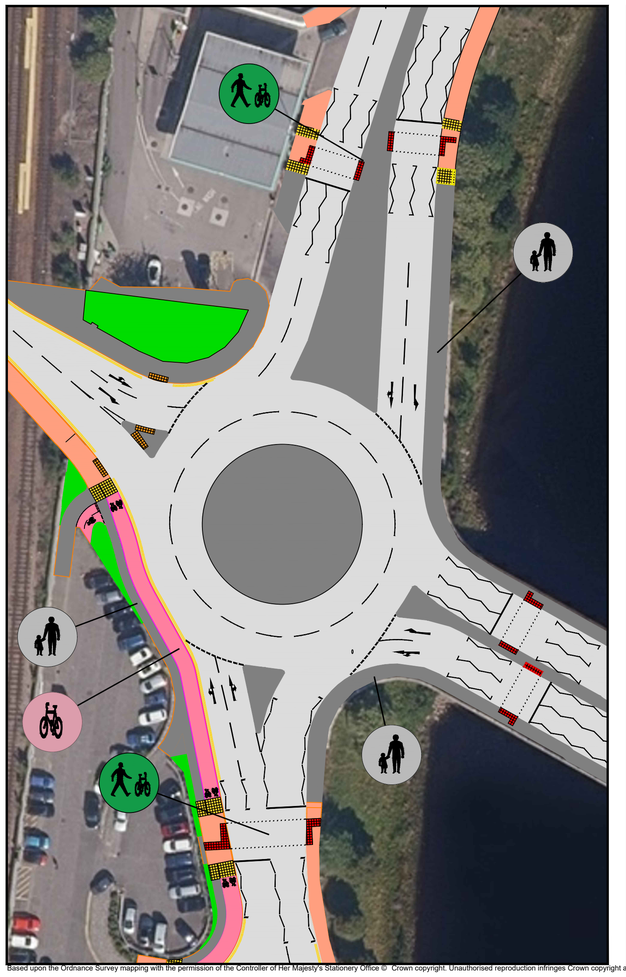
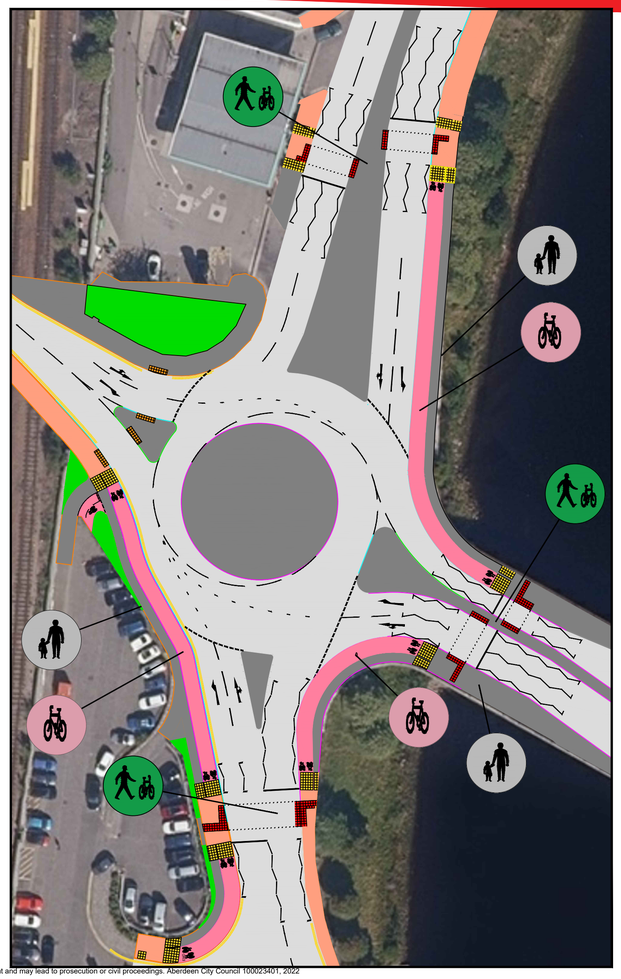
South College Street - Phase 2

