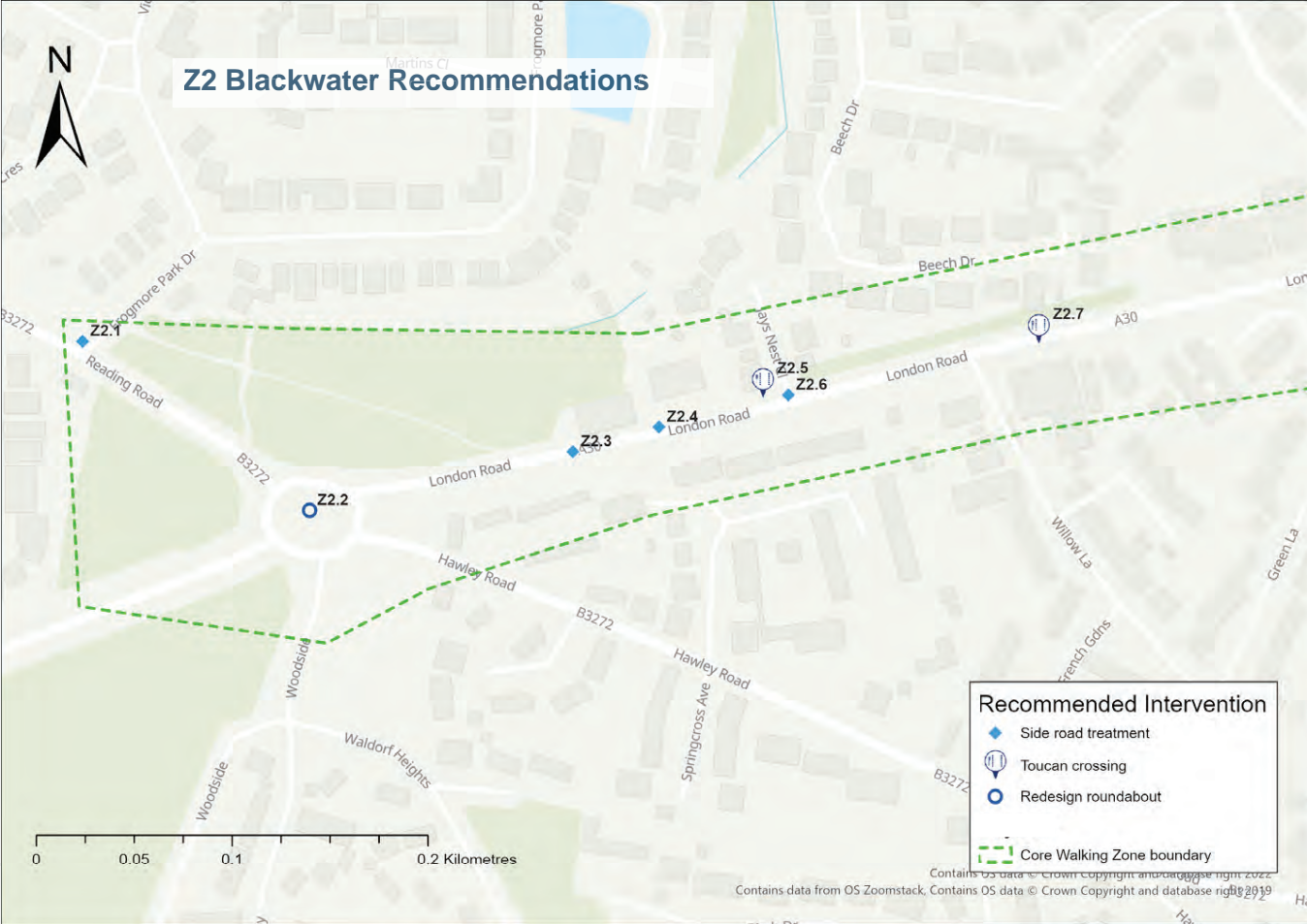
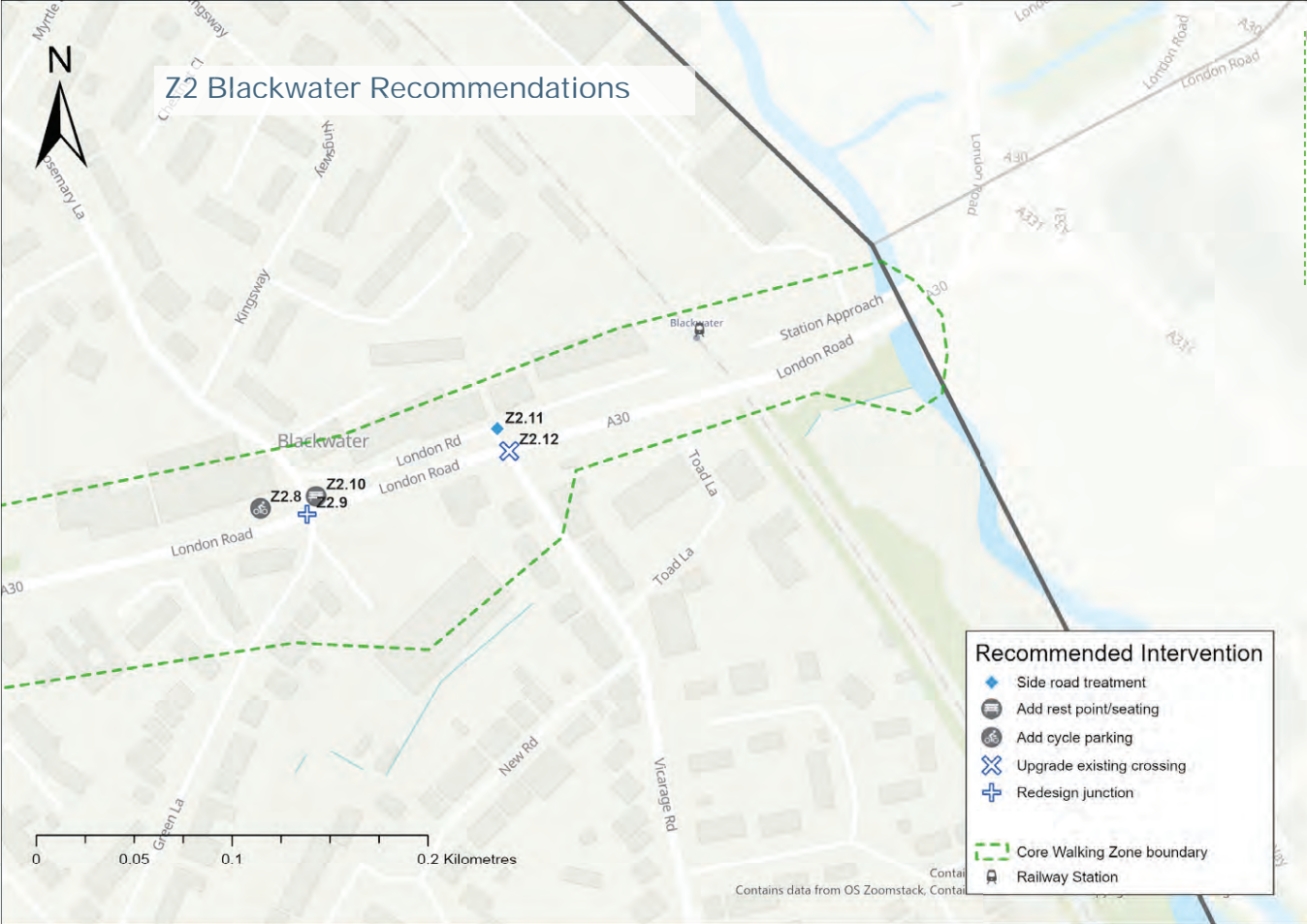


## Z2 Blackwater Recommendations



| Intervention Number | Recommendation  |
|---------------------|---|
| Z2.1                | Tighten kerb radii over Frogmore Park Drive. Investigate feasibility of adding continuous footway and/or raised table.  |
| Z2.2                | Major re-design of roundabout is required to improve experience for active travel. This should include separate controlled crossings on all arms of the roundabout for cyclists and pedestrians.                          |
| Z2.3                | Investigate feasibility of adding different surfacing or pavement to indicate pedestrian priority over station forecourt entrance.  |
| Z2.4                | Investigate adding different surfacing or pavement to indicate pedestrian priority across Tesco entrances.  |
| Z2.5                | Due to high traffic volumes, consider upgrading existing uncontrolled crossing to signalised crossing.  |
| Z2.6                | Tighten kerb radii. Consider adding raised table/continuous footway across Jays Net Close   |
| Z2.7                | Subject to width availability, consider upgrading existing uncontrolled crossing to signalised crossing. Additionally, consider area wide maintenance of the existing verge as parts of the footway is covered by foliage |



| Intervention Number | Recommendation   |
|---------------------|--|
| Z2.8                | Add cycle parking near supermarket.  |
| Z2.9                | At the A30/London Road and Rosemary Lane junction, install pedestrian crossings with timers at all arms of the junction. Consider removing guardrails to improve attractiveness. |
| Z2.10               | Consider re-allocating parking on Kings Parage to create a pedestrian plaza. This location would benefit from additional greenery.   |
| Z2.11               | Significantly tighten kerb radii over White Hart Parade to reduce pedestrian crossing distance if possible.  |
| Z2.12               | At the A30/London Road and Vicarage Road junction, install pedestrian crossings with timers at all arms of the junction.   |

# Z3. Fleet core walking zone

Fleet is the main urban area and the High Street forms the main retail town centre for the Hart district. The Fleet core walking zone (CWZ) is defined as the built-up core of the town centre including Fleet Road, High Street, Crookham Road and Lea Wood Road.

This zone includes the shopping centre, council offices with the major shopping parades located on both sides of Fleet Road extending south to Crookham Road and Leawood Road where it meets the school zone.

Reviewing interventions to enable a reduction in vehicle dominance along the high street will enhance the experience offered to visitors and residents of Fleet.

The Fleet CWZ links to the cycle routes 150, 210 and 220.



Figure 1.4 Pedestrians crossing the B3010 at Fleet Road



Figure 1.5 Fleet Road and Reading Road junction





| Intervention Number | Recommendation  |
|---------------------|---|
| Z3.1                | Re-design junction on Fleet Road to enhance pedestrian and cyclist accessibility and permeability. Excess space provides an opportunity to improve comfort and attractiveness in the area by installing benches and other resting points, and enhancing greenery. |
| Z3.2                | Improve the Fleet Road and Bramshott Place junction, near the Premier Inn, to include signalised crossing facilities with pedestrian crossing buttons and countdown timers  |
| Z3.3                | Tighten kerb radii where Darset Avenue meets Fleet Road.  |
| Z3.4                | Tighten kerb radii where Bramshot Drive meets Fleet Road.   |
| Z3.5                | Tighten kerb radii, at the junction where Knoll Road meets Fleet Road.  |
| Z3.6                | Install pedestrian signals with countdown timers at all arms of the junction of Fleet Road/B3010.   |
| Z3.7                | Add benches to improve comfort at junction.   |
| Z3.8                | Install cycle parking.  |
| Z3.9                | Consider adding zebra crossing over Church Road, near the junction with Fleet Road to improve access from this important walking route to and from Fleet town centre  |
| Z3.10               | Add a bench outside shops at the Fleet Road - Crookham Road junction. Also, add signs to improve wayfinding at junction.  |
| Z3.11               | In conjunction with cycling improvements, re-design junction to include pedestrian signals, countdown timers and reallocate carriageway space to include wider footways and an improved public realm.   |
| Z3.12               | Tighten kerb radii at Glen Road.  |
| Z3.13               | Considering nearby school, tighten kerb radii to reduce vehicle turning speed. Consider feasibility of adding a raised table over Lea Wood Road.  |



# Z4. Church Crookham core walking zone

Church Crookham, in association with Fleet and Elvetham Heath, forms the main urban area in Hart district. The Church Crookham core walking zone (CWZ) focuses on Reading Road South and its connection to Court Moor Secondary School.

This zone includes residential areas and green spaces located along Reading Road South and Award Road.

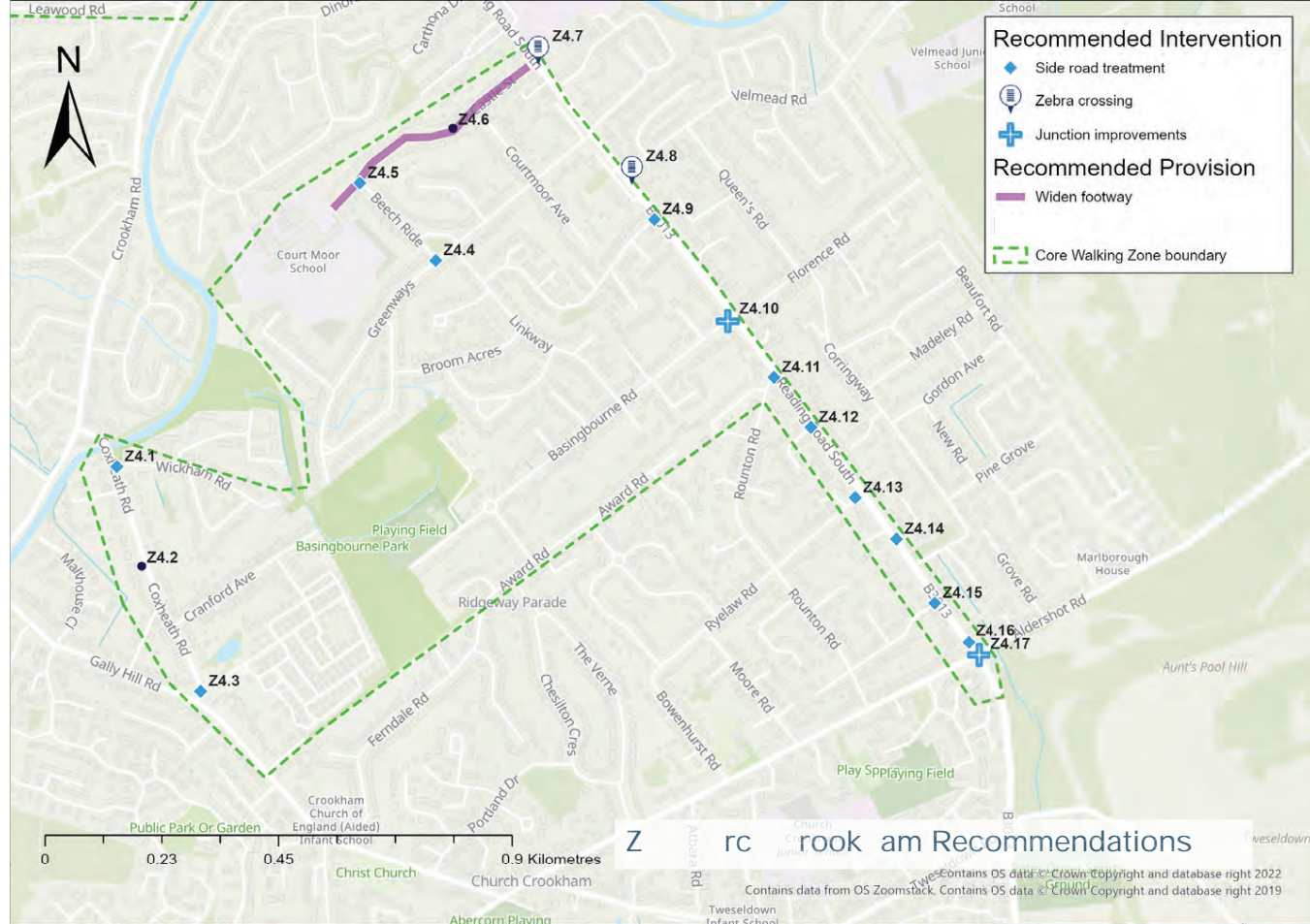
The zone provides a key link for access to Church Crookham centre and includes popular walking routes to Court Moor School from Coxheath Road and Greenways.

Church Crookham CWZ links to the cycle routes 150 and 160.



