach to the junction / zebras. This will involve advertising and consulting on a road hump notice.

Integrated impact assessment



NORWICH
City Council

Report author to complete

Committee:	Norwich Highways Agency Committee
Committee date:	16 March 2017
Director / Head of service	Andy Watt
Report subject:	Transport for Norwich – Magdalen Road cycling improvements
Date assessed:	08/02/17
Description:	To consider consultation responses to the Angel Road / Waterloo Road cycling improvement project and agree to implement the scheme.

	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"/>	This scheme is viewed as value for money
Other departments and services e.g. office facilities, customer contact	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If option 2 is decided on, the cost of installation and maintenance of two zebras compared with a toucan crossing will be a saving.
ICT services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Economic development	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	This scheme helps to encourage sustainable travel to benefit the city and everyone who lives and works here.
Financial inclusion	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	This scheme promote cycling and walking which are inclusive and low cost forms of transport
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"/>	This scheme promotes road safety for all users, but may cause concern for some visibly impaired people due to the shared space elements and possible removal of signalised crossing.
<u>S17 crime and disorder act 1998</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Human Rights Act 1998	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Health and well being	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The proposed facilites will help to encourage more walking and cycling which has been shown to benefit health. If more drivers are encouraged to walk or cycle, air polution will decrease.

	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"/>	
Eliminating discrimination & harassment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Advancing equality of opportunity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This scheme aims to improve travel facilities for pedestrians and cyclists, making the roads safer for all users. However concerns have been voiced by the NNAB for VIPs who may find some aspects more demanding and may lose their confidence in crossing the road.
Environmental (please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Transportation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	This scheme helps to meet the corporate priority of a safe, clean and low carbon city
Natural and built environment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	This scheme will not have any adverse effects on the environment, but by encouraging non motorised travel will help improve air quality.
Waste minimisation & resource use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pollution	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	This scheme will help improve air quality by encouraging non motorised forms of travel

	Impact			
Sustainable procurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Energy and climate change	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The scheme contributes to the corporate priority 'a safe, clean and low carbon city' by encouraging cycle use, reducing car use and CO2 emissions
(Please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Risk management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The scheme is safety audited to ensure that the measures implemented create a safe environment.

Recommendations from impact assessment	
Positive	
	The scheme should be installed with an amended option 2 designed to give better facilities to the cyclist and pedestrian.
Negative	
Neutral	
Issues	

Concerns have been raised by the Norfolk and Norwich Association for the Blind over some aspects that may make independent travel for visually impaired people difficult. These have been discussed in the report and will be addressed as much as possible in the detail design.

Responder	Option 1	Option 2	Comments	Officers response
Resident			Objects to any shared cycle paths / footpaths, prefer to keep signalled pedestrian only crossing but with a speed table. Existing bus gate on Catton Grove Road should be enforced, make Eade Road / Patterson Road one way.	Objection noted, a request for enforcement of the bus gate on Catton Grove Road has recently been made to Norfolk Constabulary. The issue of traffic management in Patteson Road and Eade Road is discussed in the main report
Resident		X	Prefers zebra crossings to signalled crossings	Noted
Resident	X		Concerned that fast cars could make zebras unsafe, but both options seem good.	The proposed zebras will have physical traffic calming to slow vehicles.
Resident		X	Uses the junction as both cyclist and pedestrian and thinks this will improve safety for everyone. Could "tiger" markings be reduced and a sign erected to say zebra for both pedestrians and cyclists.	All facilities on the highways have to be designed in agreement with Department for Transport regulations. The proposed design is in accordance with the regulations.
Pavilion Playschool	X		Prefer option 1	Noted.
First Bus			Has no concerns for majority of scheme but asked for confirmation that buses will be able to turn left at the Waterloo Road / Angel Road junction without encroaching on the inbound lane of traffic as this often has queueing traffic.	Vehicle tracking on AutoCAD for a standard double decker bus have shown the design is suitable for large vehicles. As detailed design is completed, bus routes will be considered.
Resident		X	Prefers option 2 as long as it will not affect traffic. A cyclist who appreciates recent cycle schemes. Patteson Road and Eade Road should be made one way as these roads are too narrow with parking and two way traffic.	It is judged that option two with the two zebra crossings will not have adverse effect on traffic congestion. Appreciation of recent cycling schemes is welcomed. The issue of traffic management in Patteson Road and Eade Road is discussed in the main report.