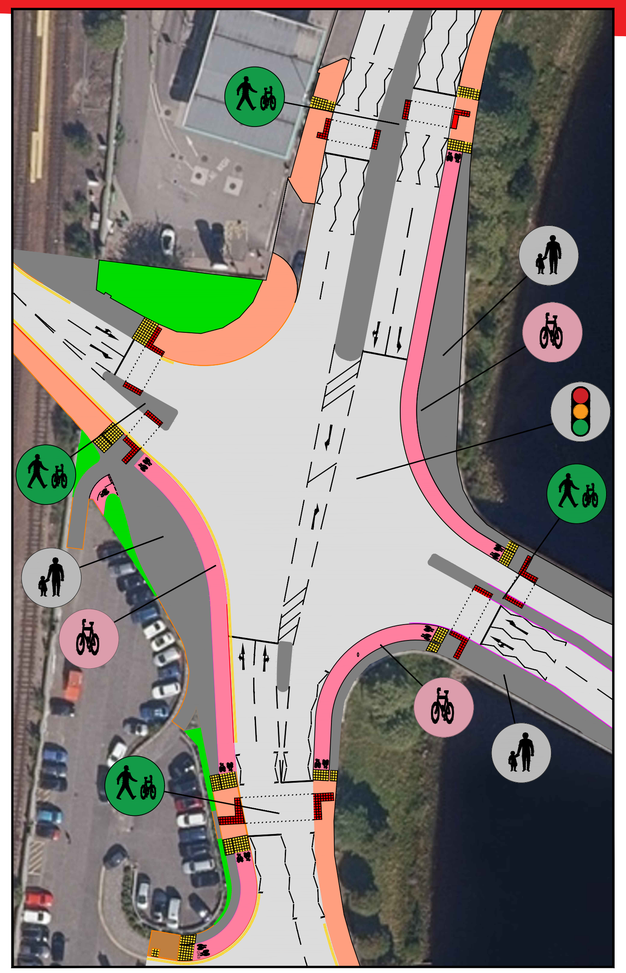
Option 1: Enhanced Roundabout
(Additional Pedestrian Crossing on QE Bridge)



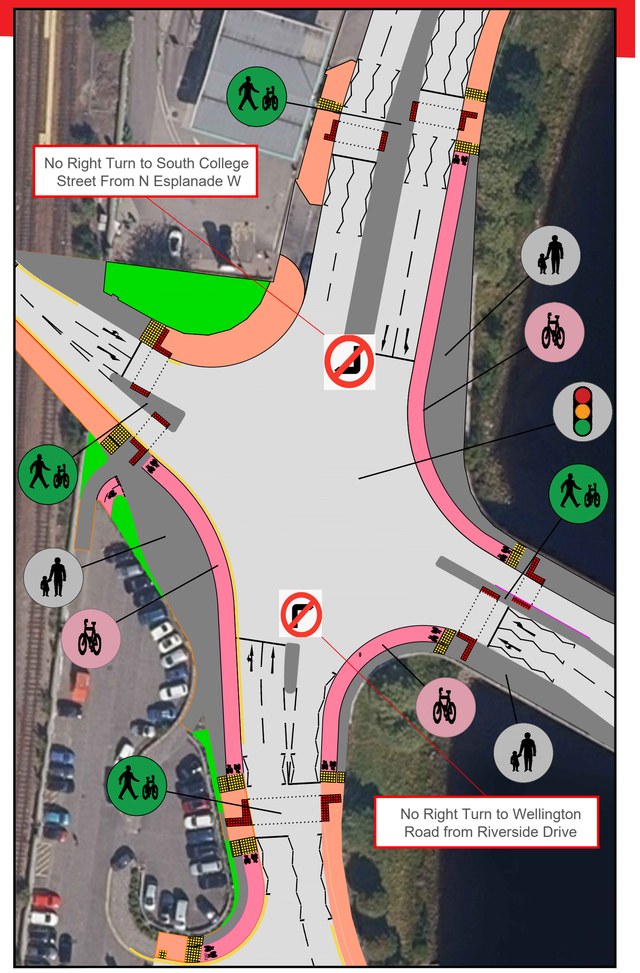
Option 2: Spiral Roundabout
(Additional Toucan Crossing on QE Bridge)