Figure 1.6 Reading Road South at Velmead Road

| Intervention Number | Recommendation   |
|---------------------|--|
| Z4.1                | Tighten kerb radii over Wickham Road. Consider installing raised table or continuous footway if possible.  |
| Z4.2                | Missing footway on western side of Coxheath Road from Cope Lane to Basingstoke Canal Bridge. There appears to be space within the highway boundary to install a 2m footway. Would improve accessibility of existing bus stops. |
| Z4.3                | Consider reducing turning radii at Coxheath Road at Gally Hill Road to shorten pedestrian crossing distance.   |
| Z4.4                | Tighten kerb radii if possible on Beech Ride at Spring Woods. Add dropped kerbs at a minimum. Investigate feasibility of installing continuous footway or raised table.  |
| Z4.5                | Tighten kerb radii if possible on Beech Ride. Add dropped kerbs at a minimum. Investigate feasibility of installing continuous footway or raised table.  |
| Z4.6                | Ban pavement parking on Spring Woods/Castle Street. Pavement parking and narrow carriageway due to cars parked on both sides severely limits visibility and safety for non-motorised users.                                    |
| Z4.7                | Add zebra crossing over B3013 near Castle Street, for those crossing over to and from Court Moor School. Additionally, consider reducing the junction radii at the Castle Street junction                                      |
| Z4.8                | Install a zebra crossing over B3013 near Velmead Road. This may be helpful for those travelling to Fleet Infant School and Velmead Junior School.  |
| Z4.9                | Tighten turning radii on Longmead Road to reduce pedestrian crossing distance.   |
| Z4.10               | Investigate feasibility of installing a raised table across the staggered junction of Basingbourne Road/ Reading Road South and Florence Road  |
| Z4.11               | Tighten turning radii at Rounton Road to reduce pedestrian crossing distance.  |
| Z4.12               | Tighten turning radii to reduce pedestrian crossing distance at Vivian Close.  |



| Intervention Number | Recommendation   |
|---------------------|--|
| Z4.13               | Tighten turning radii on Ryelaw Road.  |
| Z4.14               | Tighten turning radii on Sian Close.   |
| Z4.15               | Tighten turning radii on Compton Road.                                       |
| Z4.16               | Introduce right turn ban near petrol station                                 |
| Z4.17               | Investigate feasibility of installing controlled crossings at junction arms. |



# Z5. Hartley Wintney core walking zone

Hartley Wintney is a secondary local service centre and a local retail centre. The Hartley Wintney core walking zone (CWZ) is defined by the area encompassing High Street/A30 which is bordered to the south by the Hartley Wintney Commons nature reserve to the north by the Hartley Wintney Golf Club junction where London Road and High Street merge.

This CWZ is a concentrated retail area offering eating, shopping and services located on both sides of High Street. The majority of the High Street already includes wide footways, seating and greenery, as well as bicycle parking.

Hartley CWZ links to the cycle routes 110 and 120.

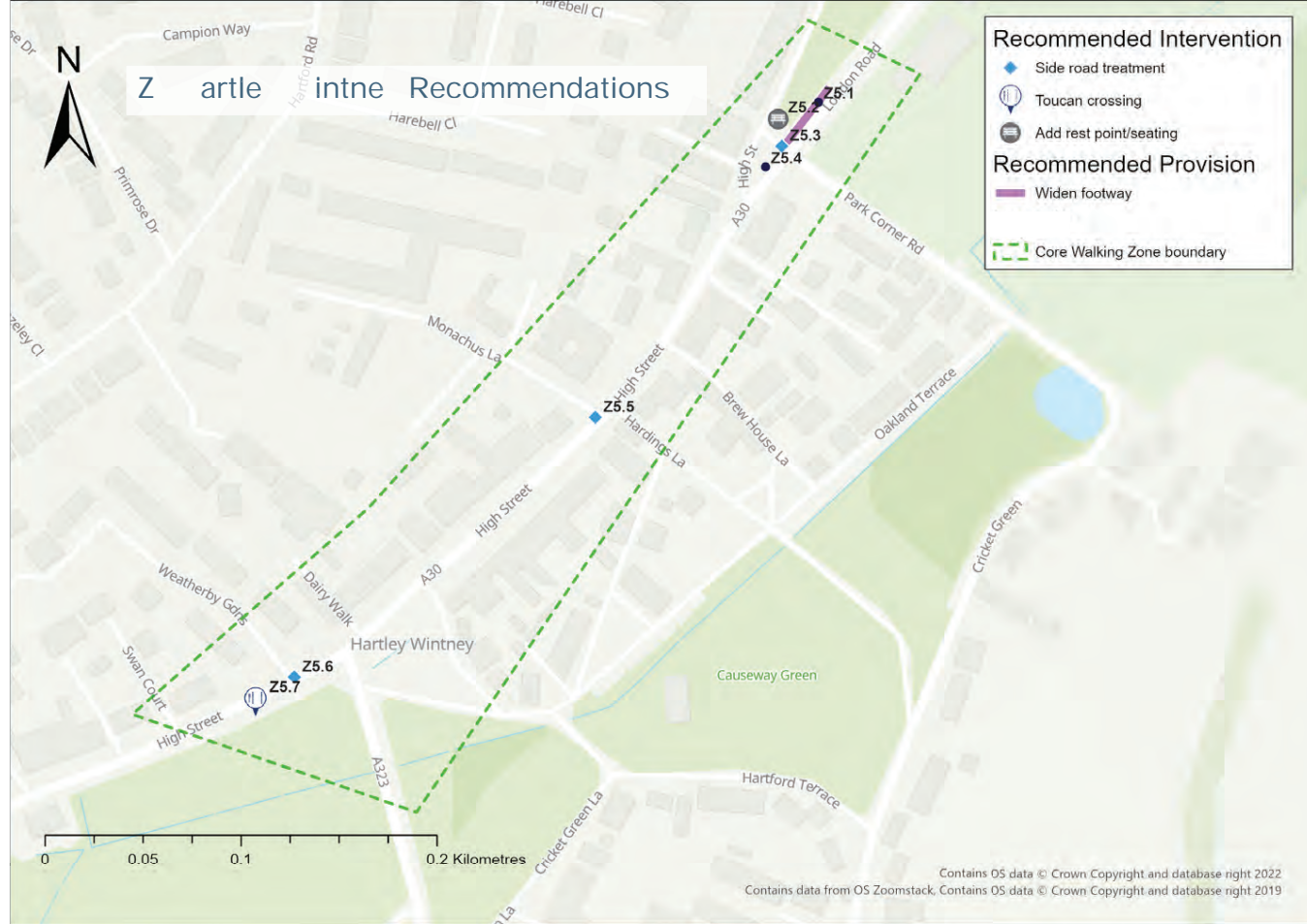


Figure 1.7 Hartley Wintney High Street



Figure 1.8 High Street, Fleet Road roundabout

| Intervention Number | Recommendation  |
|---------------------|---|
| Z5.1                | Widen existing footway on London Road to 2m minimum.  |
| Z5.2                | Add benches.  |
| Z5.3                | Evaluate feasibility of removing one of the access roads onto Hunts Common to reduce vehicle dominance. Only one 'slip road' is needed. |
| Z5.4                | Widen existing footway to 2m minimum.   |
| Z5.5                | Consider adding raised table or continuous footway across Monachus Lane.  |
| Z5.6                | Tighten kerb radii and consider installing raised table or continuous footway across Weatherby Gardens                                  |
| Z5.7                | Investigate upgrading existing uncontrolled crossing to signalised pedestrian crossing.   |





# Z6. Hook core walking zone

Hook is a primary local service centre, and is a retail district centre. The proposed core walking zone includes the railway station, and includes important employment sites.

The Hook core walking zone (CWZ) is focussed on access from the primary roads London Road, B3349, and Station Road.

This CWZ is bordered by Primary and Secondary Cycle Routes, therefore some recommendations for pedestrian improvements are also included in the cycle route recommendations.

Reviewing interventions to enable a reduction in traffic dominance along the primary roads will enhance the experience offered to visitors and residents of Hook.

Hook CWZ links to the cycle routes 120,130 and 200.



Figure 1.9 Station Road/London Road roundabout, Hook



Figure 1.10 Station Road, Hook

| Intervention Number | Recommendation   |
|---------------------|--|
| Z6.1                | Install parallel crossing on all roundabout arms.  |
| Z6.2                | Reduce turning radii to shorten pedestrian crossing distance over Four Acre Coppice.   |
| Z6.3                | Investigate feasibility of installing an uncontrolled crossing in place of the traffic island over the B3349 south of Ravenscroft. |
| Z6.4                | Reduce turning radii over Bow Field.   |
| Z6.5                | Reduce turning radii over Quince Tree Way, improve tactile paving.   |
| Z6.6                | Consider upgrading existing uncontrolled crossing to zebra crossing over the B3349 south of Quince Tree Way.                       |
| Z6.7                | Reduce turning radii over Wild Herons.   |
| Z6.8                | Review and redesign, if needed, the Griffin Way South roundabout to explore improvements for pedestrians.                          |
| Z6.9                | Tighten turning radii to shorten pedestrian crossing distance over the B3349/Griffin Way.  |
| Z6.10               | Consider installing zebra crossing over the B3349/Griffin Way, if there is sufficient demand.                                      |
| Z6.11               | Upgrade to a zebra crossing  |
| Z6.12               | Install benches for resting points at Griffin Way South and Station Road roundabout  |
| Z6.13               | Install wayfinding signs at Griffin Way South and Station Road roundabout  |
| Z6.14               | Tighten kerb radii on Rawlings Road  |
| Z6.15               | Tighten kerb radii on Rectory Road   |
| Z6.16               | Add wayfinding signs   |





# Z7. Odiham core walking zone

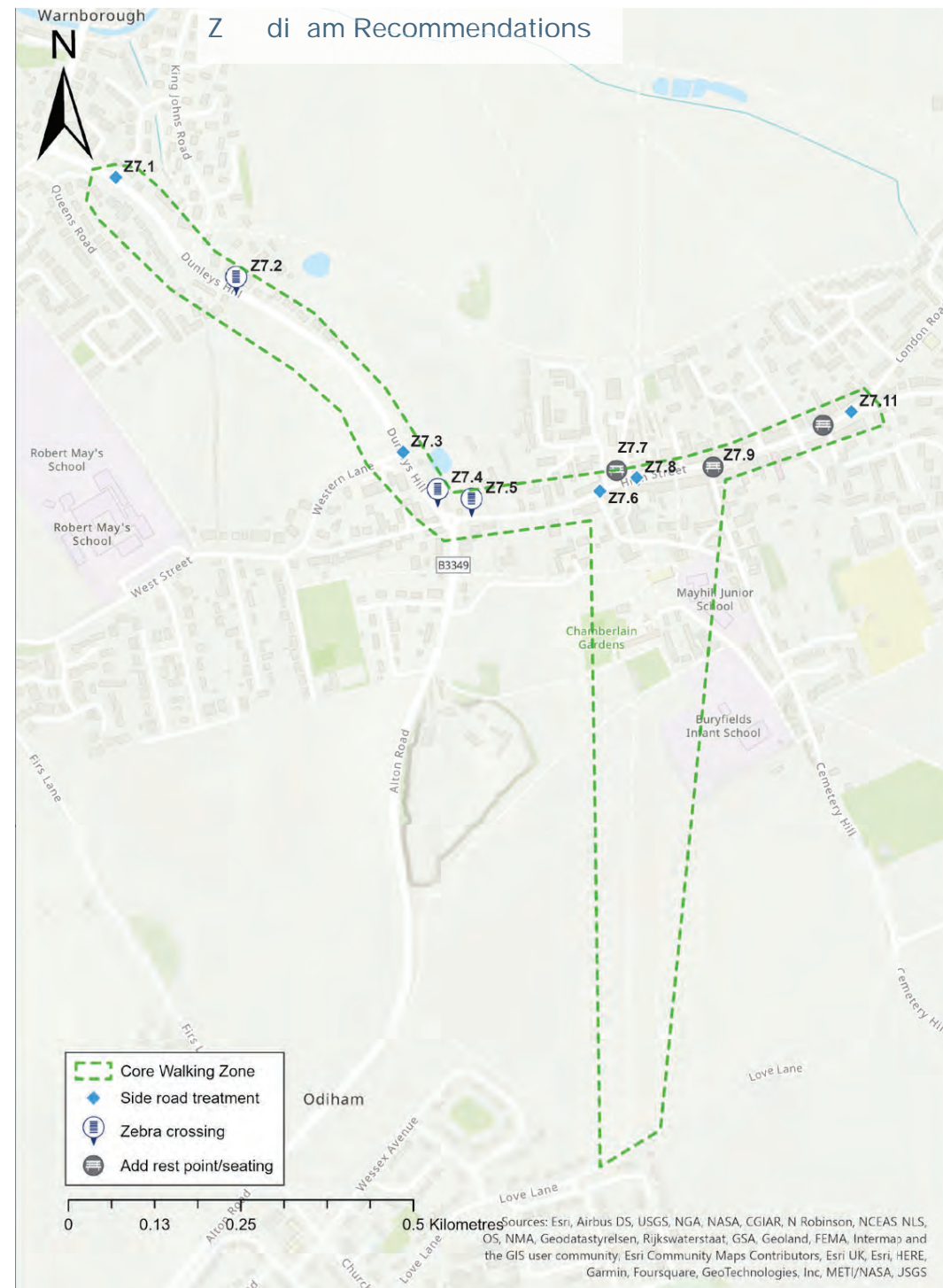
Odiham is a secondary local service centre and a local retail centre. The Odiham Core Walking Zone (CWZ) focusses on Dunley's Hill/B3349 and High Street and their junction. This CWZ overlaps with primary cycle route 200. Some pedestrian recommendations are included within in the cycle route recommendations.

The CWZ contains a local supermarket, as well as a parade of shops and businesses near the King Street junction on both sides of High Street. The zone provides a key link for access to Odiham centre.



Figure 1.11 Odiham High Street

| Intervention Number | Recommendation  |
|---------------------|---|
| Z7.1                | Tighten kerb radii at Whitewater Road.  |
| Z7.2                | Upgrade to controlled pedestrian crossing if volumes warrant it.  |
| Z7.3                | Significantly tighten kerb radii at Western Lane - consider adding raised table/continuous footway.     |
| Z7.4                | Consider upgrading existing uncontrolled crossing to zebra or signalised pedestrian crossing.           |
| Z7.5                | Consider upgrading existing uncontrolled crossing to zebra crossing.                                    |
| Z7.6                | Tighten kerb radii at Church Street. Opportunity to use land gain to align crossing points at junction. |
| Z7.7                | Add a bench.  |
| Z7.8                | Tighten kerb radii at Deer Park View and add continuous footway/raised table if possible.               |
| Z7.9                | Consider adding seating and greenery to King Street/High Street junction, paying mind to visibility.    |
| Z7.10               | Add a bench.  |
| Z7.11               | Investigate feasibility of tightening kerb radii, adding raised table/continuous footway.               |





# Cycling Audits - Proposed Cycle Network

# Cycling Interventions Toolkit



**Fully kerbed segregated cycle track**

Cycle facility protected from motor traffic by a full-height kerb, with some buffer space between the cycle track and carriageway.



**Stepped segregated cycle track**

Cycle track is set below footway level, typically protected from the carriageway by a lower height kerb and usually directly next to it.



**Mandatory cycle lane w/ light segregation**

Cycle lane with the use of intermittent physical features placed along the inside edge of a mandatory cycle lane to provide additional protection from motor traffic.



**Modal filter**

A bollard or planter in the carriageway which people can travel past by walking or cycling. Helps create a low traffic environment by restricting access to motorised through-traffic.



**Mandatory cycle lane**

Area of the carriageway reserved for the use of cycles, marked with a solid white line.



**Contraflow cycle lane**

Mandatory cycle lane that allows cyclists to travel opposite the flow of vehicle traffic, allowing for greater permeability of the cycle network.



**Off-carriageway cycle track**

Cycle facility separated from motor traffic typically through green space.



**20mph zones**

Lower speed zones create safer environments for all, may need to be combined with infrastructure and enforcement changes to ensure compliance.



**Pedestrian/cyclist priority street**

Street design that prioritises pedestrian and cyclist travel. Characterised by lower traffic speeds, restricted motor vehicle access, and coloured paving materials.



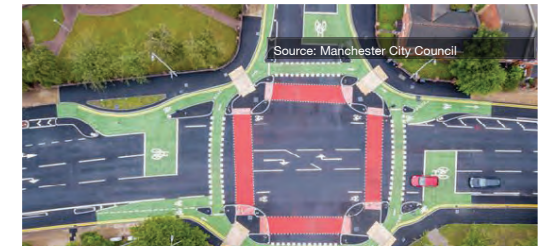
**Dutch style street/quietway**

Street without a centre line encourages slower vehicle speeds and helps create a shared street environment.



**Dutch style roundabout/mini-roundabout**

A roundabout that provides a segregated facility for cyclists and pedestrians through all arms of the roundabout. In a mini-roundabout the central island is replaced by road markings.



**CYCLOPS junction**

CYCLOPS stands for 'Cycle Optimised Protected Signals'. The unique design of the junction completely separates pedestrians and cyclists from motor traffic, reducing the possibility of collisions or conflict. Pedestrians are also able to get where they want to be in fewer stages with more space to wait than on other junction designs.

## Controlled crossings



**Zebra crossing**

Pedestrian priority crossing requiring motorists to give way to pedestrians.



**Parallel crossing**

Similar to a zebra crossing, but with a separate parallel cycle crossing alongside the zebra crossing.



**Signalised crossing**

Signal-controlled crossings comprising either a Pelican/Puffin for pedestrians or a Toucan which can be shared between pedestrians and cyclists.



# Proposed Hart district cycle network

12 primary cycle routes were audited as part of the LCWIP. Horizontal routes are numbered beginning from 100 going from north to south. Vertical routes are numbered beginning from 200 from east to west.

Route number does not indicate priority.

Recommended interventions for each route, in accordance with LTN 1/20, are outlined in this section. Each route incorporates a variety of infrastructure improvements described in the 'Cycling Interventions Toolkit' on the previous page.

A significant transformation of existing carriageway space and priorities would be required in order bring about a step-change in cycling within Hart district.



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# Route 100: Yateley to Blackwater

## Route description

Route 100 starts at the junction of the B3272 and Moulsham Copse Lane in Yateley. It follows the B3272/Reading Road through Yateley and into Blackwater, where it follows the A30/London Road until reaching Blackwater railway station at the Hart district boundary with Surrey Heath.

