

Report of the Corporate Director of Place  
Portfolio of the Executive Member for Transport

## **Traffic Signal Asset Renewal (TSAR) – Junction of Malton Road and New Lane**

### **Summary**

1. The traffic signalling equipment at this site is life expired, has become difficult and costly to maintain and needs to be replaced.
2. The TSAR (Traffic Signal Asset Renewal) programme is the means by which life expired traffic signal assets across the city are refurbished.
3. Although the programme is primarily about asset renewal, there is scope to take advantage of ‘easy wins’ whilst refurbishing the equipment. To that end, design proposals aimed at improvements for pedestrians and cyclists moving through the junction and providing links to existing cycle infrastructure to the northwest of the junction in accordance with the Travel Hierarchy of Transport Users adopted by CYC as part of Local Transport Plan 3 are being put forward.
4. An initial proposed design which included the reallocation of carriageway space on New Lane to provide a mandatory northbound cycle lane to link with an existing on carriageway cycle lane as well as kerblines changes aimed at reducing cyclist/[pedestrian conflict in the North Western corner of the junction was developed and shared for consultation with local ward councillors and external stakeholders representing active travel mode users and equalities groups.
5. Ward councillors responded to indicate that the carriageway changes proposed in this initial design were a cause for concern and did not address local issues which are proposed to be more pressing at the junction. Safety issues for cyclists entering the carriageway of New Lane without traffic signal control whilst motor vehicle traffic also enters

the road as part of the proposed layout changes was a key focus, alongside a desire for the introduction of a third signal controlled crossing at the junction providing a more direct route between the Southern foot/cycle way of Malton Road and New Lane.

6. Based on this response, a further three design proposals were compiled which reflected the suggestions proposed during consultation as well as informing slight revisions to the original design proposal to provide light segregation of the new northbound cycle lane and an increase in the size of the foot/cycle way areas around the proposed Toucan crossing waiting areas.
7. The Four Design Proposals include:
  - Design Proposal A – Renewal of Traffic Signal Equipment and minor civils works
  - Design Proposal B – Renewal of Traffic Signal Equipment and reallocation of New Lane Carriageway space to Active Travel Modes
  - Design Proposal C – Renewal of Traffic Signal Equipment with additional Toucan Crossing Introduction
  - Design Proposal D – Renewal of Traffic Signal Equipment, Reallocation of New Lane Carriageway space to Active Travel Modes and additional Toucan Crossing Installation
8. A second round of consultation was undertaken on these four design proposals with responses indicating that ward councillors would favour the introduction of Design Proposal C whereas Stakeholders representing Active Travel users would prefer Design Proposal D.
9. A decision is required to approve which of the proposed schemes should be taken forward to detailed design and construction.

## **Recommendations**

10. The Executive Member is asked to:

Approve progression of the scheme to detailed design and construction, based on one of the scheme proposals described within this report.

Reason:

In order to progress the design and construction of the TSAR scheme at Malton Road / New Lane.

## Background

11. The TSAR (Traffic Signal Asset Renewal) programme has been in place since 2015 and is responsible for the replacement of life expired traffic signal assets around York.
12. The focus is on replacing equipment that is liable to imminent failure, rather than seeking to improve congestion or achieve a similar transport improvement goal. However, where 'easy wins' can be achieved at the same time as replacing obsolete equipment, these will be taken advantage of.
13. CYC's Local Transport Plan 3 includes a hierarchy of Transport Users as part of which, pedestrian and cyclist needs should be prioritised when identifying the potential for amendments to the transport network. Existing issues at this junction location highlight conflict between these two transport users when moving through shared spaces and therefore revisions are proposed which aim to improve these journeys by creating additional space for them.
14. To date, 44 sets of signals have been refurbished and a further site is scheduled for completion in the 22/23 financial year.
15. The traffic signal controller and the majority of the signal poles at this site are in excess of 17 years old, though some have been replaced in the recent past due to vehicle strikes. An operational inbound Bus Lane is currently in place along Malton Road supporting the Park and Ride service which runs through this junction.
16. The junction lies in close proximity to York Outer Ring Road and the A64 bypass as well as the Community Stadium and Monks Cross/Vangarde retail park developments. Access to a small number of residential properties is present within the signal controlled area of the junction and any revision of the site will seek to maintain the existing arrangements for the entrance/exit arrangements for these properties.
17. Off Carriageway cycle provision already exists at the junction however the layout is constrained due to a lack of space to serve both pedestrians and cyclists.

## Options

18. The following options are available:
19. Option 1 – Approve progression of the scheme to detailed design and construction based on one of the Design Proposals included at Annexes A to D of this report.
20. Option 2 – Do not approve for the scheme to proceed and indicate further considerations which need to be addressed for a scheme to gain approval.