Angel Road and Waterloo Road scheme consultation responses

Responder	Option 1	Option 2	Comments	Officers response
Resident	X		Prefers option 1 as motorists do not always stop for pedestrians on zebra crossings, but would like to add an extra crossing on Angel Road near the junction with Patteson Road as it is difficult to cross here.	Preference noted, however as there will be significant traffic calming in the area, slower vehicles mean drivers have more time to consider pedestrians. Option 2 with two zebra crossings would remove some of the need to cross Angel Road.
Norfolk Constabulary	X		Prefer option one as "the two pedestrian crossings in close proximity as shown in option 2, may cause unnecessary congestion in this area and may result in drivers ignoring the option to stop".	The safety audit carried out on the designs did not consider there was a road safety issue with two zebras in close proximity, the forecast use of these crossings should not cause congestion.
Resident		X	Prefers option 2, having two zebra crossings. Patteson Road and Eade Road should be made one way as it may dissuade rat running. Road is too narrow for two way traffic.	Preference noted, the issue of traffic management in Patteson Road and Eade Road is discussed in the main report.
Resident	OK	OK	Request to include traffic calming features on Waterloo Road between Starling Road and Buxton Road.	There is a full road width road hump outside House no. 167 in the scheme which is in this stretch of road.
Resident	X		Patteson Road and Eade Road should be made one way	The issue of traffic management in Patteson Road and Eade Road is discussed in the main report.
Resident	OK	OK	Patteson Road, Eade Road and Buxton Road should be made one way	As above
Resident		X	Welcomes the improvement on Shipstone Road and replacing the speed cushions on Angel Road with full width humps.	Support welcome.
Resident	X		No comment	

Responder	Option 1	Option 2	Comments	Officers response
Resident		X	Single yellow lines on Waterloo Road should be changed to double yellow lines as parked cars on both sides of road make it difficult to drive.	In this residential area, residents' parking is very limited. It is not appropriate to limit the parking further.
Resident		X	Many people try to cross the road where the south crossing is proposed as it is close to a convenience store. The north crossing could have visibility problems.	The information on pedestrian movements noted. The north crossing has been in place for many years and there is not an evidenced safety concern.
Resident		X	I am a cyclist and struggle to cross from Shipstone Road across the road onto Angel Road on my commute to work due to heavy traffic. Patteson Road is used by many drivers because of the one way system at the bottom of Waterloo Road. There are many arguments between drivers, Patteson would be best with one way traffic.	Support welcomed. The issue of traffic management in Patteson Road and Eade Road is discussed in the main report.
Resident			Objects to parking bay outside nos.118 and 120, considers it should be moved to outside the convenience store. Is concerned the raised table outside his property will cause noise and suggests it is lengthened to near Buxton Road. Concerned with speed of cyclists on Shipstone Road.	The parking bay needs to be close to the local store, but not directly in front where it is necessary for vehicles with deliveries to stand. The location of the raised table has been designed to slow traffic at this junction. It would not be effective if the table was extended. The raised table will be designed to minimise traffic noise, however it cannot be guaranteed that there will not be any increase in noise from passing traffic.