The route also includes two 'spur' alignments. A cross-boundary connection to Sandhurst railway station in Bracknell Forest is recommended along Darby Green Lane/Swan Lane. Due to high traffic volumes on the B3272, a cycle route on Rosemary Lane is recommended as a potential alternative link to Blackwater railway station.

At Blackwater railway station there is a lack of accessible crossing provision for cyclists and pedestrians over the North Downs Line. In the long-term, it is recommended that a new shared pedestrian/cyclist overbridge be constructed to provide a safe link onwards into Camberley and Sandhurst.

This route will support safer and more direct active travel links between Yateley, Blackwater, and key cross boundary destinations such as Sandhurst and Camberley.

## Route length

Approximately 9km (includes Rosemary Lane spur).

## Existing conditions

The B3272/Reading Road has no dedicated cycle provision. The route includes several large roundabouts at Cricket Hill Lane, Darby Green Road and at the A30 which are major barriers to active travel, as they lack dedicated cycle provision and signalised pedestrian crossings. The A30/London Road carries high traffic volumes, and currently only has an intermittent advisory cycle lane.

Rosemary Lane has some advisory cycle lane markings and signage, and is more frequently used by local cyclists. This corridor is also a bus route.

## Barriers to walking and cycling

- High traffic volumes on the B3272 and the A30.
- The A30 bridge over the North Downs Line is a pinchpoint, with no cycle facilities and narrow footways. It is a major barrier to cyclists and pedestrians crossing into Surrey Heath.
- The B3272/A30 roundabout

## Potential options

- A segregated cycle track is recommended along the entirety of the route on the B3272 and the A30. In some locations, excess carriageway space can be re-purposed to accommodate a cycle track.
- One-way segregated cycle lanes are recommended on Rosemary Lane
- Darby Green Lane/Swan Lane could be acceptable for cycling mixed with motor vehicle traffic, if traffic volumes are less than 2,000 per day- this segment will require further study.



Figure 1.12 The B3272 east of Cricket Hill Lane



Figure 1.13 Rosemary Lane

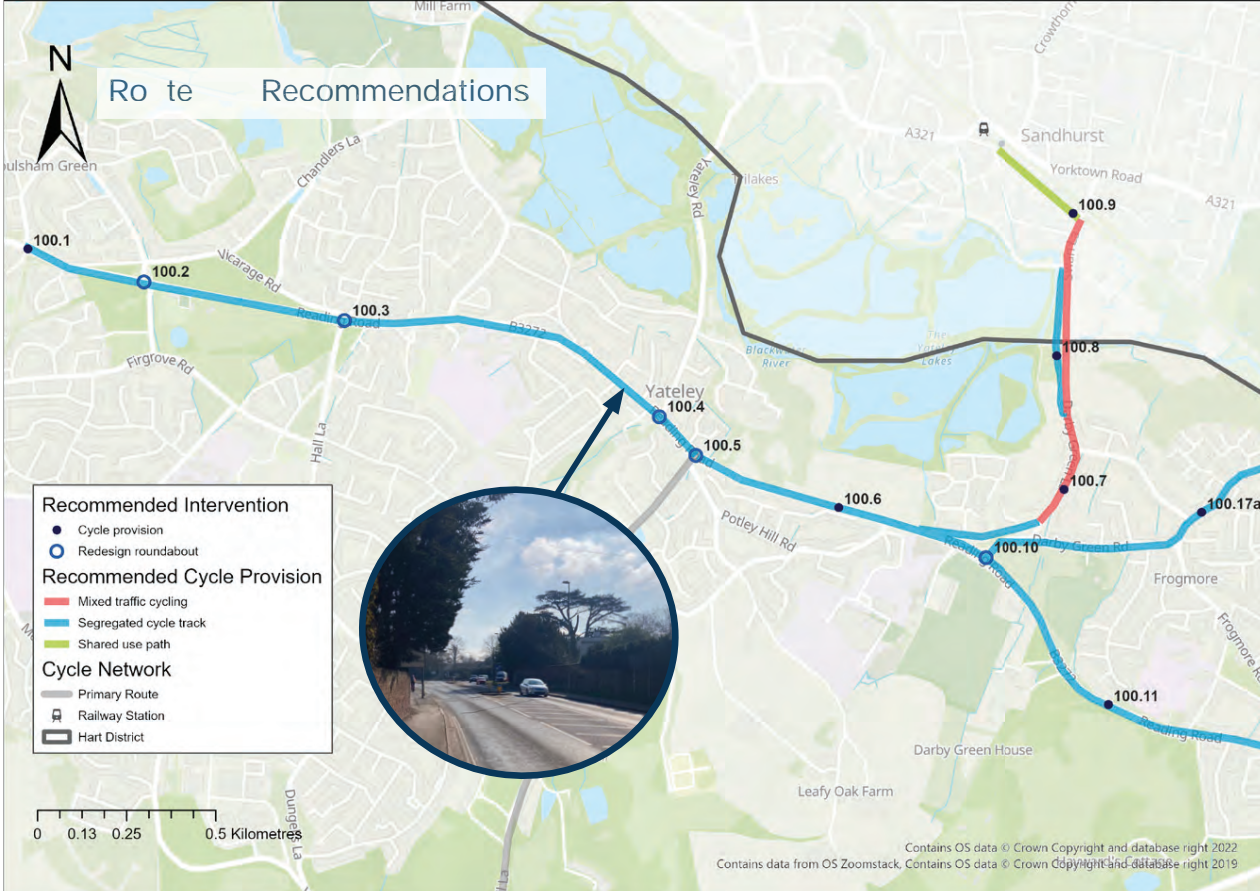


Figure 1.14 The A30 in Blackwater





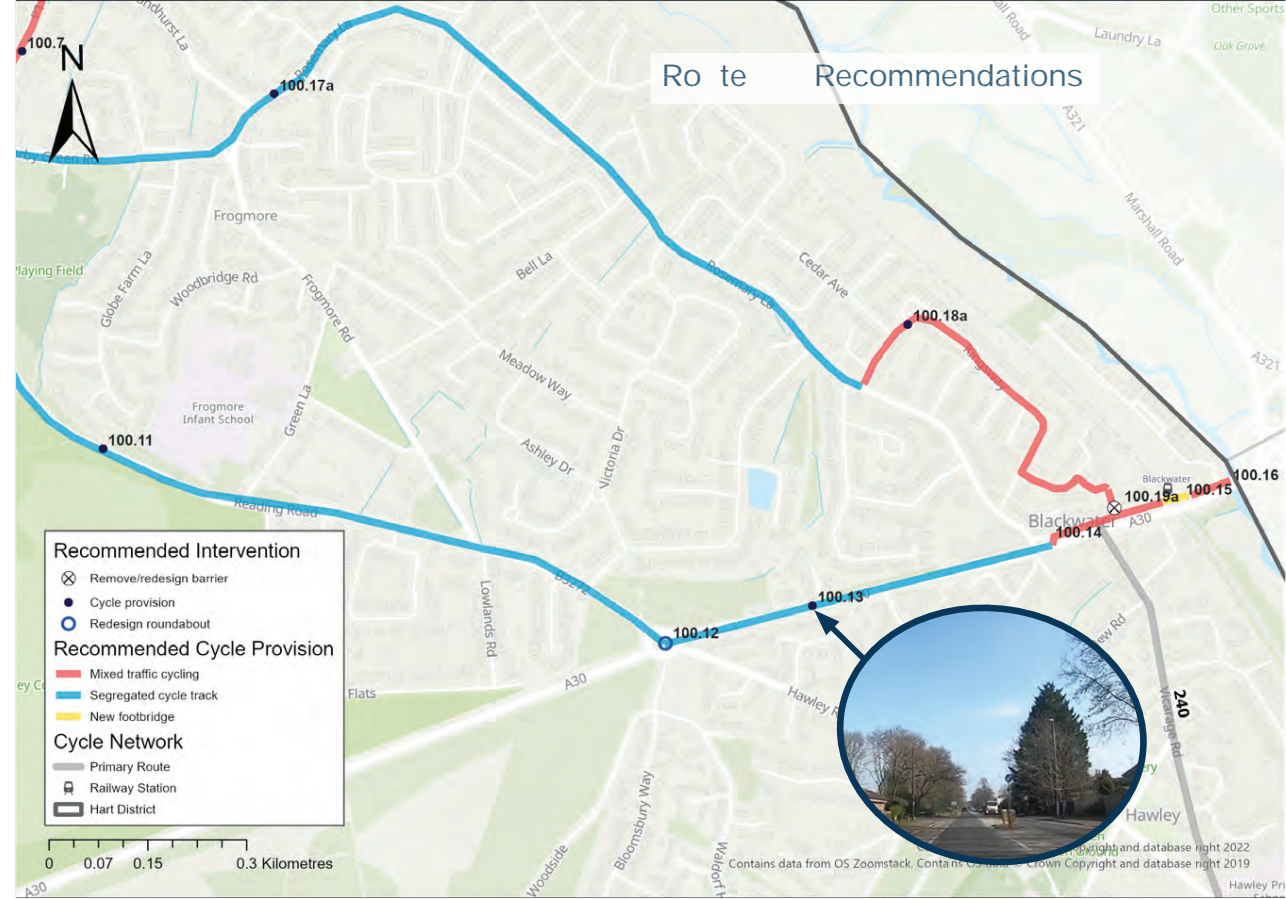




| Intervention Number | Recommendation  |
|---------------------|---|
| 100.1               | Investigate the feasibility of installing segregated cycle tracks on the B3272 Reading Road between The Link/Moulsham Copse Lane junction and Cricket Hill Lane roundabout. Due to space limitations, some sections may need to be a shared use path, with continuous crossings across side roads to provide continuity and priority along the route. |
| 100.2               | A review of the B3272/ The Link/ Moulsham Copse Lane junction should be undertaken to explore improvements for pedestrians and cycle priority and continuity at the junction.   |
| 100.3               | A review of the B3272/Vicarage Road/Village Way/Hall Lane roundabout should be undertaken to explore improvements for pedestrians and cycle priority and continuity at the roundabout.  |
| 100.4               | A review of the B3272/ Sandhurst Road junction should be undertaken to explore improvements for pedestrians and cycle priority and continuity at the junction. Investigate the potential for providing a Cyclops style junction to improve east/west cycle route continuity and connectivity.   |
| 100.5               | A review of the B3272/ Cricket Hill Lane roundabout should be undertaken to explore improvements for pedestrians and cycle priority and continuity at the junction. Investigate the potential for providing a Dutch style roundabout to improve east/west cycle route continuity and connectivity.  |
| 100.6               | Investigate the feasibility of installing segregated cycle tracks on the B3272 Reading Road between Cricket Hill Lane roundabout and Darby Green Lane roundabout.   |
| 100.7               | Mixed traffic cycling provision on Darby Green Lane/Swan Lane from Darby Green Road to the North Downs Line. Speed limit must be reduced to 20mph, traffic calming and modal filters will be required to reduce motor traffic volumes.  |
| 100.8               | Option: Investigate feasibility of installing segregated two-way cycle track using green space on western side of Swan Lane. Note: Likely to have ecology and landownership constraints.  |
| 100.9               | Due to space constraints consider upgrading existing footpath to Sandhurst Station to permit cycling. Ensure that lighting is provided on the path.   |
| 100.10              | A review of the B3272/ Darby Green Road roundabout should be undertaken to explore improvements for pedestrians and cycle priority and continuity at the junction. Investigate the potential for providing a Dutch style roundabout to improve east/west cycle route continuity and connectivity.   |
| 100.11              | Investigate feasibility of installing segregated cycle tracks on the B323/Reading Road from Darby Green Road to A30/ London Road, subject to land availability.   |



| Intervention Number | Recommendation   |
|---------------------|--|
| 100.12              | A review of the B3272/ A30/ London Rd / Hawley Rd roundabout should be undertaken to explore improvements for pedestrians and cycle priority and continuity at the junction. |
| 100.13              | Investigate feasibility of installing segregated cycle tracks on the A30/London Road between the B3272 and Rosemary Lane.  |
| 100.14              | Create a cyclist and pedestrian priority street on Kings Parade/White Hart Parade from Rosemary Lane to Blackwater Station.  |
| 100.15              | Long term: New shared use bridge over railway line with accessible ramps is required.  |
| 100.16              | Mixed traffic cycling provision would be suitable on Station Approach Road, if volumes are low. Also consider adding traffic calming measures as required.                   |
| 100.17a             | Investigate feasibility of installing two-way segregated cycle track on Darby Green Road/Rosemary Lane from the B3272 to Kingsway.   |
| 100.18a             | Use low traffic Kingsway to connect to rear of Blackwater parade of shops.   |
| 100.19a             | Remove/redesign barrier to allow for cycle access to White Hart Parade.  |



# Route 110: Hartley Wintney to Elvetham Heath

## Route description

Route 110 starts in Hartley Wintney on its northern end, specifically at the High Street (A30) and Fleet Road (A323) roundabout. It then travels south along the A323, crosses the M3 and the railway bridge, and ends at the Elvetham Road / Hitches lane roundabout where it meets route 210.

This route is mostly rural, but will allow for more direct and safer travel for those moving between Hartley Wintney and Fleet, allowing for easier access to key areas such as Fleet train station. Although there are existing Public Rights of Way, and Church Lane which may be used as quieter alternatives with less motor traffic, they are indirect routes which would increase cycle travel time.

## Route length

Approximately 4km.

## Existing conditions

There is minimal cycling infrastructure along route 110, with no dedicated cycle provision. There are also poor crossing points throughout the route, with no controlled crossings available at the Fleet Road / High Street roundabout, the Fleet Road / Elvetham Heath Way roundabout, and at the Hitches Lane / Elvetham Road roundabout.

Additionally, there are a number of side roads, such as Baldwin Close, with large turning radii which increase crossing distance and time, and are also lacking continuous footway infrastructure. There is existing verge along the route which could potentially be used to create walking and cycling infrastructure.

## Barriers to walking and cycling

- Speed limit of up to 50mph along Fleet Road
- Lack of dedicated cycle path on Fleet Road (A323)

- High traffic flows on Fleet Road, at over 8,000<sup>1</sup> per day.

## Potential options

Given the existing verge along Fleet Road and the speed limit, there is opportunity to create a shared use path with a minimum width of 3m, along with a 1.5m horizontal separation from the carriageway. However, this is subject to ecological and landownership permission relating to this location.

<sup>1</sup> Department for Transport (2021) Road Traffic Statistics. <https://roadtraffic.dft.gov.uk/manualcountpoints/78178>



Figure 1.15 Hitches Lane / Fleet Road roundabout



Figure 1.16 Fleet Road / Elvetham Heath Way roundabout

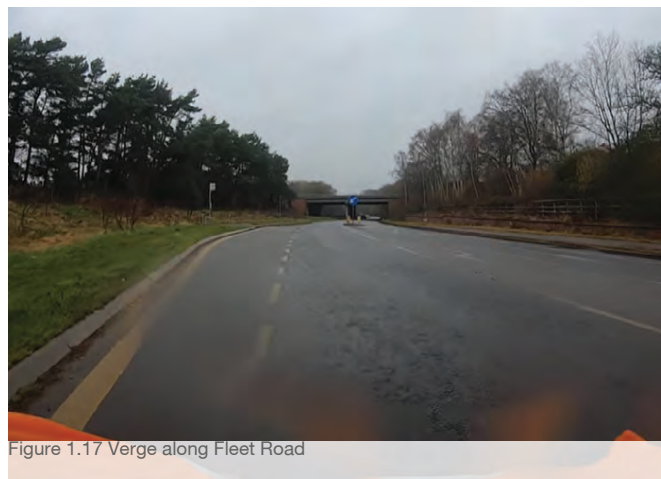
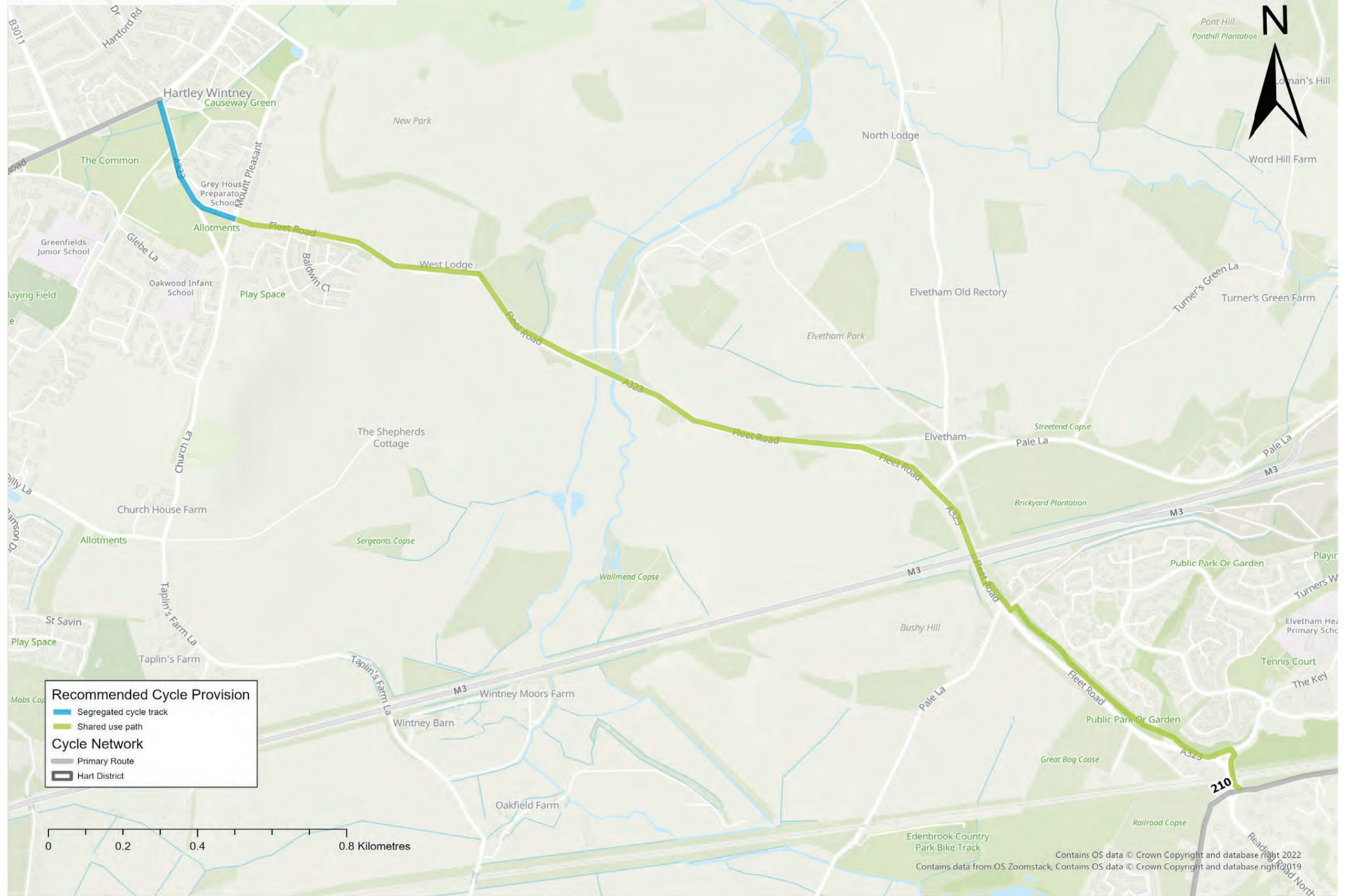