## Analysis

### **Design Proposal A – Renewal of Traffic Signal Equipment and minor civils works**

#### *Description of Changes*

21. A full refurbishment of the on site traffic signal equipment, introduction of a new traffic signal controller to allow remote access of the junction via the CYC Urban Traffic Control system and introduction of Near Side Red/Green Man Toucan Crossing technology
22. Verges moved back in the Northern Footway of Malton Road to provide slight increases in available shared space around the known pinch point for pedestrians and cyclists turning onto/from New Lane and the Toucan crossing waiting areas.
23. Removal of the existing carriageway island across New Lane
24. Inclusion of a new cycle off slip provision from New Lane into the shared use area around the eastern extent of the Toucan Crossing to allow cyclists to use the Toucan or proceed eastbound using the existing off carriageway cycle way on Malton Road.
25. Tactile paving installed to current guidance and audible crossing alert included.
26. Extended cycle on/off slip provision for cyclists wishing to join the off carriageway cycleway provision when heading westbound along Malton Road.

27. Application of Green surface markings over the entry points to residential properties on Malton Road and a commercial property on New Lane.
28. Potential inclusion of a Yellow Box junction marking on Malton Road outbound across the entrance to New Lane if supported by North Yorkshire Police.
29. The estimated cost of the work to the Traffic Signal at the junction of Malton Road and New Lane detailed in Annex A for this design proposal A is £120,000.00 and construction of this design is estimated to take 3 weeks.

### *Reasoning*

30. Replacement of the traffic signal technology is the fundamental purpose of this project, as per item 12.
31. The upgrade of the traffic signal controller at the site allows for improved remote operation of the junction via UTC and the ability for alternative signal phasing plans to be enforced on demand as required as part of network planning/monitoring.
32. Conflict between pedestrians and cyclists at the North West corner of the junction has been identified during site visits and scheme feasibility works. Cutting back of existing hedgerow in the area is estimated to create a small amount of additional space in the existing footway however this is not considered sufficient to provide ample space for both pedestrians and cyclists to move through the area safely. The slight reduction in grass verge within the northern footway of Malton Road generates a small increase in available shared space at this point which would improve pedestrian/cyclist congestion marginally.
33. Design proposal A provides slight improvements to tackle the existing conflict identified between pedestrians and cyclists at the north west corner of the junction with shared space areas improved marginally. The proposed installation of traffic signal equipment does not preclude future revisions to the layout of the junction to provide further betterment from being delivered.

### *Impact on vehicular traffic*

34. As no major changes are intended to the layout or operation of the junction, there will be minimal impact on vehicular traffic.
35. Renewal of the traffic signals equipment will improve traffic detection at the junction leading to improvements in delay during quieter trafficked times.

### *Impact on Pedestrians*

36. This design will offer slight improvements for pedestrians including lower pedestrian wait times due to improved traffic signal operation, additional waiting area capacity and improved tactile paving layouts in accordance with current guidance.
37. The intended use of Near side Red/Green Man technology is based on the following reasoning:
38. All junctions on the Malton Road corridor and in the Monk's Cross area use near-sided indicators. Consistency in application is a key consideration so that users are clear what is expected of them within a similar environment.
39. Recent traffic counts undertaken show that the junction has low use by pedestrians and cyclists (on a shared use footway). It is very unlikely that crowding of pedestrians or obscuring of the near-side unit will take place.
40. Footway widths at the crossing points are generally wide (over 3m) allowing indicators to be placed at the front of kerb without any significant narrowing of the footway or impacting of crowding of users.
41. Pedestrians will cross on an "all red" to traffic with audible signals used to provide assistance to visually impaired users.
42. High level repeaters will be installed at 1.9m clearance to base of unit to allow for improved viewing of near sided units and reduce obscuring the units.

### *Impact on Cyclists*

43. The inclusion of a new off slip for cyclists proceeding south bound on New Lane provides a transition point with a significantly improved angle of entry when compared to the existing drop kerb arrangement and

allows cyclists to enter the area of shared footway/cycle space prior to reaching the existing stop line and waiting for a green traffic signal.

44. Provision of cycle lane infrastructure across a number of property access points will be marked using green surfacing to highlight the potential presence of cyclists to motor vehicle users moving through these locations.
45. For cyclists who wish to remain on carriageway when moving through the junction from New Lane, the transition point to off carriageway provision on Malton Road inbound will be lengthened reducing the need for cyclists to proceed directly ahead at the junction and improving the entry angle onto the cycle lane.
46. The JAT score for this option based upon the criteria of LTN 1/20 is 17%. The scoring is low due to a lack of off carriageway cycle provision for cyclists approaching the junction from New Lane and the use of shared use pedestrian / cyclist facilities around the crossing locations. Pedestrian flows are low at the junction and the use of shared space is considered appropriate for this more inter-urban location.

#### *Impact on Air Quality*

47. This option has a negligible impact on Air Quality in the immediate area of the junction given that traffic levels are estimated to remain largely the same as no major changes to operation of the junction are included.

### **Design Proposal B – Renewal of Traffic Signal Equipment and reallocation of New Lane Carriageway space to Active Travel Modes**

#### *Description of Changes*

48. A full refurbishment of the on site traffic signal equipment, introduction of a new traffic signal controller to allow remote access of the junction and introduction of Near Side Red/Green Man Toucan Crossing technology
49. Tactile paving installed to current guidance and audible crossing alert included.