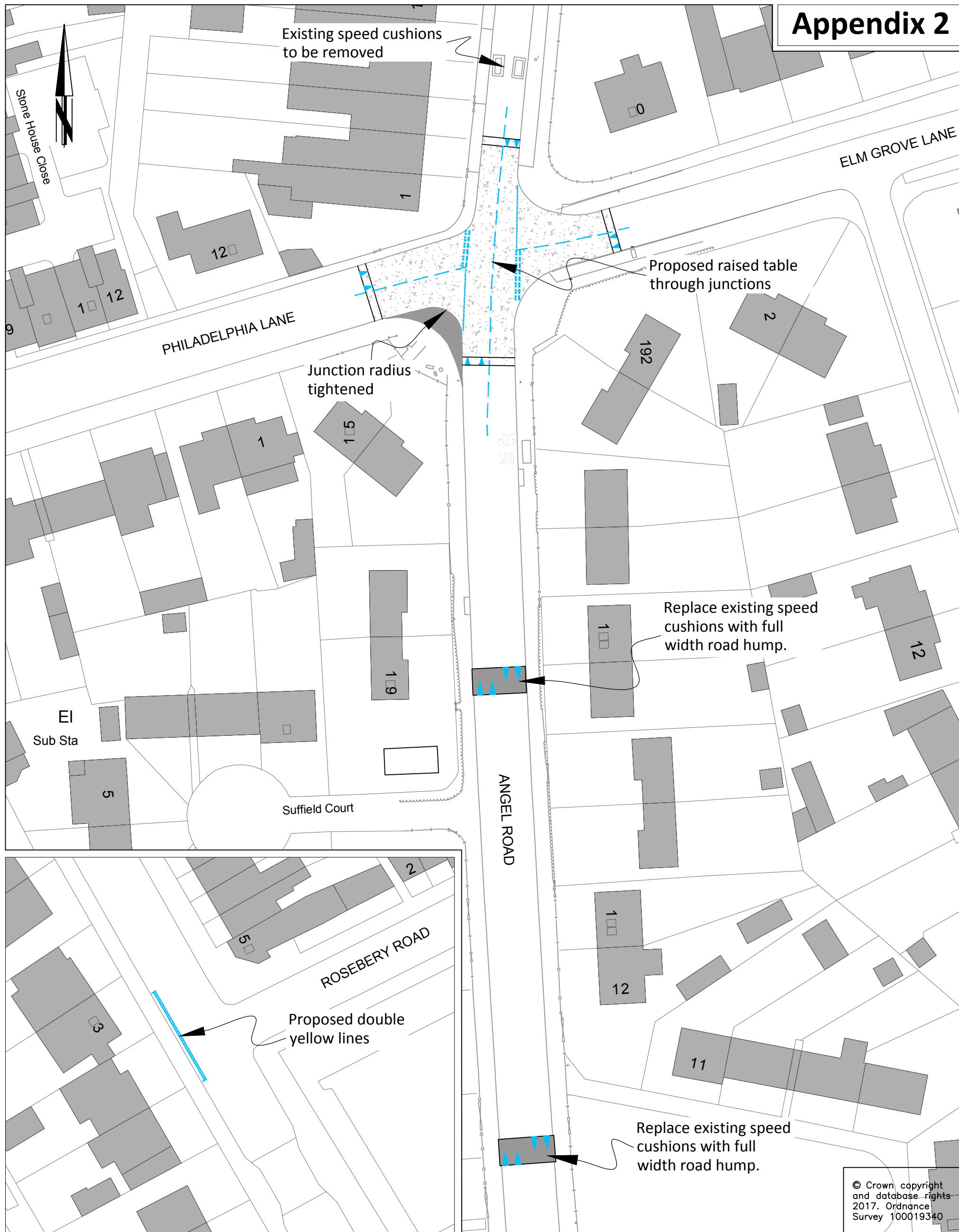
Responder	Option 1	Option 2	Comments	Officers response
Resident		X	Supports measures which calm the speed of traffic in this area and improve facilities for cyclists and pedestrians. Patteson Road is used as a cut through and should be made one way towards Aylsham Road.	Support welcome. The issue of traffic management in Patteson Road and Eade Road is discussed in the main report.
Resident			Concerned with drainage issues on Shipstone Road at the cycle path / footpath section as private surface water drains run onto path, vehicles using the cycle paths, and cyclists travelling too close to houses. Suggested alternative layout without the existing trees.	The design of the Shipstone Road area will consider drainage and desire lines of both pedestrians and cyclists. The planted area will be improved.
Councillor Brociek-Coulton	X		Considers the signalised crossing is vital not just for the residents to cross safely but also for the traffic to get out safely from Angel Road. Has a petition of 89 signatures of residents who use the local school. Prefers option 1. Even though option 2 has two crossings and sounds appealing, it is felt it will not be the safest on the busy road.	It is understood how some people will feel a zebra with the existing traffic speeds could be unsafe, however we are proposing a 20mph with traffic calming and this arrangement has good safety records in other areas of the city.
Resident			Does not want the cobbled stone area outside their house on Shipstone Road removed, considers the cycle path would be too close to their front door. Would like assurance the road works would not damage their property and considers the existing layout functions well and the proposals are a waste of tax payers money.	The pavement will be slabbed to encourage cyclists away from the footpath. The road works will not damage any private property. The cycling facility needs improvement as it has deteriorated over time.