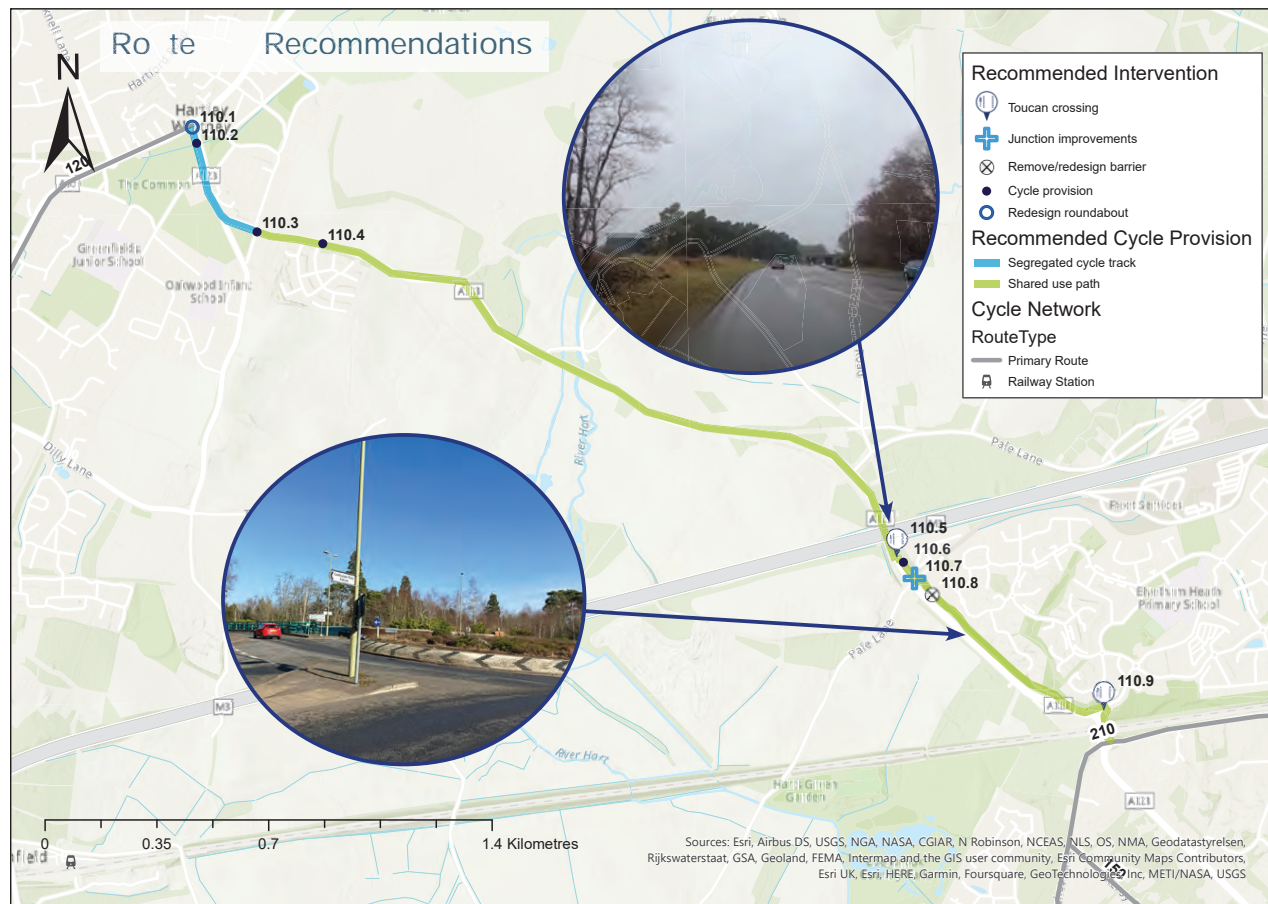
Figure 1.17 Verge along Fleet Road



Route Recommended cycle provision



| Intervention Number | Recommendation  |
|---------------------|---|
| 110.1               | Redesign A30/A323 roundabout. Also, investigate feasibility of installing a toucan crossing on west side of roundabout.   |
| 110.2               | Investigate feasibility of installing a segregated cycle path (minimum 3m, and a minimum 2m footway) from the A30/A323 roundabout to the Mount Pleasant/A323 junction. This may require reallocating common land or private land may be needed.   |
| 110.3               | Investigate feasibility of installing a shared use path with a minimum width of 3m and a minimum of 1.5m horizontal separation from the carriageway (speed limit of 50mph) on the west side of Fleet Road, from the Mount Pleasant/A323 junction to Pale Lane. Note: There may be ecology and land ownership constraints involved with constructing a shared use path in this location. |
| 110.4               | Increase 30 mph zone to include Baldwin Close   |
| 110.5               | Investigate feasibility of installing a Toucan crossing to provide a link between the existing shared path on the east side of Fleet Road and the proposed shared use path on the west side, near Pale Lane.  |
| 110.6               | Shared use path needs to be at 3m in width with lighting provision, from Pale Lane to the Elvetham Road / Hitches Lane roundabout.  |
| 110.7               | Consider redesign junction to allow cyclist to join Pale Lane safely.   |
| 110.8               | Modify barrier on shared use path near Pale Lane to allow for cycle access.   |
| 110.9               | Consider upgrading the existing uncontrolled crossing to a Toucan Crossing, across Elvetham Heath Way at the A323 roundabout.   |





# Route 120: Hook to Hartley Wintney

## Route description

Route 120 starts at Hartley Wintney at its north eastern end, specifically at the High Street (A30) / Fleet Road (A323) junction. It then heads west along the A30, passing Winkworth Business Park and Murrell Green Business Park, and into Hook. The route goes through Hook town centre and ends at the Station Road / Elms Road roundabout where it meets route 130.

Although there are existing side roads and Public Rights of Way that could be used to travel between Hartley Wintney and Hook, Route 120 provides the most direct passage between the two communities, providing a link to key destinations such as Hook train station.

## Route length

Approximately 5.5km.

## Existing conditions

There is minimal cycling infrastructure along the length of the route, with no dedicated cycle path on the road. Although there is a shared-use path in certain areas, for example near Murrell Green Business Park, this may not be safe enough and wide enough when considering the traffic flow and speed limit on London Road. There are also poor crossing points in numerous areas, for example at the London Road / B3011 roundabout, where there are no controlled crossings and narrow crossing refuges.

There are other areas along the route where there is extra carriageway space and verge, which could possibly be used to create new shared paths. Examples of these spaces can be seen at the Dilly Lane / London Road junction.

## Barriers to walking and cycling

- High traffic levels along London Road with records showing daily traffic flows reaching over 11,500<sup>1</sup>
- Poor crossing infrastructure along the route. For example, there are no controlled crossing points at the Fleet Road / High Street roundabout and at the London Road / Griffin Way South (B3349) roundabout
- On road parking near the Fleet Road / High Street junction

## Potential options

- There is an opportunity to create a segregated cycle track across Oak Common between Fleet Road and West Green Road. However, this would require a further feasibility study which would consider land use and ownership.
- There is also opportunity to create a segregated cycle track on the north side of London road, up until near Dilly Lane. However, this would require the re-allocation of space on the carriageway and possibly require private land.
- Considering the speed limit of 50mph on London Road (A30), it is recommended that a feasibility study be done to investigate the possibility of installing a minimum 3m cycleway and a minimum 2m footway, with a 1.5m horizontal separation from the carriageway) between Phoenix Green and Murrell Green Business Park.
- Considering that there is an existing shared use path, it is recommended that it be upgraded to create a minimum 3m cycleway and a minimum 2m footway between Murrell Green Business Park and Rookwood Close.
- Shared use provisions are also recommended up to the Elms Road / London Road roundabout by upgrading the existing path, re-allocating space from Hook Village Garden and Cemetery, and by re-allocating some frontage .

<sup>1</sup> Department for Transport (2021) Road Traffic Statistics. <https://roadtraffic.dft.gov.uk/manualcountpoints/26316>

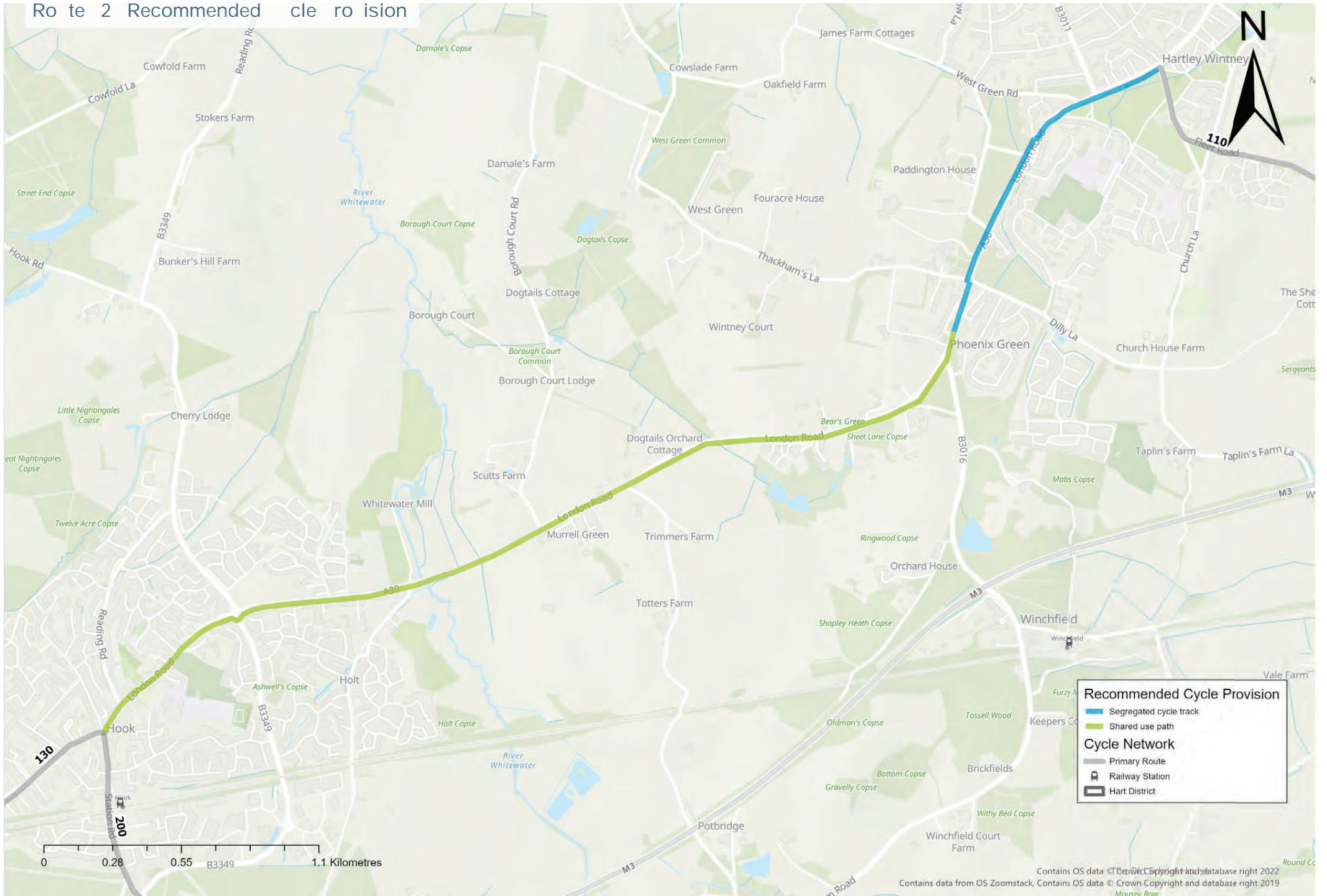


Figure 1.18 London Road / Dilly Lane junction



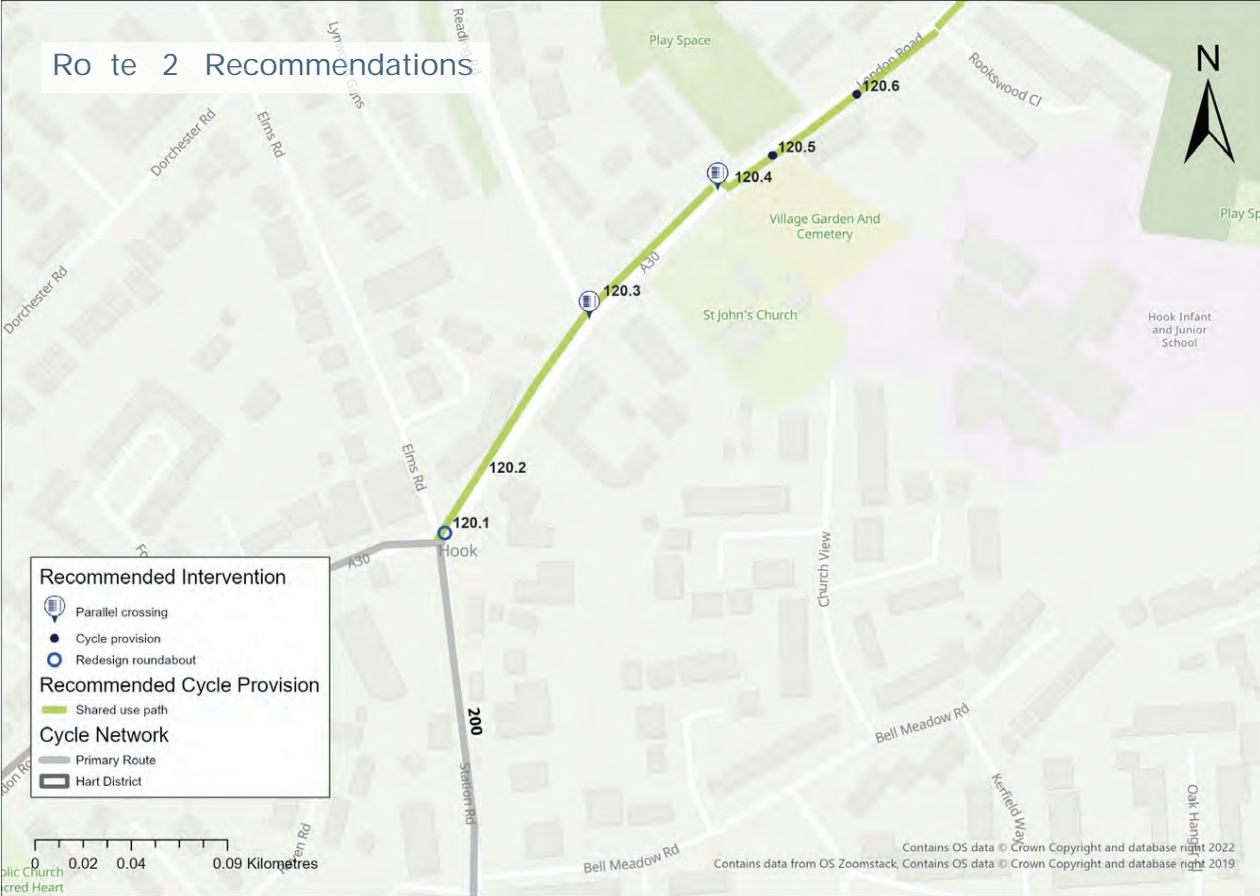
Figure 1.19 Fleet Road / London Road roundabout