50. Kerblines at the mouth of New Lane built out to provide additional footway/cycle way space at the Toucan Crossings
51. Removal of the existing carriageway island across New Lane
52. Removal of the dedicated left turn flare lane entering the junction from New Lane. Carriageway centre line relocated to provide single inbound and outbound lanes on New Lane.
53. Introduction of a new mandatory northbound cycle lane on New Lane with an initial 15 metre length of light segregation linking existing cycle lane provision on Malton Road and the on carriageway cycle lane located 120m north of the junction site.
54. New Cycle slip provision from Malton Road outbound into New Lane to join this new cycle lane.
55. New cycle off slip provision from New Lane into the shared use area around the eastern extent of the Toucan Crossing to allow cyclists to use the Toucan or proceed eastbound using the existing off carriageway cycle way on Malton Road.
56. Extended cycle on/off slip provision for cyclists wishing to join the off carriageway cycleway provision when heading westbound along Malton Road.
57. Application of Green surface markings over the entry points to residential properties on Malton Road and a commercial property on New Lane.
58. Potential inclusion of a Yellow Box junction marking on Malton Road outbound across the entrance to New Lane if supported by North Yorkshire Police.
59. The estimated cost of the work to the Traffic Signal at the junction of Malton Road and New Lane detailed in Annex B for this design proposal B is £175,000.00 and construction of this design is estimated to take 5 weeks.

### *Reasoning*



60. Replacement of the traffic signal technology is the fundamental purpose of this project, as per item 12.
61. The upgrade of the traffic signal controller at the site allows for improved remote operation of the junction via UTC and the ability for alternative signal phasing plans to be enforced on demand as required as part of network planning/monitoring.
62. The build out of the kerb lines at the mouth of New Lane creates additional space for pedestrians and cyclists waiting to use the signal controlled crossings and also provides space for slip road access for cyclists wishing to move from Malton Road eastbound into North Lane without the need to wait for a signal controlled phase.
63. Conflict between pedestrians and cyclists at the North West corner of the junction has been identified during site visits and scheme feasibility works. Cutting back of existing hedgerow in the area is estimated to create a small amount of additional space in the existing footway however this is not considered sufficient to provide ample space for both pedestrians and cyclists to move through the area safely.
64. Removal of the left turn flare lane from New Lane generates carriageway space for an LTN1/20 compliant North bound separated cycle lane to be included, removing the pedestrian/cyclist conflict indicated above and connecting cyclists with existing on carriageway cycle lane provision further North of the junction site.
65. The cycle slipway connecting southbound cyclists on New Lane with the Toucan crossing location is provided despite the lack of existing carriageway cycle infrastructure in this direction of travel. There is potential for expansion of the carriageway in this area towards the existing hedgerow to provide cycling provision approaching the junction however this is beyond the scope and budget of the existing TSAR scheme.
66. This Design Proposal B provides improvements for pedestrian experience in comparison to Design Proposal A however these are primarily outcomes of larger improvements relating to facilities for cyclists proceeding from Malton Road into New Lane. The additional shared space at the North West corner of the junction allows this manoeuvre to be made with reduced pedestrian conflict by relocating cyclist movements into dedicated on carriageway infrastructure.

### *Impact on vehicular traffic*

67. Given the required reduction in traffic lanes on New Lane, the preliminary design has been subject to operational transport modelling (Linsig) which indicates that removal of the left turn flare lane from New Lane will increase delay and queuing for general traffic however, the junction is still likely to operate within capacity.
68. Operational modelling also indicates that the change to the junction layout is unlikely to result in material increases in journey times for the P&R bus service on Malton Road which make use of the inbound Bus Lane which is present at the site.
69. Renewal of the traffic signals equipment will improve traffic detection at the junction leading to improvements in delay during quieter trafficked times.
70. The proposed build out of kerblines has been subject to swept path analysis to ensure that Buses/HGV's moving through the junction are not impacted by the change.
71. The introduction of the new mandatory cycle lane on New Lane may generate a requirement for a TRO to prevent vehicles parking/loading within the lane although this is not a formal requirement. Any formal application of a TRO would be subject to a formal consultation with local properties which may be impacted by the TRO which would need to be completed before any construction works took place.

### *Impact on Pedestrians*

72. This design will offer slight improvements for pedestrians including lower pedestrian wait times due to improved traffic signal operation, additional waiting area capacity and improved tactile paving layouts in accordance with current guidance.
73. The intended use of Near side Red/Green Man technology is based on the following reasoning:
74. All junctions on the Malton Road corridor and in the Monk's Cross area use near-sided indicators. Consistency in application is a key

consideration so that users are clear what is expected of them within a similar environment.

75. Recent traffic counts undertaken show that the junction has low use by pedestrians and cyclists (on a shared use footway). It is very unlikely that crowding of pedestrians or obscuring of the near-side unit will take place.
76. Footway widths at the crossing points are generally wide (over 3m) allowing indicators to be placed at the front of kerb without any significant narrowing of the footway or impacting of crowding of users.
77. Pedestrians will cross on an “all red” to traffic with audible signals used to provide assistance to visually impaired users.
78. High level repeaters will be installed at 1.9m clearance to base of unit to allow for improved viewing of near sided units and reduce obscuring the units.