Responder	Option 1	Option 2	Comments	Officers response
Resident		X	This option gives a better route for cyclists traveling north along Angel Road. Considers toucans are less safe than zebras as users have to wait for the signal and often choose to risk crossing before the lights turn.	Comments noted.
Resident			Concerned with safety at the junction of Magdalen Road with Waterloo Road. Has been caused to fall off her bike by a vehicle turning right into Waterloo Road driving in front of her.	With the proposals for a larger area of 20mph and traffic calming, cycling will become more pleasant and hopefully drivers more considerate.
NNAB	X		Prefer option 1 as this is a signalised crossing which is thought safer to use for VIPs, and are disappointed at the shared surface areas, although they are limited. However they would like the removal of the raised table across Shipstone Road as this would not have any discernible tactile for a VIP to know if they are on the road or path. Strongly object to option 2 as zebras are difficult and dangerous for some VIPs to use. The large table with no full kerb gives no discernible edge to the footpath and a VIP could drift into the road. The loss of navigation points makes finding the crossing point a huge challenge. Objects to the raised table at the crossroads of Angel Road with Elm Grove Lane, this would again have no kerb edge which could disorientate a VIP who could drift into the road. Could traffic on the lead up to the junction be used instead of this raised table.	Preference noted. The raised tables may be able to have a kerb edge to them; existing levels will have to be considered. It is understood that VIPs are likely to feel less confident without signal crossings, but this may be improved by slower traffic. Other considerations are discussed in the main report.

Angel Road and Waterloo Road scheme consultation responses

Responder	Option 1	Option 2	Comments	Officers response
Resident		X	Option two combined with the 20mph speed limit will improve pedestrian safety overall. Concerned with visibility for pedestrians and cyclists on the west side of crossing at junction with Angel Road. Visibility around the corner is poor and there is the danger of collisions between cyclists and pedestrians going in opposite directions, especially at school times.	Preference noted. The visibility for pedestrians and cyclists at the junction of Angel Road and Waterloo Road will be considered by designers.
Resident	X		Supports any measure to slow traffic down. Rat running on Buxton Road to avoid traffic light queues causes problems.	Support welcome, traffic management on Patteson Road, Eade Road and Buxton Road are discussed in the main report.
Norwich Cycling Campaign		X	Welcomes the 20mph area extension. Neither option is good enough as the shared footpath / cycle paths are too narrow, however Option 2 would work better in a 20mph as there will be less waiting for cyclists. Suggest install signals at the crossing for all traffic. The advisory cycle lane on Waterloo Road will not help cyclists, traffic calming is needed. On Shipstone Road consideration of pedestrian desire lines is needed and surface needs improving. Also the existing bollards are a hazard. Catton Grove Road bus gate should be enforced. Welcome the sinusoidal humps on Angel Road and the raised table at the junction with Elm Grove Lane.	Support for 20mph is welcome. The shared footpaths are as wide as the highway limitations allow and they are only short sections. Traffic calming is proposed on Waterloo Road and the advisory cycle lane is thought helpful in giving the cyclists a more prominent position on the road. Shipstone Road area is designed to allow pedestrian and cyclists in all directions. Surfaces will be improved.