# Route 2 Recommended cycle provision





## Route 2 Recommendations



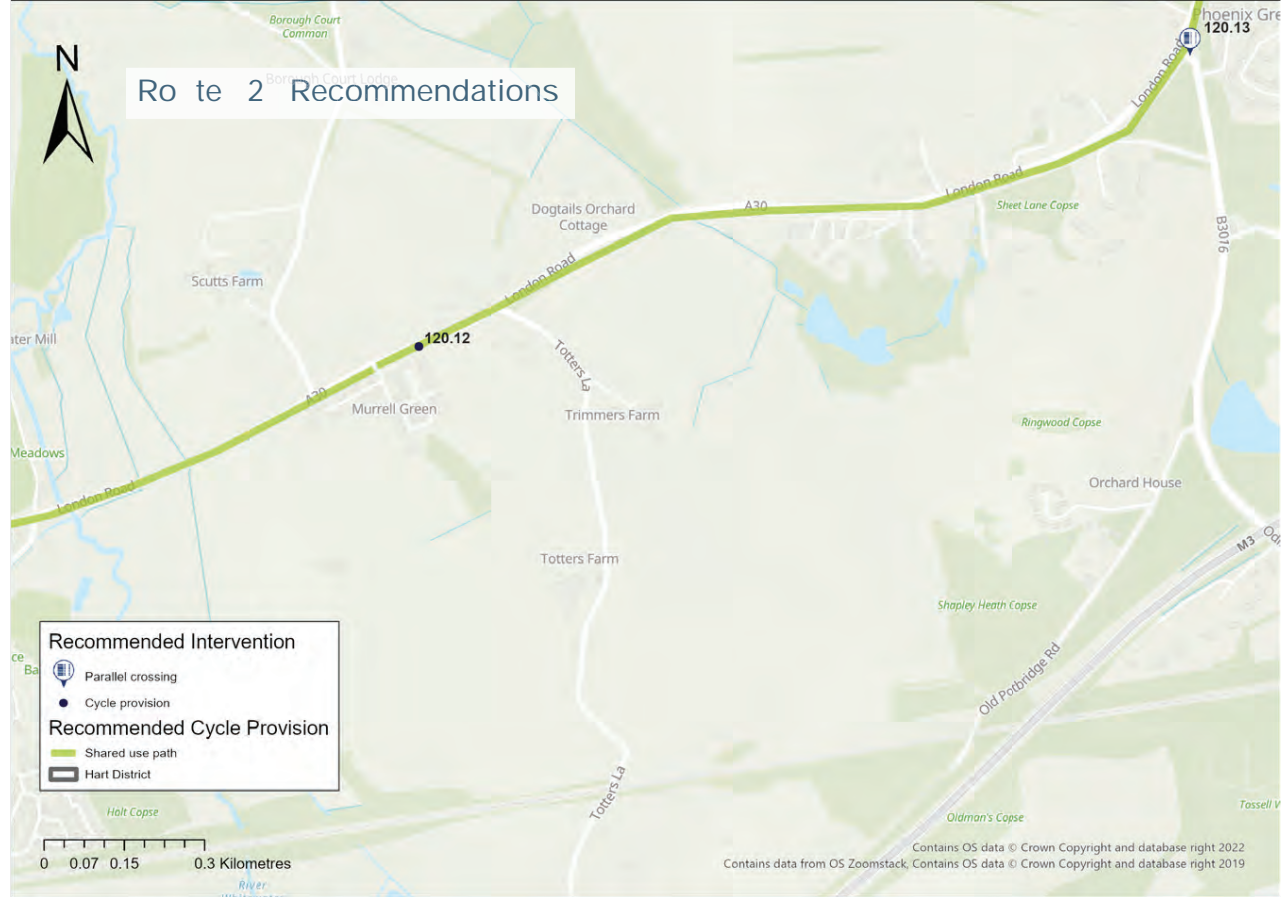
| Intervention Number | Recommendation   |
|---------------------|--|
| 120.1               | Install parallel crossings on Elms Road arm and London Road arm, at A30 roundabout.  |
| 120.2               | Footway on A30/London Road could be upgraded to shared use path with the reallocation of some frontage and the removal of the bus layby. |
| 120.3               | A parallel crossing could be installed across Reading Road.  |
| 120.4               | The existing pedestrian crossing could be upgraded to a parallel crossing over the A30/London Road.                                      |
| 120.5               | Alongside Hook Village Garden and Cemetery, there may be space to allow for a shared use path.   |
| 120.6               | Footway on A30 to be upgraded to shared use, but will remain narrow in places due to physical constraints.                               |

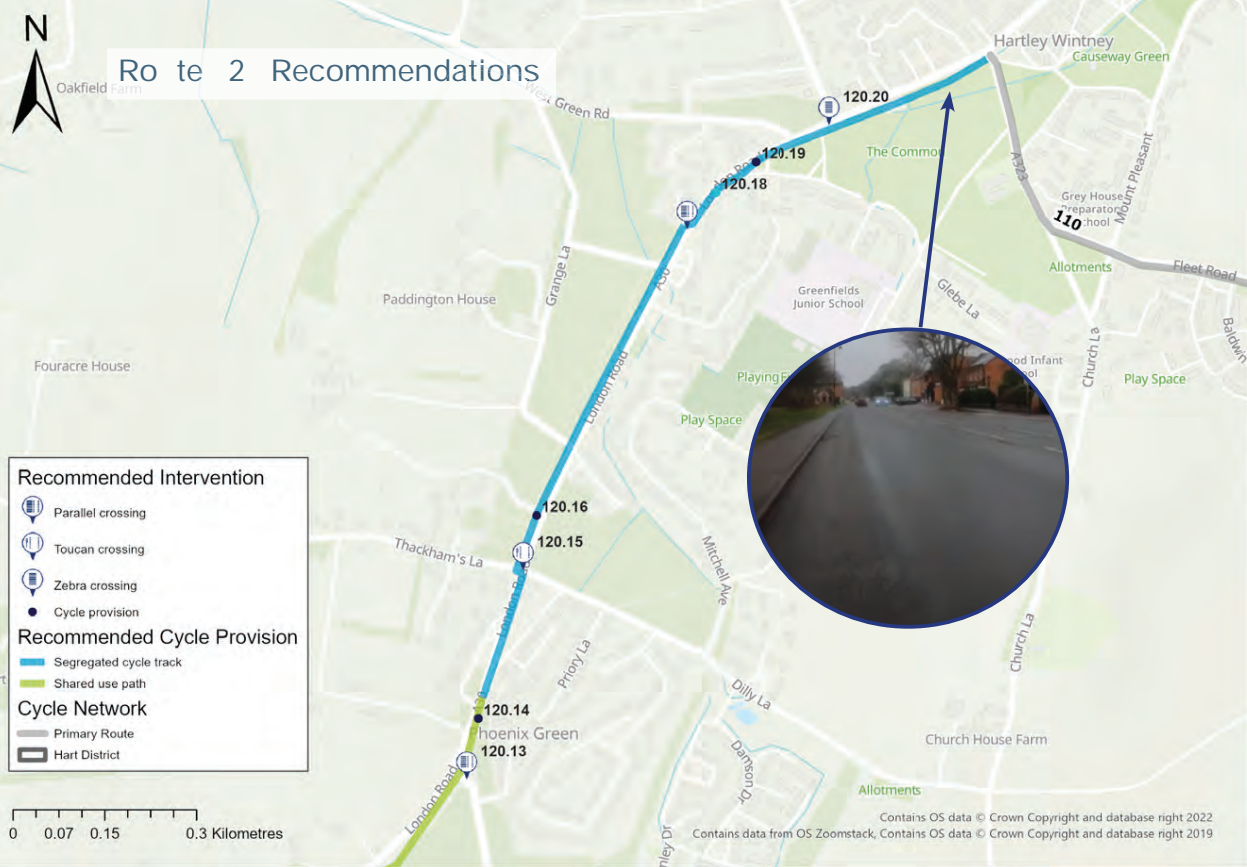
| Intervention Number | Recommendation  |
|---------------------|---|
| 120.7               | Investigate upgrading existing shared use path (minimum 3m cycleway, and a minimum 2m footway) on the south side of London Road between Murrell Green Business Park and Rookwood Close.   |
| 120.8               | Remove barrier on existing path.  |
| 120.9               | A review of the A30/ B3349 roundabout should be undertaken to explore improvements for pedestrian and cycle priority, and continuity at the junction. Investigate the potential for providing a Dutch style roundabout to improve east/west cycle route continuity and connectivity |
| 120.10              | Consider upgrading existing uncontrolled crossing at Papermill Avenue to a parallel crossing.   |
| 120.11              | Refuge on existing uncontrolled crossing should be made larger to accommodate shared use.   |





| Intervention Number | Recommendation   |
|---------------------|--|
| 120.12              | Investigate feasibility of installing a shared use path (minimum 3m cycleway, and a minimum 2m footway) with separation from the carriageway on the south side of London Road between Phoenix Green and Murrell Green Business Park. There appears to be ample carriageway space that can be reallocated for this purpose. |
| 120.13              | Parallel crossing to be considered at Odiham Road to support the shared use path. However, speed limit may dictate signalised crossing, or speed would need to be reviewed to support parallel crossing.   |





| Intervention Number | Recommendation  |
|---------------------|---|
| 120.14              | Consider a two-way segregated cycle track on the south side of London Road, from Croft Lane to Dilly Lane junction. Some space could be reallocated from the carriageway, but it may also require private land.               |
| 120.15              | Consider installing toucan crossings at southern and western arms of Thackhams Lane/London Road junction.   |
| 120.16              | Consider a two-way segregated cycle track on the north side of London Road from Dilly Lane/Thackhams Lane junction to Peel Court. Some space could be reallocated from the carriageway, but it may also require private land. |
| 120.17              | Parallel crossing could be installed south of Peel Court. However, speeds may dictate signalised crossing, or speed would need to be reviewed to support parallel crossing.   |
| 120.18              | Consider a segregated cycle facility on the south side of London Road between Peel Court and Oak Common. Some space could be reallocated from the carriageway, but it may also require private land.                          |
| 120.19              | Investigate the feasibility of installing a segregated cycle facility between Fleet Road and West Green Road across the common. This would require reallocating common land or private land.                                  |
| 120.20              | Consider upgrading uncontrolled crossing to Zebra crossing at the Bracknell Lane/London Road junction.  |



# Route 130: A30 to Hook

## Route description

Route 130 connects Basingstoke and Deane Borough's planned LCWIP route to Hook. The route starts at the boundary of Basingstoke and Deane Borough and Hart District. It continues on the A30 until reaching Hook.

## Route length

Approximately 1.5km.

## Existing conditions

The A30 is a wide, high speed road with no dedicated cycle provision, and a footway on one side of the carriageway. As it approaches Hook, the carriageway narrows substantially, although in some locations there remains a large painted central reserve. This corridor is also a bus route.

## Barriers to walking and cycling

- A30/London is a high speed corridor with no dedicated cycle provision and limited footway provision.

## Potential options

- Conduct feasibility study to determine if a two-way segregated cycle track can be accommodated along the length of this route.



Figure 1.20 A30/ London Road in Hook

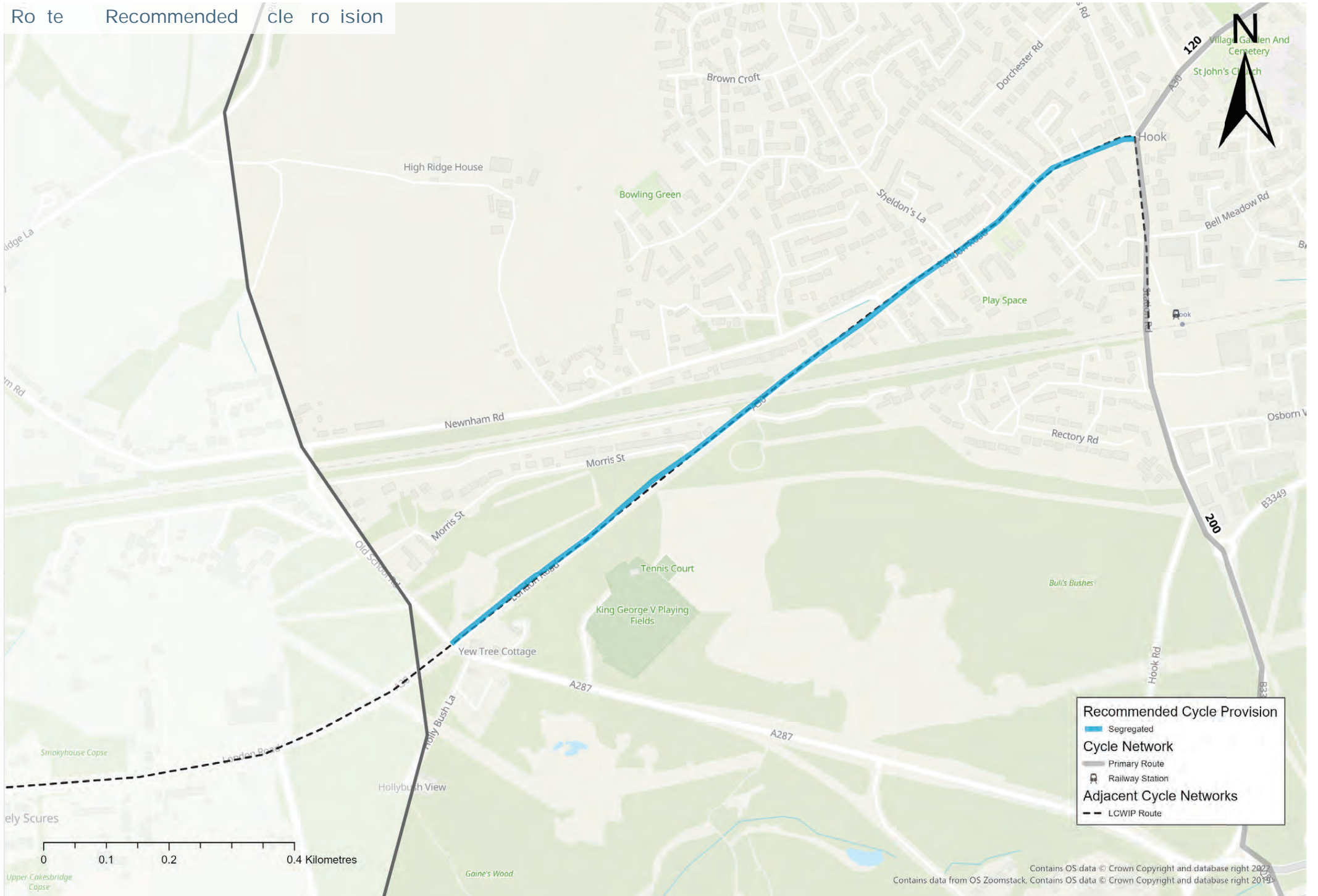


Figure 1.21 Fleet Road / London Road at Sheldon's Lane



Figure 1.22 A30/London Road near The Hogget bus stop

Route Recommended Cycle Provision



**Recommended Cycle Provision**

- Segregated

**Cycle Network**

- Primary Route
- Railway Station

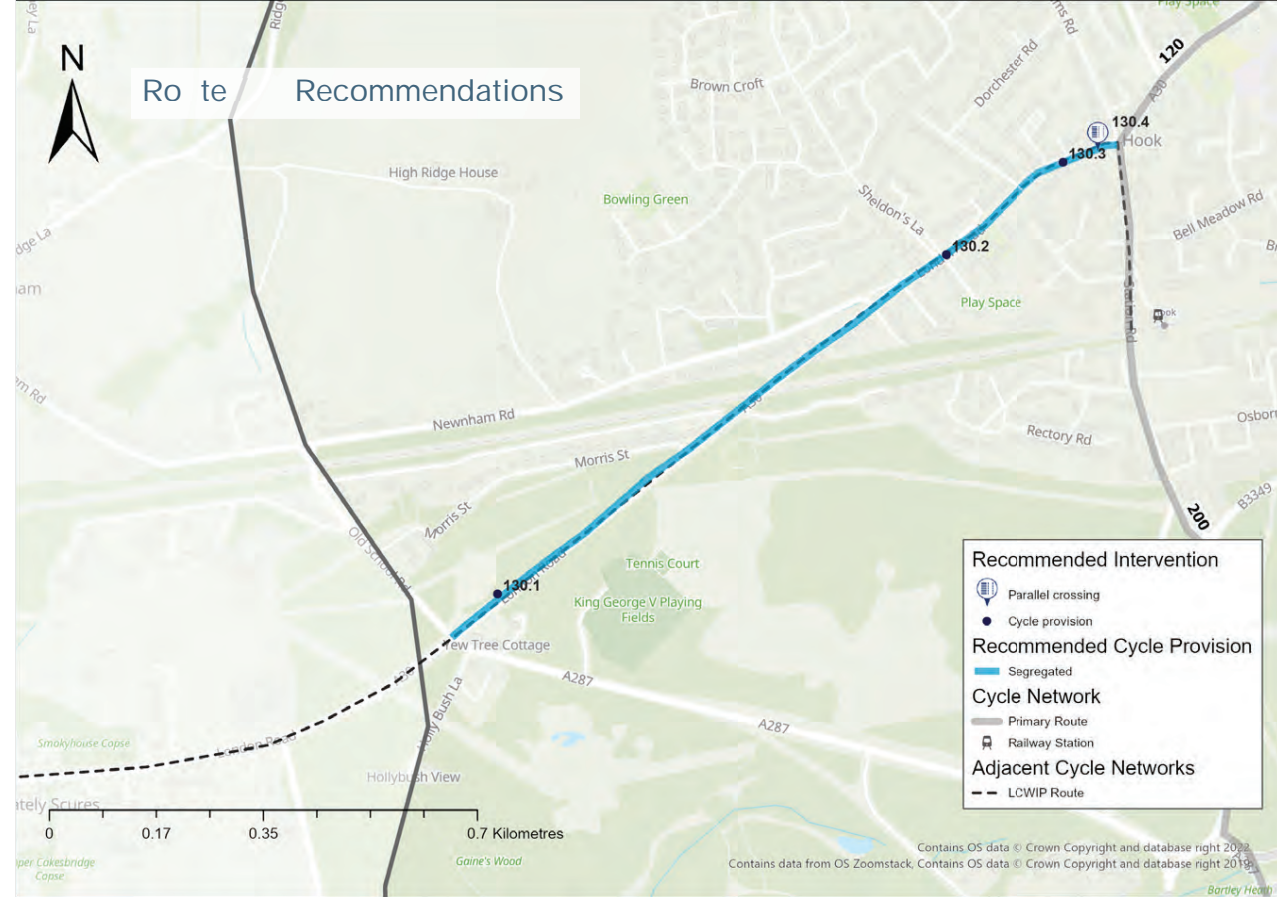
**Adjacent Cycle Networks**

- LCWIP Route

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 Contains data from OS Zoomstack, Contains OS data © Crown Copyright and database right 2019