### *Impact on Cyclists*

79. The proposed section of mandatory cycle lane heading northbound along New Lane from the junction will provide a link between existing off carriageway provision on Malton Road and existing on carriageway provision north of the junction on New Lane.
80. A mandatory cycle lane is proposed to provide indication for motorists that they should not encroach on this area of the carriageway. Light segregation infrastructure is included for the first 15 metres of the mandatory cycle lane to enhance safety for cyclists at this transition point.
81. The mandatory cycle lane and associated kerb line adjustments will offer a transition point allowing cyclists to make the left hand turn from Malton Road into New Lane without the need to wait for signal control. Although motor vehicles may be entering New Lane at the same time as cyclists enter the carriageway, the light segregation provided at the transition point will clearly identify carriageway space for all road users.
82. For cyclists who wish to remain on carriageway when moving through the junction from New Lane, the transition point to off carriageway provision on Malton Road southwest bound will be lengthened reducing

the need for cyclists to proceed directly ahead at the junction and improving the entry angle onto the cycle lane.

83. Provision of cycle lane infrastructure across a number of property access points will be marked using green surfacing to highlight the potential presence of cyclists to motor vehicle users moving through these locations.
84. The JAT score for this option based upon the criteria of LTN 1/20 is 33%. Despite the inclusion of the new cycle provision in this design option, improvement in the score is restricted due to the pre existing lack of off carriageway cycle provision for cyclists approaching the junction from New Lane and the use of the shared use pedestrian / cyclist facilities around the crossing locations. Pedestrian flows are low at the junction and the use of shared space is considered appropriate for this more inter-urban location.

#### *Impact on Air Quality*

85. This option has a negligible impact on Air Quality in the immediate area of the junction given that traffic levels are estimated to remain largely the same as no major changes to operation of the junction are included.

### **Design Proposal C – Renewal of Traffic Signal Equipment with additional Toucan Crossing Introduction**

#### *Description of Changes*

86. A full refurbishment of the on site traffic signal equipment, introduction of a new traffic signal controller to allow remote access of the junction via the CYC Urban Traffic Control system and introduction of Near Side Red/Green Man Toucan Crossing technology
87. Verges moved back in the Northern Footway of Malton Road to provide slight increases in available shared space around the known pinch point for pedestrians and cyclists turning onto/from New Lane and the Toucan crossing waiting areas.
88. Removal of the existing carriageway island across New Lane
89. Inclusion of a new cycle off slip provision from New Lane into the shared use area around the eastern extent of the Toucan Crossing to

allow cyclists to use the Toucan or proceed eastbound using the existing off carriageway cycle way on Malton Road.

90. Tactile paving installed to current guidance and audible crossing alert included.
91. Extended cycle on/off slip provision for cyclists wishing to join the off carriageway cycleway provision when heading westbound along Malton Road.
92. Application of Green surface markings over the entry points to residential properties on Malton Road and a commercial property on New Lane.
93. Introduction of a third signal-controlled Toucan Crossing location to the south west of the junction.
94. Slight relocation of the vehicle stop lines on Malton Road outbound to provide space for the new Toucan Crossing.
95. Extended areas of shared use pedestrian/cyclist space on Malton Road around the waiting areas for this new Toucan Crossing.
96. Potential inclusion of a Yellow Box junction marking on Malton Road outbound across the entrance to New Lane if supported by North Yorkshire Police.
97. The estimated cost of the work to the Traffic Signal at the junction of Malton Road and New Lane detailed in Annex C for this design proposal C is £155,000.00 and construction of this design is estimated to take 4 weeks.

### *Reasoning*

98. Replacement of the traffic signal technology is the fundamental purpose of this project, as per item 12.
99. The upgrade of the traffic signal controller at the site allows for improved remote operation of the junction via UTC and the ability for alternative signal phasing plans to be enforced on demand as required as part of network planning/monitoring.

100. Conflict between pedestrians and cyclists at the North West corner of the junction has been identified during site visits and scheme feasibility works. Cutting back of existing hedgerow in the area is estimated to create a small amount of additional space in the existing footway however this is not considered sufficient to provide ample space for both pedestrians and cyclists to move through the area safely. The slight reduction in grass verge within the northern footway of Malton Road generates a small increase in available shared space at this point which would improve pedestrian/cyclist congestion marginally.
101. The inclusion of a third Toucan crossing at the junction is a consideration proposed by local ward councillors based on evidence for pedestrians and cyclists to cross the width of Malton Road at various uncontrolled locations between this junction and the signal controlled provision south west of the site at the junction of Malton Road and Elmfield Avenue.
102. This Design Proposal C improves carriageway crossing options in comparison to proposals A and B by providing a more direct link for pedestrians and cyclists wishing to move between New Lane and Malton Road's southern footway with slight improvements to tackle the existing conflict identified between pedestrians and cyclists at the north west corner of the junction. Available shared space is improved marginally, and the proposed installation of traffic signal equipment does not preclude future revisions to the layout of the junction to provide further betterment from being delivered.