Responder	Option 1	Option 2	Comments	Officers response
Resident			Leave the crossing as it is. Slowing traffic down will add to congestion. The 30minutes waiting area o/s 118/120 waterloo Road is not needed. Traffic does not stop for zebras and so the crossing is dangerous. Shared cycle paths / footpaths are dangerous for pedestrians as cyclists are inconsiderate.	The crossing needs to be renewed as the signals are at the end of their workable life. Traffic moving slowly does not increase congestion. The 30 minutes parking area will be useful to local businesses. Most pedestrians and cyclists are considerate of each other.



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Funded by:



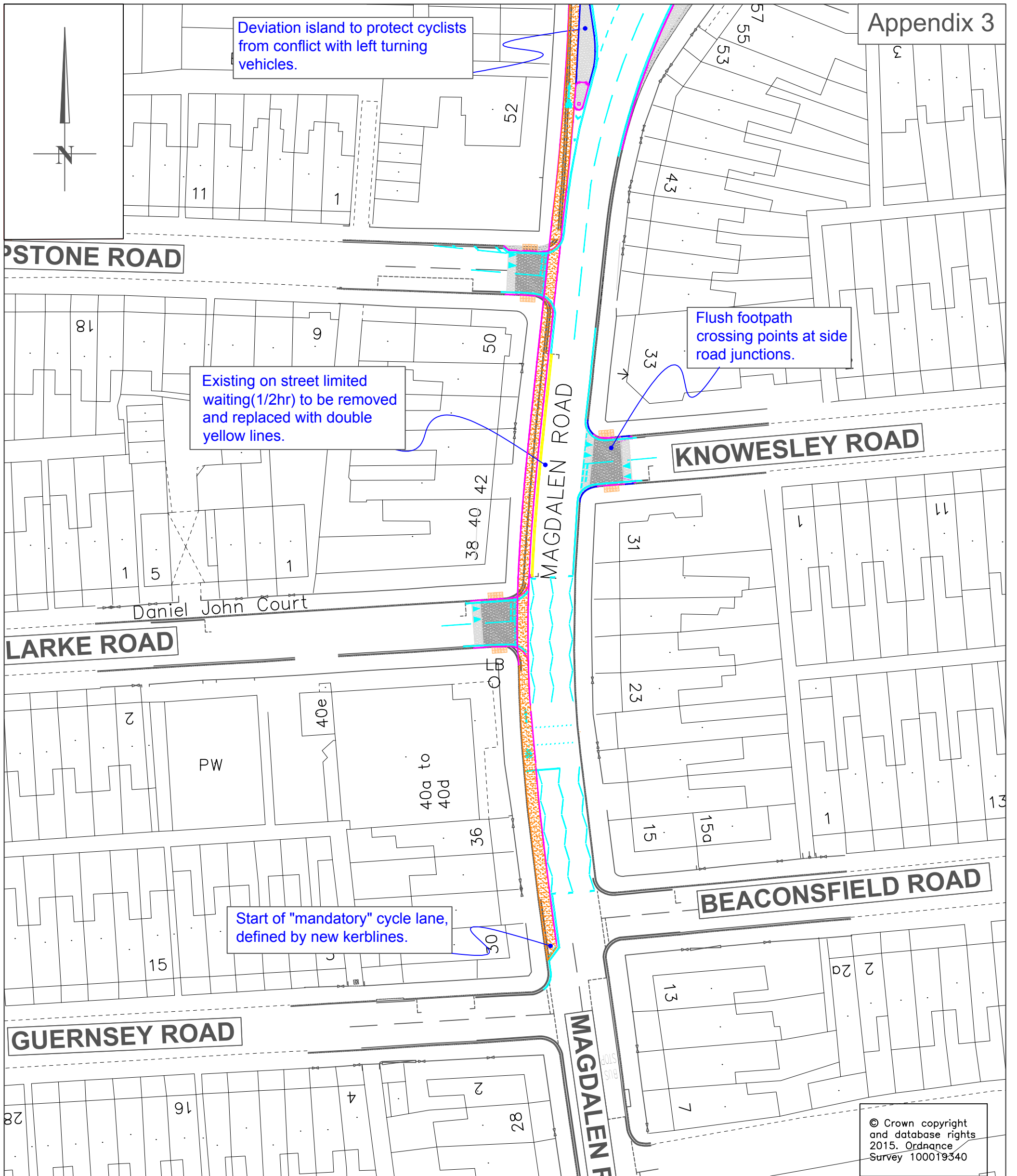
DRAWING TITLE

Transport for Norwich
PE122 Angel Road/Waterloo Road
Consultation Plan Sheet 1

Tom McCabe
Executive Director of
Community and Environmental Services