| Intervention Number | Recommendation   |
|---------------------|--|
| 130.1               | Investigate feasibility of installing a segregated cycle facility with separation from the carriageway on the A30/London Road from the A287 to New Road. Consider narrowing the existing 40mph carriageway to accommodate this.  |
| 130.2               | Investigate feasibility of installing a segregated cycle facility on the south side of A30/London Road from New Road to Station Road. Some space could be reallocated from the carriageway but it may also require private land. |
| 130.3               | Consider removing bus layby to allow for space to be allocated for a segregated cycle facility.  |
| 130.4               | Install parallel crossing on A30/London Road (west) arm. Remove existing uncontrolled pedestrian crossing.   |



# Route 140: Fleet to Farnborough

## Route description

Route 140 starts at the Fleet Road / Kings Road junction on its northern end, and travels down to the Norris Hill Road / Ively Road roundabout. One part of the route continues southwards and ends at the Aldershot Road / A323 junction, while another part of the route goes north-wards from the roundabout and heads along Ively Road, and ends on Old Kennels Lane.

There is also an additional part of the route that travels down Guildford Road, through an existing rural path, which then leads to Ively Road.

Overall, this route will help to promote safer and more direct travel between destination points such as Fleet station, the town centre, and Cody Technology Park and Hartland Park.

## Route length

Approximately 5km.

## Existing conditions

The existing space allocated to cyclists on the carriageway along Kings Road is narrow and not segregated, which may make some users feel unsafe on the busy road. There are also insufficient crossing facilities along the entire length of the route, particularly at roundabouts and along Kings Road.

Although the section of the route passing along Guildford Road provides a safer environment with less vehicle traffic, it also consists of an undeveloped path which requires re-surfacing works and improvements to lighting and wayfinding. These conditions are similar for the part of the route which follows the existing canal tow path.

There is an existing shared-use path when traveling down Ively Road, however, this is currently narrow and would need to be widened.

## Barriers to walking and cycling

- High traffic flow on Ively Road previously reaching up to 15,000<sup>1</sup> vehicles per day
- Poor crossing facilities, particularly at major roundabouts
- The ability to create and/or improve cycling infrastructure may be subject to landownership and ecological data adjacent to the route

## Potential options

Investigate the feasibility of installing segregated cycle track and a shared used path along Kings Road.

One option for Norris Hill Road is to install a 3m shared used path (from the A323 / Kings Road junction to the Aldershot Road / A323 junction). This should also include a minimum 2m horizontal separation from the carriageway. Shared use facilities may also be suitable along the route leading up to the Ively Road / Kennels Lane junction.

Assuming a 20 mph speed limit and low traffic levels along Guildford Road (less than 2,000 per day), there is the opportunity to allow for cycling in mixed traffic.

<sup>1</sup> Department for Transport (2019) Road Traffic Statistics. <https://roadtraffic.dft.gov.uk/manualcountpoints/945237>



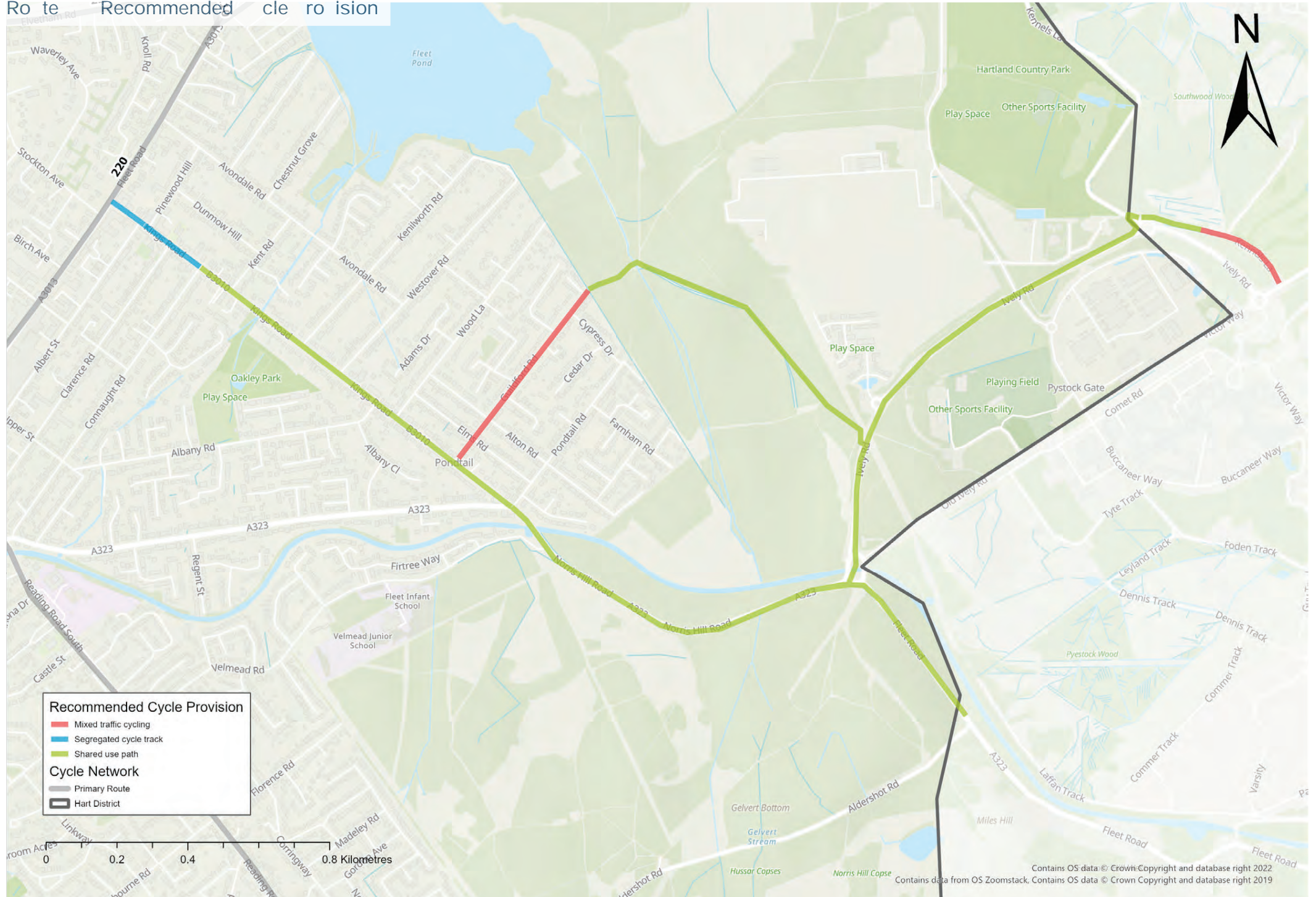
Figure 1.23 Narrow existing cycling facilities along Kings Road



Figure 1.24 Extra carriageway space at the Aldershot Road / Kings Road junction

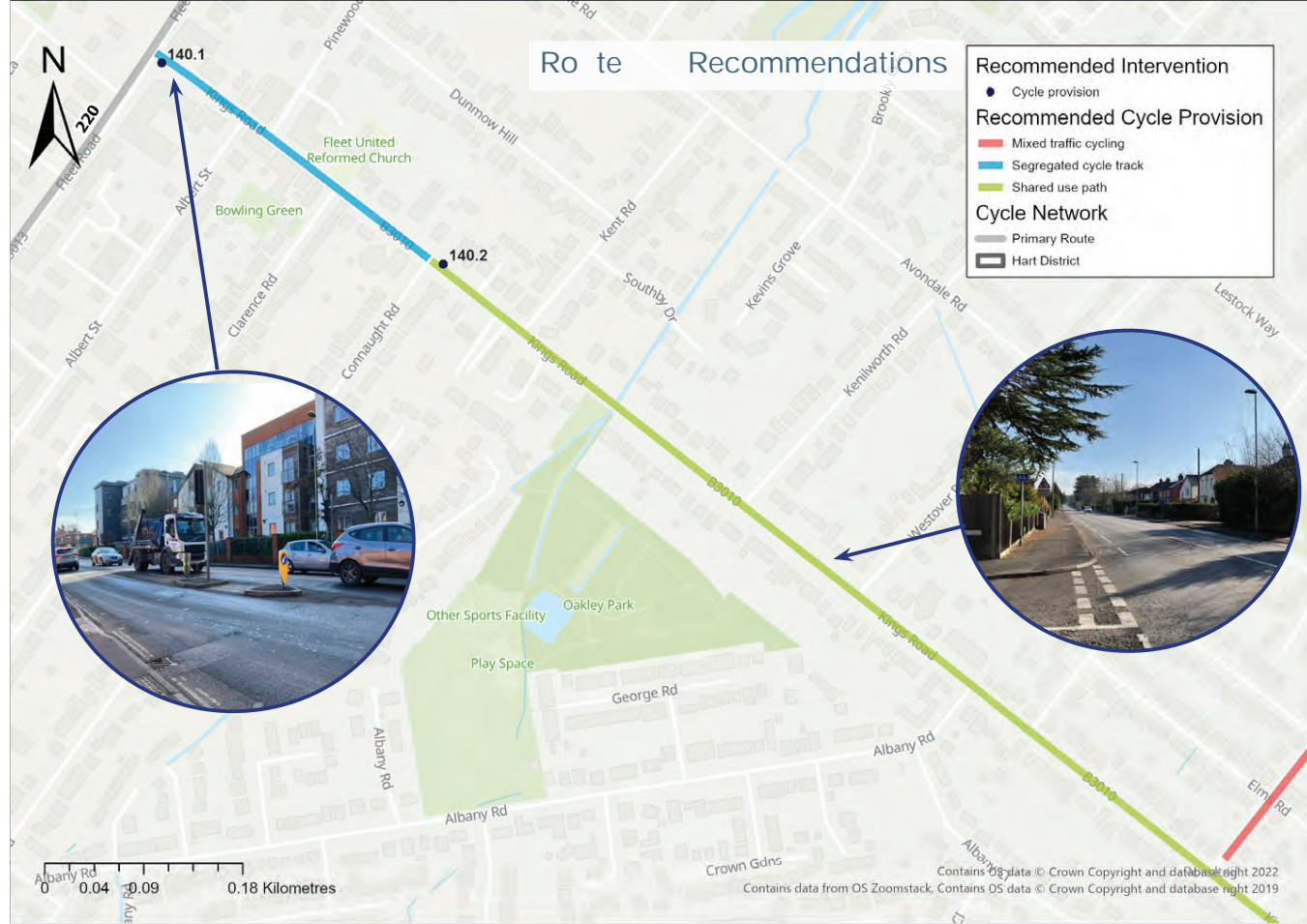


Route Recommended cycle provision





| Intervention Number | Recommendation  |
|---------------------|---|
| 140.1               | Investigate the feasibility of installing a segregated two-way cycle track from Fleet Road to Connaught Road.   |
| 140.2               | Due high traffic flows and limited carriageway space, investigate the feasibility of installing a shared use path from Connaught Road to Aldershot Road, subject to pedestrian and cycle usage. |





| Intervention Number | Recommendation  |
|---------------------|---|
| 140.3               | Investigate feasibility of installing a Toucan crossing over Pondtail Road.   |
| 140.4               | Investigate the feasibility of creating a 3m shared used path on the north side of Norris Hill Road from Aldershot Road to Ively Road.  |
| 140.5               | Existing shared use path on Ively Road. Investigate the possibility of widening to a minimum of 3m where possible.  |
| 140.6               | Install cyclist priority crossing across Pystock Way.   |
| 140.7               | Consider upgrading existing uncontrolled crossing to parallel crossing at Kennels Lane.   |
| 140.8               | Maintain existing shared use path on Old Kennels Lane.  |
| 140.9               | Create pedestrian and cyclist priority street on Old Kennels Lane by adding signage and ensuring a 20 mph speed limit.  |
| 140.10a             | Cycling in mixed traffic is feasible on Guildford Road, from the B3010 to its terminus. This assumes that there is a 20mph speed limit and low traffic volumes. Note that this is an alternative route and would be less direct than a route Norris Hill Road.          |
| 140.11a             | Upgrade existing paths in green space between Pondtail and Hartland Park to create a 3m wide shared use path. Surfacing works, lighting, and wayfinding signs should be installed. There is also the opportunity to link to Fleet Pond route through MoD Training Area. |



# Route 150: Fleet to Church Crookham

## Route description

Route 150 starts at the Hitches Lane / Fitzroy Road junction, and heads east on Tavistock Road. The route then goes down Reading Road South, and ends at the Sandy Lane / Beacon Hill Road roundabout.

This route offers a more direct travel from the Edenbrook area to Church Crookham, helping to link key destination points such as Fleet Business Park, Calthorpe Park and Heatherside Junior School. It will also help for safer travel as it provides an alternative to cycling down Reading Road North, which is a major A road with high daily traffic flows.

## Route length

Approximately 4.5km.

## Existing conditions

There is minimal cycling infrastructure along the length of the route, with insufficient crossing facilities and resting points at major junctions, such as at the Reading Road South /Aldershot Road roundabout where pedestrian countdown timers and crossing buttons are missing at all junction arms.

There are also poor crossing facilities across Reading Road South therefore current north - south movement over the road may be challenging.