#### *Impact on vehicular traffic*

103. Operation of the junction will remain as it does currently even after the additional Toucan Crossing is introduced as all crossings will operate at the same time therefore, there will be minimal impact on vehicular traffic.
104. Renewal of the traffic signals equipment will improve traffic detection at the junction leading to improvements in delay during quieter trafficked times.

#### *Impact on Pedestrians*

105. This design will offer slight improvements for pedestrians including lower pedestrian wait times due to improved traffic signal operation, additional waiting area capacity and improved tactile paving layouts in accordance with current guidance.
106. The intended use of Near side Red/Green Man technology is based on the following reasoning:
107. All junctions on the Malton Road corridor and in the Monk's Cross area use near-sided indicators. Consistency in application is a key consideration so that users are clear what is expected of them within a similar environment.
108. Recent traffic counts undertaken show that the junction has low use by pedestrians and cyclists (on a shared use footway). It is very unlikely that crowding of pedestrians or obscuring of the near-side unit will take place.
109. Footway widths at the crossing points are generally wide (over 3m) allowing indicators to be placed at the front of kerb without any significant narrowing of the footway or impacting of crowding of users.
110. Pedestrians will cross on an "all red" to traffic with audible signals used to provide assistance to visually impaired users.
111. High level repeaters will be installed at 1.9m clearance to base of unit to allow for improved viewing of near sided units and reduce obscuring the units.
112. The additional Toucan Crossing will provide a more direct option for pedestrians wishing to move between the Southern footway of Malton Road and New Lane, removing the need for them to double back on themselves when using the existing crossing points and therefore reducing the amount of time spent waiting for a Green signal as the crossing is reduced to a single phase.

### *Impact on Cyclists*

113. The inclusion of a new off slip for cyclists proceeding south bound on New Lane provides a transition point with a significantly improved angle of entry when compared to the existing drop kerb arrangement and allows cyclists to enter the area of shared footway/cycle space prior to reaching the existing stop line and waiting for a green traffic signal.

114. Provision of cycle lane infrastructure across a number of property access points will be marked using green surfacing to highlight the potential presence of cyclists to motor vehicle users moving through these locations.
115. For cyclists who wish to remain on carriageway when moving through the junction from New Lane, the transition point to off carriageway provision on Malton Road inbound will be lengthened reducing the need for cyclists to proceed directly ahead at the junction and improving the entry angle onto the cycle lane.
116. The additional Toucan Crossing will provide a more direct option for Cyclists wishing to cross from the Southern cycleway of Malton Road to New Lane, removing the need for them to double back on themselves when using the existing crossing points and therefore reducing the amount of time spent waiting for a Green signal as the crossing is reduced to a single phase.
117. The JAT score for this option based upon the criteria of LTN 1/20 is 17%. The scoring is low due to a lack of off carriageway cycle provision for cyclists approaching the junction from New Lane and the use of the shared use pedestrian / cyclist facilities around the crossing locations. Pedestrian flows are low at the junction and the use of shared space is considered appropriate for this more inter-urban location.

### *Impact on Air Quality*

118. This option has a negligible impact on Air Quality in the immediate area of the junction given that traffic levels are estimated to remain largely the same as no major changes to operation of the junction are included.

## **Design Proposal D – Renewal of Traffic Signal Equipment, Reallocation of New Lane Carriageway space to Active Travel Modes and additional Toucan Crossing Installation**

### *Description of Changes*

119. A full refurbishment of the on site traffic signal equipment, introduction of a new traffic signal controller to allow remote access of the junction



and introduction of Near Side Red/Green Man Toucan Crossing technology

120. Tactile paving installed to current guidance and audible crossing alert included.
121. Kerblines at the mouth of New Lane built out to provide additional footway/cycle way space at the Toucan Crossings
122. Removal of the existing carriageway island across New Lane
123. Removal of the dedicated left turn flare lane entering the junction from New Lane. Carriageway centre line relocated to provide single inbound and outbound lanes on New Lane.
124. Introduction of a new mandatory northbound cycle lane on New Lane with an initial 15 metre length of light segregation linking existing cycle lane provision on Malton Road and the on carriageway cycle lane located 120m north of the junction site.
125. New Cycle slip provision from Malton Road outbound into New Lane to join this new cycle lane.
126. New cycle off slip provision from New Lane into the shared use area around the eastern extent of the Toucan Crossing to allow cyclists to use the Toucan or proceed eastbound using the existing off carriageway cycle way on Malton Road.
127. Extended cycle on/off slip provision for cyclists wishing to join the off carriageway cycleway provision when heading westbound along Malton Road.
128. Application of Green surface markings over the entry points to residential properties on Malton Road and a commercial property on New Lane.
129. Introduction of a third signal-controlled Toucan Crossing location to the south west of the junction.
130. Slight relocation of the vehicle stop lines on Malton Road outbound to provide space for the new Toucan Crossing.