Norfolk County Council
County Hall
Martineau Lane
Norwich NR1 2SG

REV.	DESCRIPTION	DRAWN	CHECKED	DATE

INITIAL	DATE	DRAWING No.
SURVEYED BY OS	2010	PE122.CO.001
DESIGNED BY JT	01/10	PROJECT TITLE
DRAWN BY JT	01/10	Transport for Norwich
CHECKED BY MA	01/10	Angel Road
		SCALE 1:500 A3
		FILE No. PE122



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Funded by:

DRAWING TITLE

South area detail

Tom McCabe
 Executive Director of
 Community and Environmental Services
 Norfolk County Council
 County Hall
 Martineau Lane
 Norwich NR1 2SG

REV.	DESCRIPTION	CHECKED	DATE
A	Raised table removed and minor layout amendments	LJA	Jan. '17

	INIT.	DATE	DRAWING No.
SURVEYED BY	AJE		CCAG35-05 revA
DESIGNED BY	AJE		PROJECT TITLE MAGDALEN ROAD, Norwich CCAG2 Project 35
DRAWN BY	LJA		
CHECKED BY			SCALE 1:500
			FILE No.



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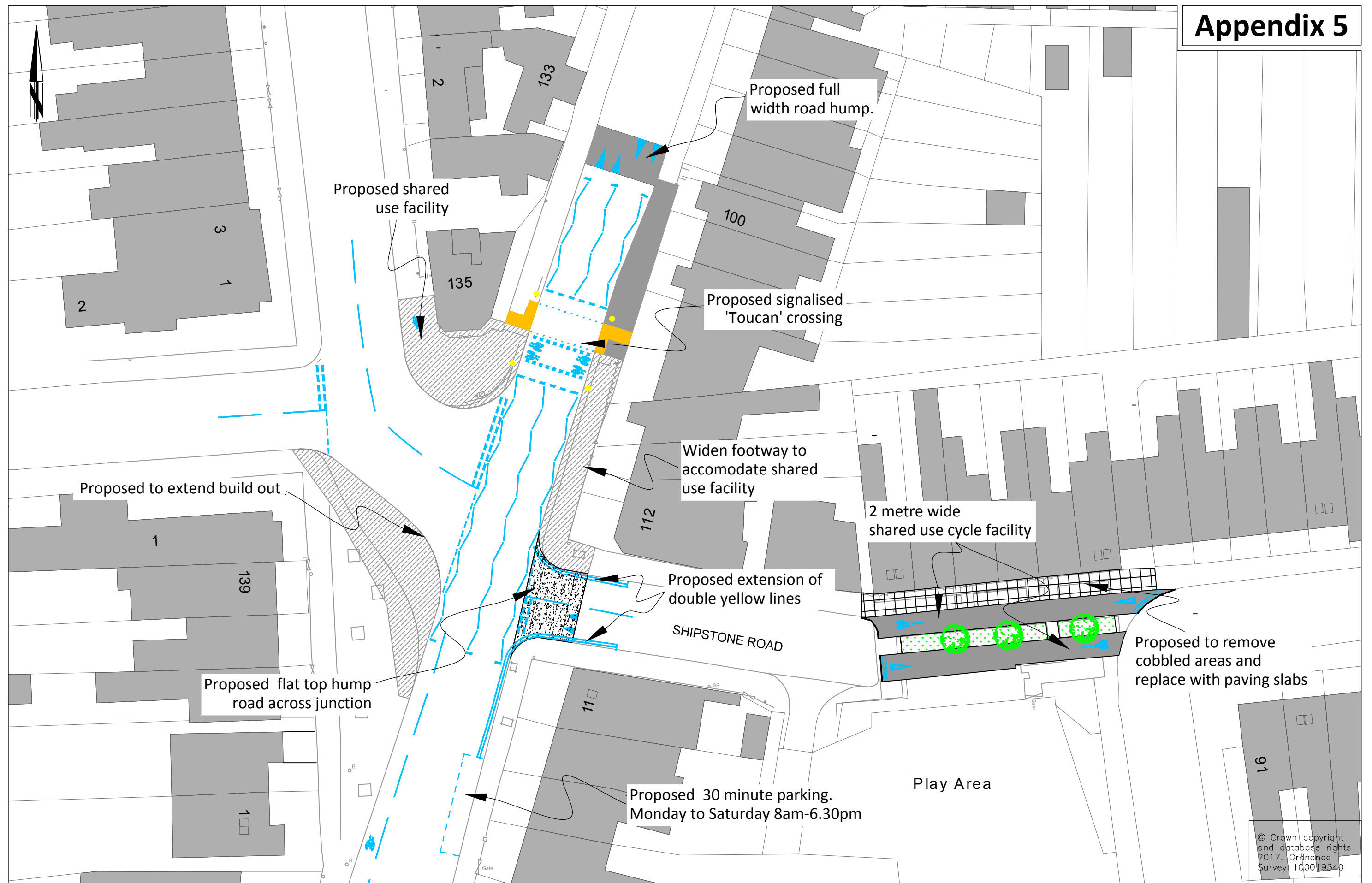
Funded by:

Tom McCabe
 Executive Director of
 Community and Environmental Services
 Norfolk County Council
 County Hall Martineau Lane
 Norwich NR1 2SG

DRAWING TITLE
 Transport for Norwich
 PE122 Angel Road/Waterloo Road
 Consultation Plan Sheet 3

REV.	DESCRIPTION	DRAWN BY	CHECKED	DATE

SURVEYED BY	INITIALS	DATE	DRAWING No.
OS	OS	2017	PE:122.CO.003
DESIGNED BY	JT	01/17	PROJECT TITLE
DRAWN BY	JT	01/17	Transport for Norwich
CHECKED BY	MA	01/17	Angel Road
			SCALE
			1:1000 A3
			FILE No.
			PE:122



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Funded by:
 Department for Transport

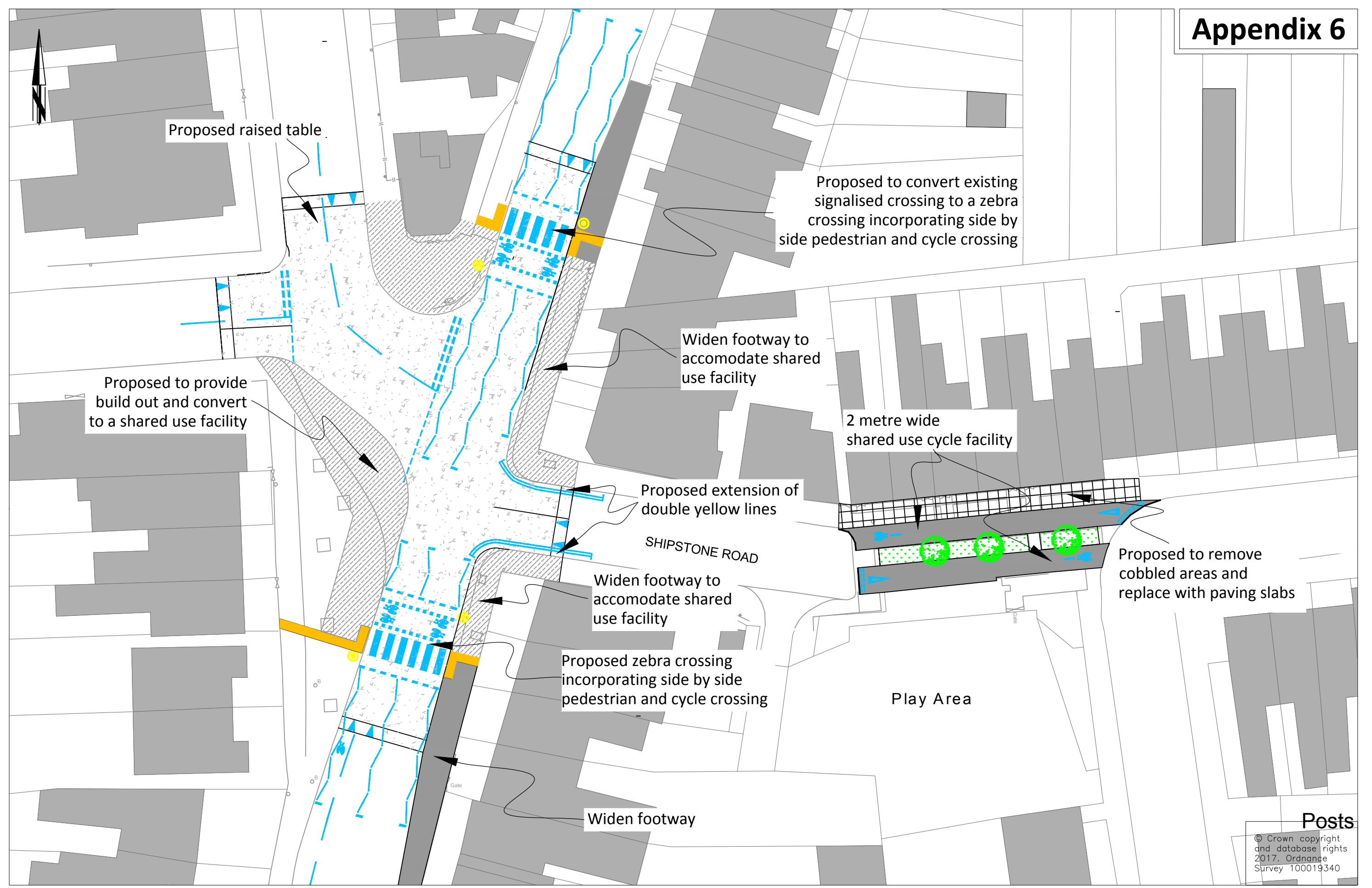


Tom McCabe
 Executive Director of
 Community and Environmental Services
 Norfolk County Council
 County Hall, Martineau Lane
 Norwich NR1 2SG

DRAWING TITLE
 Transport For Norwich
 Angle Road/Waterloo Road Junction
 Option 1

REV.	DESCRIPTION	CHECKED	DATE

	INITIALS	DATE	DRAWING No.
SURVEYED BY	OS	01/1/17	PE:122 CO:00
DESIGNED BY	JT	01/1/17	PROJECT TITLE
DRAWN BY	JT	01/1/17	Transport For Norwich
CHECKED BY	MA	01/1/17	Angle Road/Waterloo Road
			SCALE NTS
			FILE No. PE:122



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Funded by:

Tom McCabe
 Executive Director of
 Community and Environmental Services
 Norfolk County Council
 County Hall Martineau Lane
 Norwich NR1 2SG

DRAWING TITLE
 Transport For Norwich
 Angle Road/Waterloo Road Junction
 Option 2

REV.	DESCRIPTION	CHECKED	DATE

	INITIALS	DATE	DRAWING No.
SURVEYED BY	OS	01/1/17	PE:122.CO:005
DESIGNED BY	JT	01/1/17	PROJECT TITLE
DRAWN BY	JT	01/1/17	Transport For Norwich Angle Road/Waterloo Road
CHECKED BY	MA	01/1/17	SCALE
			NTS
			FILE No.
			PE:122