Option 3: Signalised Junction
(All Turning Movements Permitted)



Option 4: Signalised Junction
(Restricted Turning Movements)



Option 1

Operation:

- Retention of roundabout operation with additional Pedestrian crossing on QE Bridge

Pros:

- Traffic movements permitted in all directions
- More efficient traffic movement through the junction than signalisation
- Minimised construction intervention

Cons:

- Does not enhance the cycle network - gaps still exist on QE Bridge and North Esplanade West
- Pedestrian crossing on QE Bridge requires to be set back from the junction, increasing walk-distance)
- Uncontrolled crossing remains on South College Street
- Does not provide control of junction queuing via signal control

Option 2

Operation:

- Retention of roundabout operation with additional Toucan crossing on QE Bridge
- Spiral Roundabout operation to allow geometry to fit cycle provisions between Riverside Drive to North Esplanade West via new QE Bridge Toucan crossing

Pros:

- Traffic movements permitted in all directions
- More efficient traffic movement through the junction than signalisation
- Enhanced Cycle provision across QE Bridge

Cons:

- Gaps still exist in the cycle network - across South College Street
- Pedestrian crossing on QE Bridge is away from the desire line (back from the junction)
- Uncontrolled crossing remains on South College Street
- Does not provide control of junction queuing via signal control

Option3

Operation:

- Signalised junction - all turning movements permitted
- Walk-with staggered Toucan Crossing on QE Bridge and South College St
- Remote Toucan Crossings on Riverside Drive & North Esplanade West
- 4 stage signal phasing

Pros:

- Traffic movements permitted in all directions
- Provides controlled crossings on all arms of the junction
- Provides connected cycle routes through the junction via Toucan Crossings, segregated cycle lanes, and shared cycle / footway paths
- Provides controlled traffic movement through the junction, allowing:
  - Queue management
  - Hurry call for emergency services
  - Easier freight movement through the junction
  - Future bus priority measures
  - Improved network resilience

Cons:

- 4 stage signal phasing - Least efficient option for traffic
- Slightly longer journey times compared to option 1,2 and 4

Option 4

Operation:

- Signalised junction - banned right-turn on North Esplanade West & Riverside Drive
- Right Turn from North Esplanade West is cater for through the new Palmerston Road link
- Walk-with staggered Toucan Crossing on QE Bridge and South College St
- Remote Toucan Crossings on Riverside Drive & North Esplanade West
- 3 stage signal phasing

Pros:

- 3 Stage signal Phasing - more efficient operation than option 3 allowing slightly higher traffic flow through the junction than Option 3, reducing delays
- Provides controlled crossings on all arms of the junction
- Provides connected cycle routes through the junction via Toucan Crossings, segregated cycle lanes, and shared cycle / footway paths
- Provides controlled traffic movement through the junction, allowing:
  - Queue management
  - Hurry call for emergency services
  - Easier freight movement through the junction
  - Future bus priority measures
  - Improved network resilience

Cons

- Signalised Junction is less efficient for traffic demand than the roundabout options
- Access Implications - Riverside Drive to Torry routing traffic will require to re-route via King George VI Bridge, West Tullos Road and Abbotswell Road
- Potential for traffic to re-route via minor routes in the network hierarchy

ABERDEEN CITY COUNCIL

- TOUCAN CROSSING
- TRAFFIC LIGHTS
- 2 WAY SHARED CYCLE/ FOOTWAY
- 2 WAY CYCLEWAY
- FOOTWAY
- RAIL/FOOT BRIDGE
- WALL
- LANDSCAPING/VERGE
- PARKING/LOADING