131. Extended areas of shared use pedestrian/cyclist space on Malton Road around the waiting areas for this new Toucan Crossing.
132. Potential inclusion of a Yellow Box junction marking on Malton Road outbound across the entrance to New Lane if supported by North Yorkshire Police.
133. The estimated cost of the work to the Traffic Signal at the junction of Malton Road and New Lane detailed in Annex D for this design proposal D is £210,000.00 and construction of this design is estimated to take 6 weeks.

### *Reasoning*

134. This design proposal provides an amalgamation of the junction changes proposed across Design Proposals B and C.
135. Replacement of the traffic signal technology is the fundamental purpose of this project, as per item 12.
136. The upgrade of the traffic signal controller at the site allows for improved remote operation of the junction via UTC and the ability for alternative signal phasing plans to be enforced on demand as required as part of network planning/monitoring.
137. The build out of the kerb lines at the mouth of New Lane creates additional space for pedestrians and cyclists waiting to use the signal controlled crossings and also provides space for slip road access for cyclists wishing to move from Malton Road eastbound into North Lane without the need to wait for a signal controlled phase.
138. Conflict between pedestrians and cyclists at the North West corner of the junction has been identified during site visits and scheme feasibility works. Cutting back of existing hedgerow in the area is estimated to create a small amount of additional space in the existing footway however this is not considered sufficient to provide ample space for both pedestrians and cyclists to move through the area safely.
139. Removal of the left turn flare lane from New Lane generates carriageway space for an LTN1/20 compliant North bound separated cycle lane to be included removing the pedestrian/cyclist conflict

indicated above and connecting cyclists with existing on carriageway cycle lane provision further North of the junction site.

140. The cycle slipway connecting southbound cyclists on New Lane with the Toucan crossing location is provided despite the lack of existing carriageway cycle infrastructure in this direction of travel. There is potential for expansion of the carriageway in this area towards the existing hedgerow to provide cycling provision approaching the junction however this is beyond the scope and budget of the existing TSAR scheme.
141. The inclusion of a third Toucan crossing at the junction is a consideration proposed by local ward councillors based on evidence for pedestrians and cyclists to cross the width of Malton Road at various uncontrolled locations between this junction and the signal controlled provision south west of the site at the junction of Malton Road and Elmfield Avenue.
142. This Design Proposal D provides the greatest changes to the layout of the junction in order to prioritise the movements of transport users at the top of the CYC travel hierarchy. Conflict between pedestrians and cyclists in the North West corner of the junction is reduced by increasing the available shared space at this point through extension of the kerbline further into the current carriageway as well as the provision of new on carriageway cycle provision for cyclists travelling northbound along New Lane. The additional Toucan Crossing location provides a new direct option for pedestrians and cyclists wishing to cross the carriageway under signal control at this point, reducing the need for crossings to be undertaken in multiple stages and therefore slightly reducing journey times.

#### *Impact on vehicular traffic*

143. Given the required reduction in traffic lanes on New Lane, the preliminary design has been subject to operational transport modelling (Linsig) which indicates that removal of the left turn flare lane from New Lane will increase delay and queuing for general traffic however, the junction is still likely to operate within capacity.
144. Operational modelling also indicates that the change to the junction layout is unlikely to result in material increases in journey times for the P&R bus service on Malton Road which make use of the inbound Bus Lane which is present at the site.

145. Renewal of the traffic signals equipment will improve traffic detection to at the junction leading to improvements in delay during quieter trafficked times.
146. The build out of kerb has been subject to swept path analysis to ensure that Buses/HGV's moving through the junction are not impacted by the change.
147. The introduction of the new mandatory cycle lane on New Lane may generate a requirement for a TRO to prevent vehicles parking/loading within the lane although this is not a formal requirement. Any formal application of a TRO would be subject to a formal consultation with local properties which may be impacted by the TRO which would need to be completed before any construction works took place.

### *Impact on Pedestrians*

148. This design will offer slight improvements for pedestrians including lower pedestrian wait times due to improved traffic signal operation, additional waiting area capacity and improved tactile paving layouts in accordance with current guidance.
149. The intended use of Near side Red/Green Man technology is based on the following reasoning:
150. All junctions on the Malton Road corridor and in the Monk's Cross area use near-sided indicators. Consistency in application is a key consideration so that users are clear what is expected of them within a similar environment.
151. Recent traffic counts undertaken show that the junction has low use by pedestrians and cyclists (on a shared use footway). It is very unlikely that crowding of pedestrians or obscuring of the near-side unit will take place.
152. Footway widths at the crossing points are generally wide (over 3m) allowing indicators to be placed at the front of kerb without any significant narrowing of the footway or impacting of crowding of users.
153. Pedestrians will cross on an "all red" to traffic with audible signals used to provide assistance to visually impaired users.