## Barriers to walking and cycling

- High traffic flows on Reading Road South
- Inadequate cycling facilities throughout entire length of route

## Potential options

- Assuming low traffic levels and a speed limit of 20mph, there is the opportunity for mixed traffic cycling facilities on Fitzroy Road

and Tavistock Road

- Due to limited carriageway space on Reading Road South, a shared use path may be appropriate
- There is opportunity to widen the existing footway along Beacon Hill Road to at least a 3m minimum. This could be done by either re-allocating the extra carriageway space, or using the existing verge



Figure 1.25 Lack of cycling facilities and narrow footway down Reading Road South

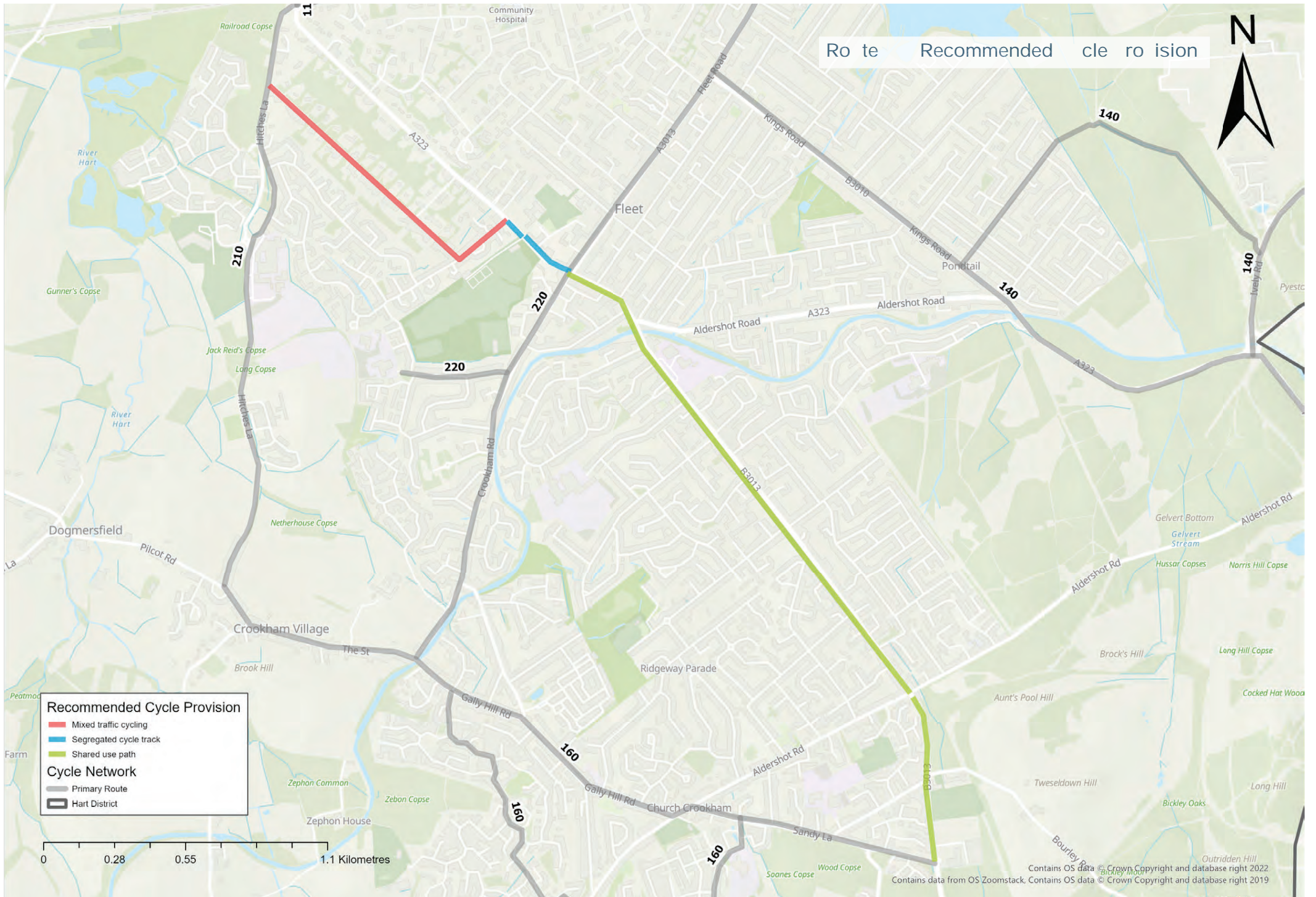


Figure 1.26 Opportunity to re-allocate extra carriageway space at Aldershot Road / Reading Road South roundabout



Figure 1.27 Opportunity to re-allocate extra carriageway space at Fleet Road / Crookham Road junction

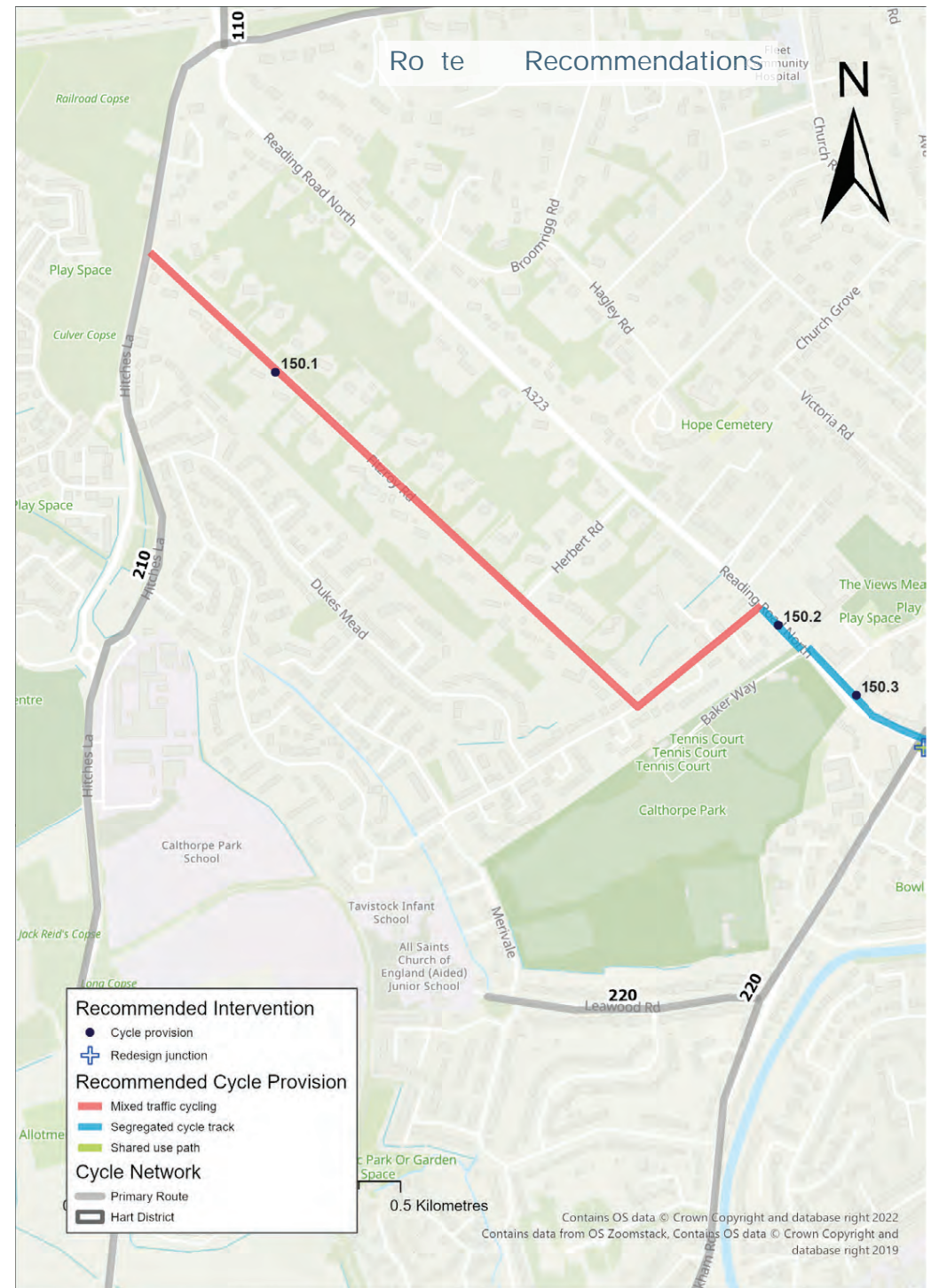




Route Recommended Provision



| Intervention Number | Recommendation  |
|---------------------|---|
| 150.1               | Mixed traffic cycling provision is suitable on Fitzroy Road/Tavistock Road from Hitches Lane to Reading Road North. Implement a 20mph speed limit, possible modal filters and other traffic calming measures as required. |
| 150.2               | Widen footway on western side of Reading Road North from to create a segregated cycle facility and 2m wide footway. Connect to existing Toucan crossing on Reading Road North.  |
| 150.3               | Re-allocate excess carriageway space to create segregated cycle facility on the eastern side of Reading Road North from Harlington Way to Fleet Road.   |





| Intervention Number | Recommendation  |
|---------------------|---|
| 150.4               | A review of the A323/A3013/Crookham Road signalised junction should be undertaken to explore improvements for pedestrians and cycle priority, and continuity through the junction. Investigate the potential for providing a Cyclops style junction to improve east/west cycle route continuity and connectivity.   |
| 150.5               | Explore providing shared use path facilities on Reading Road South between Fleet Road and Aldershot Road, subject to pedestrian and cycle usage.  |
| 150.6               | A review of the A323/B3013/Connaught Road signalised junction should be undertaken to explore improvements for pedestrians and cycle priority, and continuity through the junction. Investigate the potential for providing a Cyclops style junction to improve east/west cycle route continuity and connectivity . |
| 150.7               | Investigate feasibility of reallocating excess carriageway space and guardrailing to add seating and greenery to improve attractiveness and potentially reduce vehicle speeds through junction.   |
| 150.8               | Consider redesign existing uncontrolled crossing to a parallel crossing at Courtmoor Ave and Haywood Dr.  |
| 150.9               | Consider redesign existing uncontrolled crossing to a parallel crossing (or side road treatment depending on traffic counts) at Velmead Road.   |
| 150.10              | Consider redesign existing uncontrolled crossing to a parallel crossing (or side road treatment depending on traffic counts) at Basingbourne and Florence Roads.  |



| Intervention Number | Recommendation   |
|---------------------|--|
| 150.11              | A review of the B3013/Aldershot Road/Beacon Hill roundabout should be undertaken to explore improvements for pedestrians and cycle priority, and continuity through the junction. Investigate the potential for providing a Dutch style roundabout to improve north/south cycle route continuity and connectivity. |
| 150.12              | Investigate feasibility of installing a shared use path on Beacon Hill Road between Aldershot Road/B3013 roundabout and Sandy Lane roundabout, subject to pedestrian and cycle usage.  |
| 150.13              | A review of the B3013/Twesledown Road/Bourley Road junction should be undertaken to explore improvements for pedestrians and cycle priority, and continuity at the junction.   |
| 150.14              | A review of the B3013/Sandy Lane roundabout should be undertaken to explore improvements for pedestrians and cycle priority, and continuity. Investigate the potential for providing a Dutch style roundabout.   |





# Route 160: Crookham Village and Sandy Lane

## Route description

Route 160 starts at the Crondall Road / The Street junction from its northern end. The route continues south down Gally Hill Road, crosses Aldershot Road, and ends at the Sandy Lane / Beacon Hill Road roundabout.

There is an additional section of the route which travels down Brandon Way, and Ewshot Lane which then takes users through paths north of Crookham Park to eventually join Sandy Lane. This section takes users through quieter areas which are mostly residential properties, and avoids the busier Gally Hill Road where traffic flows can reach 6500 vehicles per day<sup>1</sup>. Overall, this route will help to promote more direct and safer travel between Church Crookham and Crookham Village, linking key destination areas such as Fleet Business Park, Church Crookham Junior School and Crookham Park.

## Route length

Approximately 3km (The Street/Gally Hill Road option).

## Existing Conditions

There is currently limited cycling infrastructure throughout the entire length of the route. There are also poor crossing points on the route, particularly at the Crookham Road / The Street junction where countdown timers and crossing buttons are missing. Similarly, there are no controlled crossing points on numerous roundabouts such as at Jubilee Drive / Sandy Lane, Sandy Lane / Beacon Hill Road, and Sandy Lane / Naishes Lane. The route also lacks wayfinding signage, particularly at the Gally Hill Road / Aldershot junction and at the Brandon Road roundabout which takes users through an alternative direction.

<sup>1</sup> Department for Transport (2009) Road Traffic Statistics. <https://roadtraffic.dft.gov.uk/manualcountpoints/945261>

## Barriers to walking and cycling

- High traffic levels on Aldershot Road where traffic flows can reach 8,900 vehicles per day<sup>2</sup>.
- Limited controlled crossings throughout entire length of route
- No dedicated cycle path on Gally Hill Road and The Street

## Potential options

- Considering that there are limited road alternatives for motor traffic travel between Church Crookham and Crookham Village, mixed traffic conditions may be suitable from the Crondall Road / The Street junction to Gally Hill Road / Sandy Lane, subject to reductions in traffic volume, which may require modal filters
- An alternative option is to direct users down Brandon Road where mixed traffic provision may be suitable given a 20mph speed limit

<sup>2</sup> Department for Transport (2019) Road Traffic Statistics. <https://roadtraffic.dft.gov.uk/manualcountpoints/945274>



Figure 1.28 Poor crossing point at The Street / Crookham Road junction

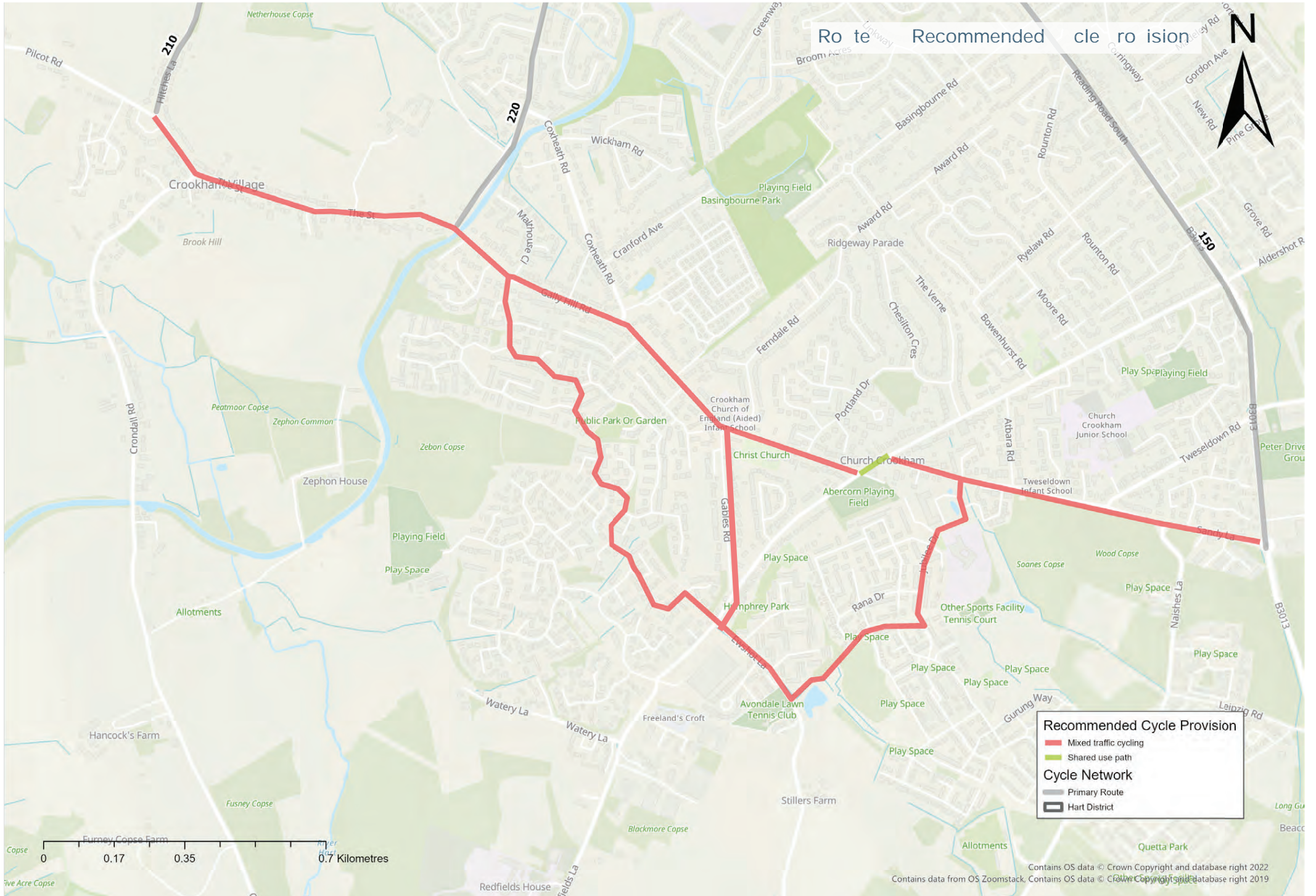


Figure 1.29 Existing conditions on Sandy Lane, with a shared use path



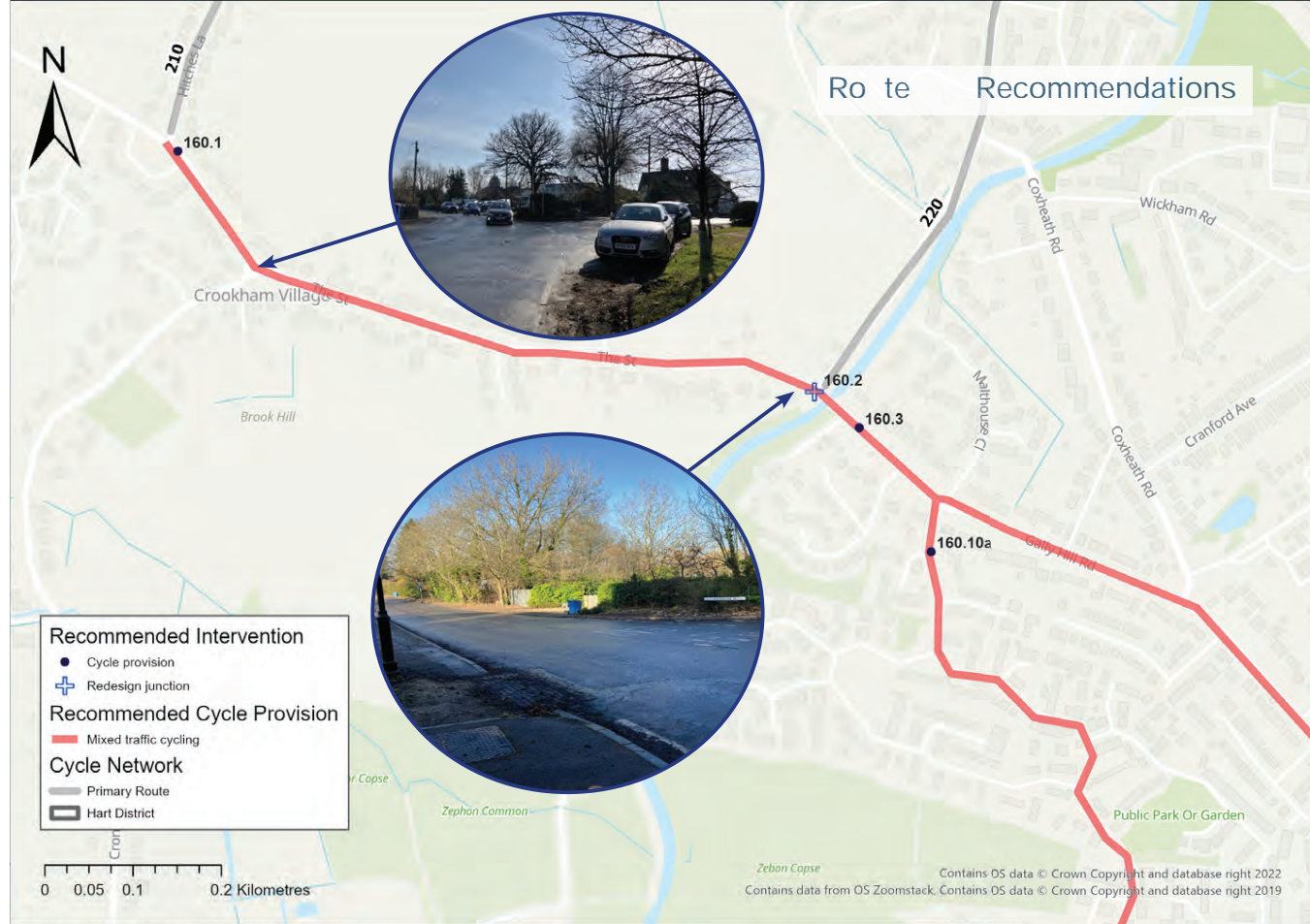
Figure 1.30 Lack of controlled crossings on Gally Hill Road / Brandon Road roundabout