154. High level repeaters will be installed at 1.9m clearance to base of unit to allow for improved viewing of near sided units and reduce obscuring the units.
155. The additional Toucan Crossing will provide a more direct option for pedestrians wishing to cross from the Southern footway of Malton Road to New Lane, removing the need for them to double back on themselves when using the existing crossing points and therefore reducing the amount of time spent waiting for a Green signal as the crossing is reduced to a single phase.

### *Impact on Cyclists*

156. The proposed section of mandatory cycle lane heading northbound along New Lane from the junction will provide a link between existing off carriageway provision on Malton Road and existing on carriageway provision north of the junction on New Lane.
157. A mandatory cycle lane is proposed to provide indication for motorists that they should not encroach on this area of the carriageway. Light segregation infrastructure is included for the first 15 metres of the mandatory cycle lane to enhance safety for cyclists at this transition point.
158. The mandatory cycle lane and associated kerb line adjustments will offer a transition point allowing cyclists to make the left hand turn from Malton Road into New Lane without the need to wait for signal control. Although motor vehicles may be entering New Lane at the same time as cyclists enter the carriageway, the light segregation provided at the transition point will clearly identify carriageway space for all road users.
159. For cyclists who wish to remain on carriageway when moving through the junction from New Lane, the transition point to off carriageway provision on Malton Road will be lengthened reducing the need for cyclists to proceed directly ahead at the junction and improving the entry angle onto the cycle lane.
160. Provision of cycle lane infrastructure across a number of property access points will be marked using green surfacing to highlight the potential presence of cyclists to motor vehicle users moving through these locations.

161. The additional Toucan Crossing will provide a more direct option for Cyclists wishing to cross from the Southern cycleway of Malton Road to New Lane, removing the need for them to double back on themselves when using the existing crossing points and therefore reducing the amount of time spent waiting for a Green signal as the crossing is reduced to a single phase.
162. The JAT score for this option based upon the criteria of LTN 1/20 is 33%. Despite the inclusion of the new cycle provision in this design option, improvement in the score is restricted due to the pre existing lack of off carriageway cycle provision for cyclists approaching the junction from New Lane and the use of the shared use pedestrian / cyclist facilities around the crossing locations. Pedestrian flows are low at the junction and the use of shared space is considered appropriate for this more inter-urban location.

### *Impact on Air Quality*

163. This option has a negligible impact on Air Quality in the immediate area of the junction given that traffic levels are estimated to remain largely the same as no major changes to operation of the junction are included.

### **Safety Considerations**

164. Accident data for a 5 year period between 01/01/17 and 31/12/21 has been assessed as part of the preliminary design works for this project. During this period only one incident is recorded, a shunt type incident between 2 cars, which resulted in 1 slight casualty.
165. Over the 5 year period, this is not considered statistically significant, and therefore safety improvements targeting the reduction of incidents similar to these in the future are not considered to be key to the delivery of this project. A further Road Safety Audit will be carried out after detailed design and before construction. This is the means by which the design safety of the scheme will be controlled.

### **Consultation**

166. An electronic consultation on Design Proposal B was undertaken during July 2022. The recipients included local ward councillors for Huntington and New Earswick, Heworth Without and Heworth, Huntington and Heworth Parish Councils, CYC officers from a range of service areas

and external stakeholders representing a range of transport and equalities groups to offer an opportunity to comment on the proposal's inclusions.

167. As part of the stakeholder response, local councillors from the Huntington and New Earswick and Heworth Without wards expressed concern about the potential impact of the changes included in Design Proposal B. Concerns were focused around the lack of crossing provision at the south of the junction, potential conflict between motor vehicles and cyclists entering the carriageway of New Lane without signal control and the potential for increased congestion on New Lane caused by the removal of the left turn lane. As part of their response, councillors put forward alternative design suggestions which they considered more appropriate at this junction location. In order to clarify these concerns and alternative suggestions, an MS Teams meeting was completed between the ward councillors and the TSAR project manager on the 13<sup>th</sup> September 2022.
168. In response to this feedback, the TSAR design team produced further Design Proposals (A, C and D) as well as updating Design Proposal B with minor revisions based on feedback provided by other stakeholders during the first period of consultation.
169. A further electronic consultation was undertaken during September 2022 with all 4 design proposals shared with the recipients included in the first round of consultation.
170. Stakeholders from groups representing active travel modes expressed a preference for Design Proposal D, citing the inclusion of revisions which they see as reducing pedestrian/cyclist conflict at the north of the junction and improving levels of protection for these users which are consistent with the principles of the new highway code. Design proposals A and C are seen as only providing minimal improvements over the current junction layout. One stakeholder group representing pedestrians expressed opposition to the intended use of Near side pedestrian crossing technology.
171. Local ward councillors indicated a preference for Design Proposal C and raised concerns regarding the removal of the left turn flare lane and the impact this will have for vehicle queues on New Lane - drawing comparison with the past removal of carriageway space to introduce a cycle lane at Clifton Green. Councillors also suggested potential revisions to the site could be made in stages with the impact of Design

Proposal C's more minor works to improve pedestrian/cyclist conflict assessed after installation before major changes such as those in proposals B and D were considered in the future.

172. A summary of the consultation responses received and associated CYC Engineer response generated across both consultations can be found in Annex E.

### **Other options not presented for consideration**

173. A Consideration for southbound, on carriageway cycle lane facilities on New Lane was included in early design compilation however as existing carriageway space does not allow for inclusion of 2 motor vehicle lanes and 2 cycle lanes, it was suggested that a link with the existing Cycle Lane provision to the North of the junction was the preferred option.

### **Council Plan**

174. Replacing life-expired traffic signalling assets allows the Authority to continue to manage the traffic on its highway network, minimising congestion and ensuring user safety. Therefore carrying out these works fulfils key outcome 3 of the Council Plan, 'Getting around sustainably.'

### **Implications**

#### **175. Financial**

Options A to C are within the budget allocation. Option D would require an additional budget of £35k. If this option is chosen the additional cost of £35k would need to be managed within the overall transport capital programme which would reduce funding available for other schemes.

#### **176. Human Resources (HR)**

There are no HR implications

#### **177. Equalities**

The Council needs to take into account the Public Sector Equality Duty under Section 149 of the Equality Act 2010 (to have due regard to the need to eliminate discrimination, harassment, victimisation and any other prohibited



conduct; advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it and foster good relations between persons who share a relevant protected characteristic and persons who do not share it in the exercise of a public authority's functions).

An Equalities Impact Assessment has been carried out and is annexed to this report at Annex F. In summary, the result of the assessment is that the proposal has:

- a) A high and positive impact in relation to Age, Disability and Gender groups; and
- b) Neutral/ high impacts identified for all other groups in the EIA.

The recommendation of the EIA is there be no major change to the proposal, with some additional actions as set out at 7 and 8 in Annex F.

## 178. **Legal**

### **Liability and Risk**

#### **Health and Safety at Work Act 1974**

City of York Council has a general duty of care to maintain traffic signal infrastructure for which it is responsible. Failure to do so could result in potential breach of Section 3 of the Health and Safety at Work Act 1974. This section places general duties on employers and the self-employed to conduct their undertakings in such a way as to ensure, so far as is reasonably practicable, that persons other than themselves or their employees are not exposed to risks to their health and safety.

#### **Design works, Civil Construction Works and Traffic Signal Equipment**

All CYC procurements and related contracts are subject to the Public Contracts Regulations 2015 ("PCRs") and the Council's Contract Procedure Rules ("CPRs"). This includes the related design and works subject of this report.

It is understood the detailed design works, construction works and equipment are proposed to be delivered by either inhouse Council teams and/ or via existing external consultants, contractors and providers under pre-procured contracts.

In the event of there ultimately being requirements outside of the existing inhouse arrangements or the scope of existing contracts CPR and PCR compliant routes will be required and guidance from Procurement and Legal should be sought.

## **Procurement**

There are no procurement implications with the process set out. Should the strategy change, this would have the potential to activate the procurement legislation. In this event, all procurements and related contracts are subject to the Public Contracts Regulations 2015 (“PCRs”) and the Council’s Contract Procedure Rules (“CPRs”). This includes the related design and works subject of this report. And as such, the requirement will need to go through the procurement, and legal teams.

### **179. Crime and Disorder**

There are no Crime and Disorder implications

### **180. Information Technology (IT)**

There are no IT implications

### **181. Property**

There are no Property implications

### **182. Other**

Disruption during construction – Constructing the TSAR schemes inevitably means a certain level of work on the Highway, with an associated level of delay and disruption to pedestrians and vehicular traffic. Such works will be scheduled and planned to minimise this disruption, and sufficient information and notice will be given to affected parties.

## **Risk Management**

183. Project Risks are recorded in the Project Risk Register and are handled by the Project Team and monitored by the Transport Board.

## Contact Details

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**Neil Ferris**  
**Corporate Director of Economy and Place**

**Report**  **Date** 5/12/22  
**Approved**

**Wards Affected:** List wards or tick box to indicate all **All**

**Huntington and New Earswick, Heworth Without, Heworth**

**For further information please contact the author of the report**

**Specialist Implications Officer(s) – List Information for all**

### **Financial**

Patrick Looker, Finance Manager Corporate Finance Team

### **Equalities and Legal**

Ryan Bell, Senior Lawyer Contracts and Commercial

### **Procurement**

Chloe Wilcox, Head of Procurement

## **Background Papers:**

**All relevant background papers must be listed here.** A 'background paper' is any document which, in the Chief Officer's opinion, discloses any facts on which the report is based and which has been relied on to a material extent in preparing the report (see page 5:3:2 of the Constitution).

### **Annexes**

Annex A – Design Proposal A

Annex B – Design Proposal B

Annex C – Design Proposal C

Annex D – Design Proposal D

Annex E – Consultation Response Summary and Principal Designer  
Feedback

Annex F – Equalities Impact Assessment

**List of Abbreviations Used in this Report**

TSAR - Traffic Signal Asset Renewal

CYC – City of York Council

UTC – Urban Traffic Control

TRO – Traffic Regulation Order

LTP – Local Transport Plan