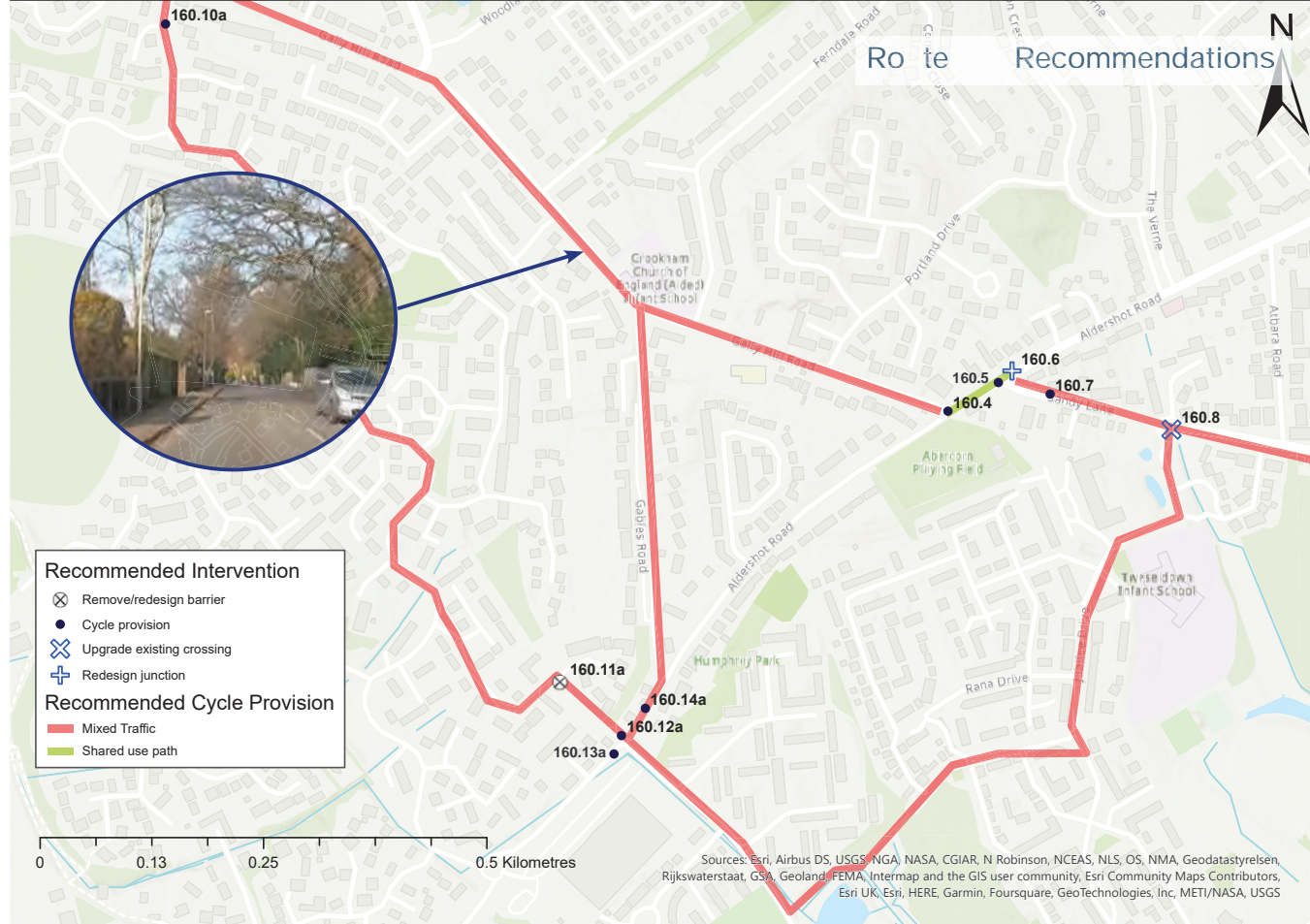




| Intervention Number | Recommendation  |
|---------------------|---|
| 160.1               | If traffic volumes are low, mixed traffic cycling provision may be suitable from the Pilcot Road/Hitches Lane junction, to the Crookham Road/The Street junction. Reduce speed limit to 20mph and introduce physical traffic calming measures as required.                                    |
| 160.2               | Investigate the feasibility of installing signalised crossing facilities at The Street / Crookham Road junction, including pedestrian crossing facilities on the southern arm.  |
| 160.3               | Considering the limited available width for segregated cycling facilities, mixed traffic cycling provision may be possible from Crookham Road junction to Aldershot Road subject to traffic speed reductions to 20mph, possible bus gate modal filters, and further traffic calming measures. |

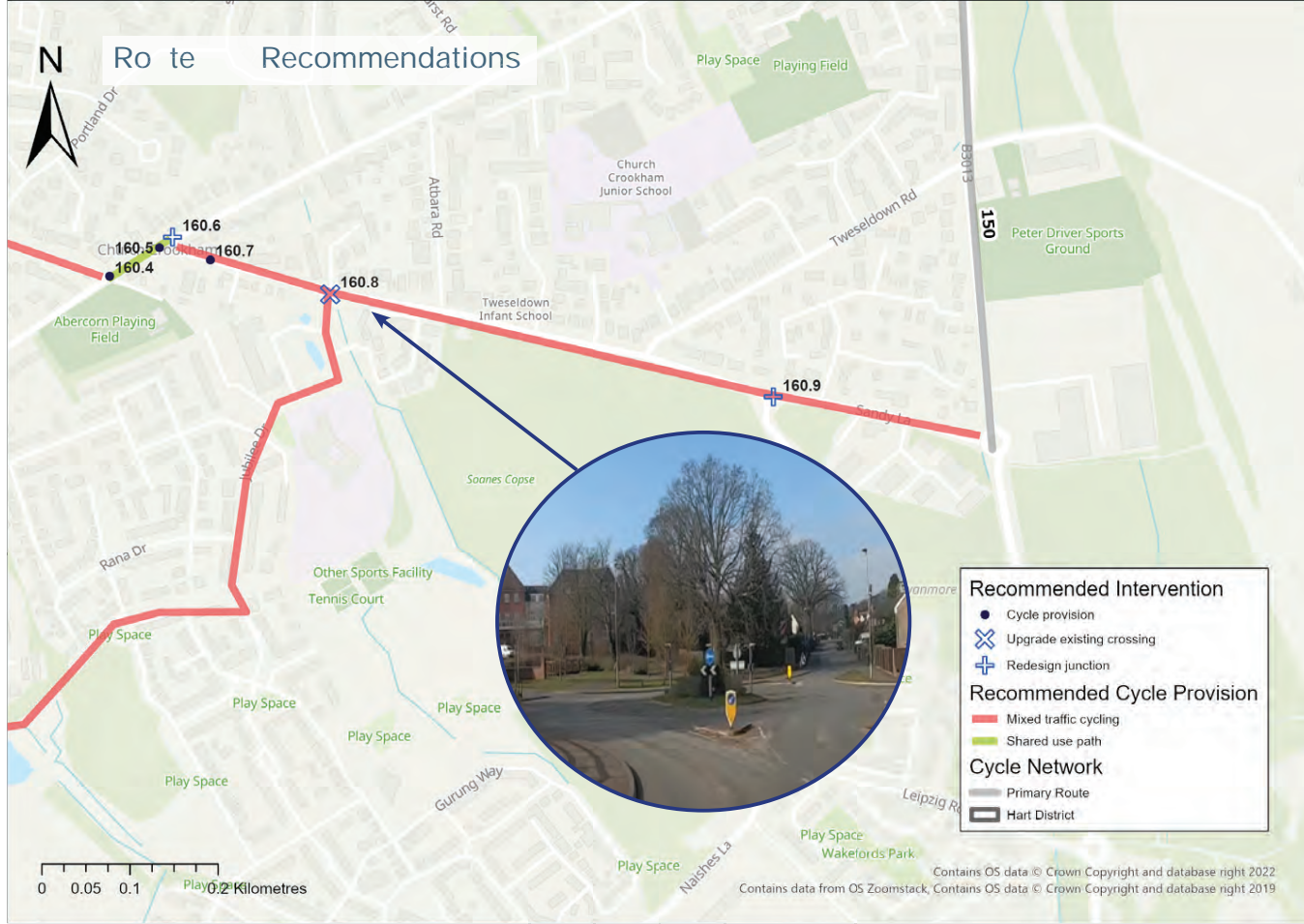


| Intervention Number | Recommendation  |
|---------------------|---|
| 160.4               | Investigate widening the existing footway as much as possible to provide a shared use path along Aldershot Road, between the Gally Hill Road and Sandy Lane junctions.  |
| 160.5               | Add wayfinding signage to show route continuation down Sandy Lane.  |
| 160.6               | Investigate the possibility of reducing the size of the Aldershot Road / Sandy Lane junction, and the possibility of providing a parallel crossing on the southern arm (across Sandy Lane).   |
| 160.7               | Insufficient width and level difference prevents widening of the existing shared use path to provide segregated conditions on Sandy Lane. Therefore, mixed traffic cycling provision may be suitable subject to a 20mph speed limit, possible bus gate, modal filters and further traffic calming measures may be required. |
| 160.8               | Install parallel crossings at the Sandy Lane / Jubilee Drive roundabout on the western, southern and eastern arms   |
| 160.10a             | This is an alternative cycling route. Reduce speed limit to 20mph to allow for mixed traffic conditions. Also consider adding cycle symbols to the carriageway for wayfinding.  |
| 160.11a             | Consider removing or redesigning barriers if access width is less than 1.5m.  |
| 160.12a             | Investigate feasibility of installing controlled crossing facilities at Aldershot Road/Ewshot Lane junction. May be challenging due to land constraints.  |
| 160.13a             | Install wayfinding signs at Aldershot Road/ Ewshot Lane junction to show continuation of route  |
| 160.14a             | Gables Road identified as a 'link' route where mixed traffic conditions are appropriate.  |





| Intervention Number | Recommendation  |
|---------------------|---|
| 160.9               | Consider installing parallel crossing facilities at western and southern arms of the Sandy Lane / Naishes Lane roundabout |



# Route 200: Hook to Odiham

## Route description

Route 200 links Hook with North Warnborough and Odiham. This route provides a critical active travel link between the larger settlement of Hook and Robert May's School in Odiham, a large secondary school with many pupils that reside in Hook.

The route begins at the A30/Station Road roundabout in Hook, travelling south along Station Road/B3349 before reaching the Hook interchange over the M3. South of this large interchange the route continues along the A287.

After the A287/B3349 roundabout, the route options include travelling along Mill Lane on low traffic rural roads, or continuing along the B3349. The route then joins an existing high quality shared use path on the eastern side of the Robert May's school, and then continues along West Street into Odiham.

## Route length

Approximately 5km.

## Existing Conditions

The only dedicated cycling provision on the route is the shared use path on the eastern side of the Robert May's School. Much of the route lacks footways and pedestrian crossings are very limited at the major roundabouts.

## Barriers to walking and cycling

- The Hook interchange over the M3 is the most significant barrier, and will require significant upgrades in order to safely accommodate cyclists and pedestrians.
- High speeds and traffic flows on the B3349 in North Warnborough

## Potential options

- Segregated cycle provision is recommended along Station Road in Hook.
- As the route travels south and becomes more rural in character, a shared use path is recommended.
- At the M3 roundabout, a dedicated shared use path with signalised crossings will be required.
- In North Warnborough, there are two options to reach Robert May's School: 1) Investigate the feasibility of installing a segregated cycling facility on the B3349 2) Use low-traffic Mill Lane and Tunnel Lane to connect to North Warnborough Street.
- In Odiham, the route would continue as a segregated cycle facility on High Street

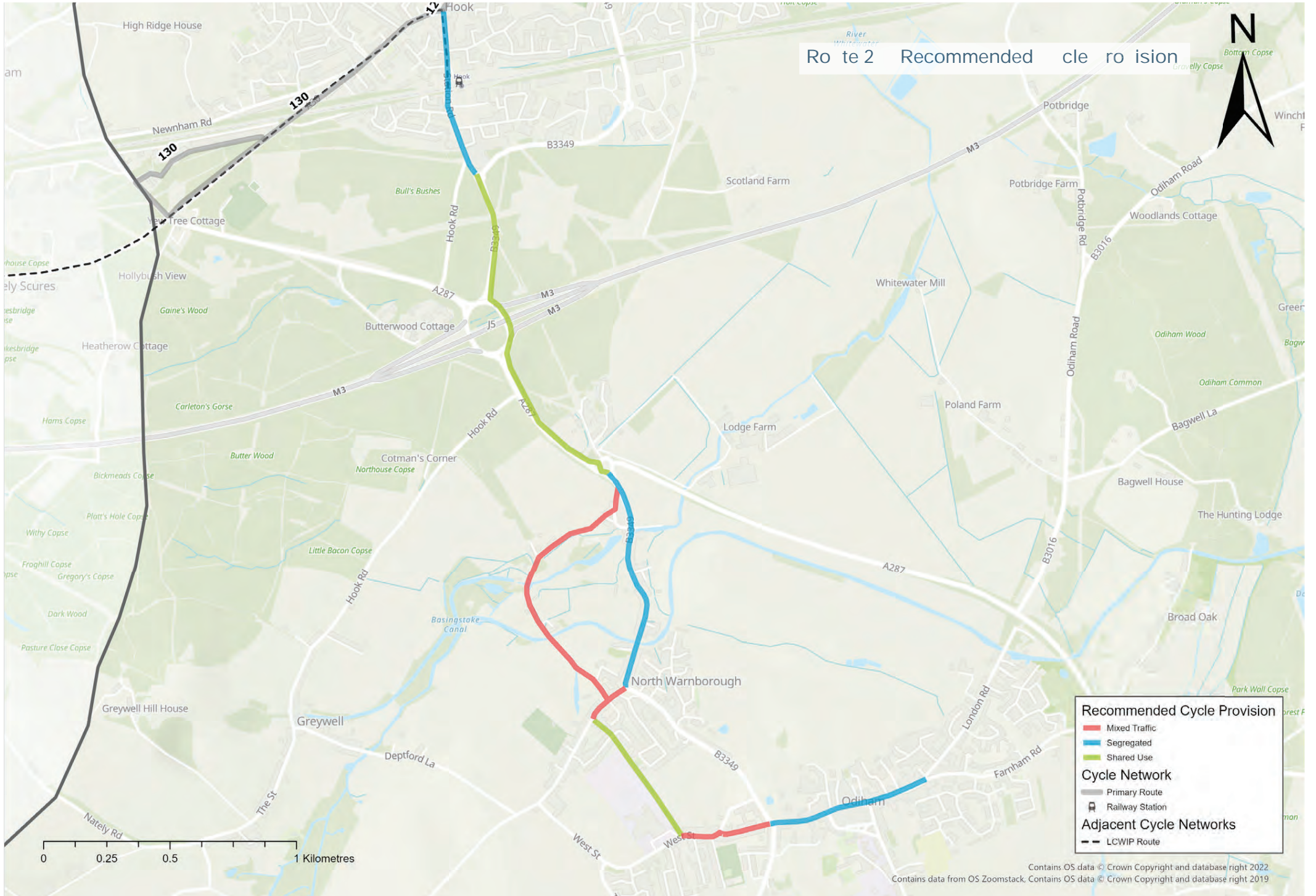


Figure 1.31 Shared use path adjacent to Robert Mays School

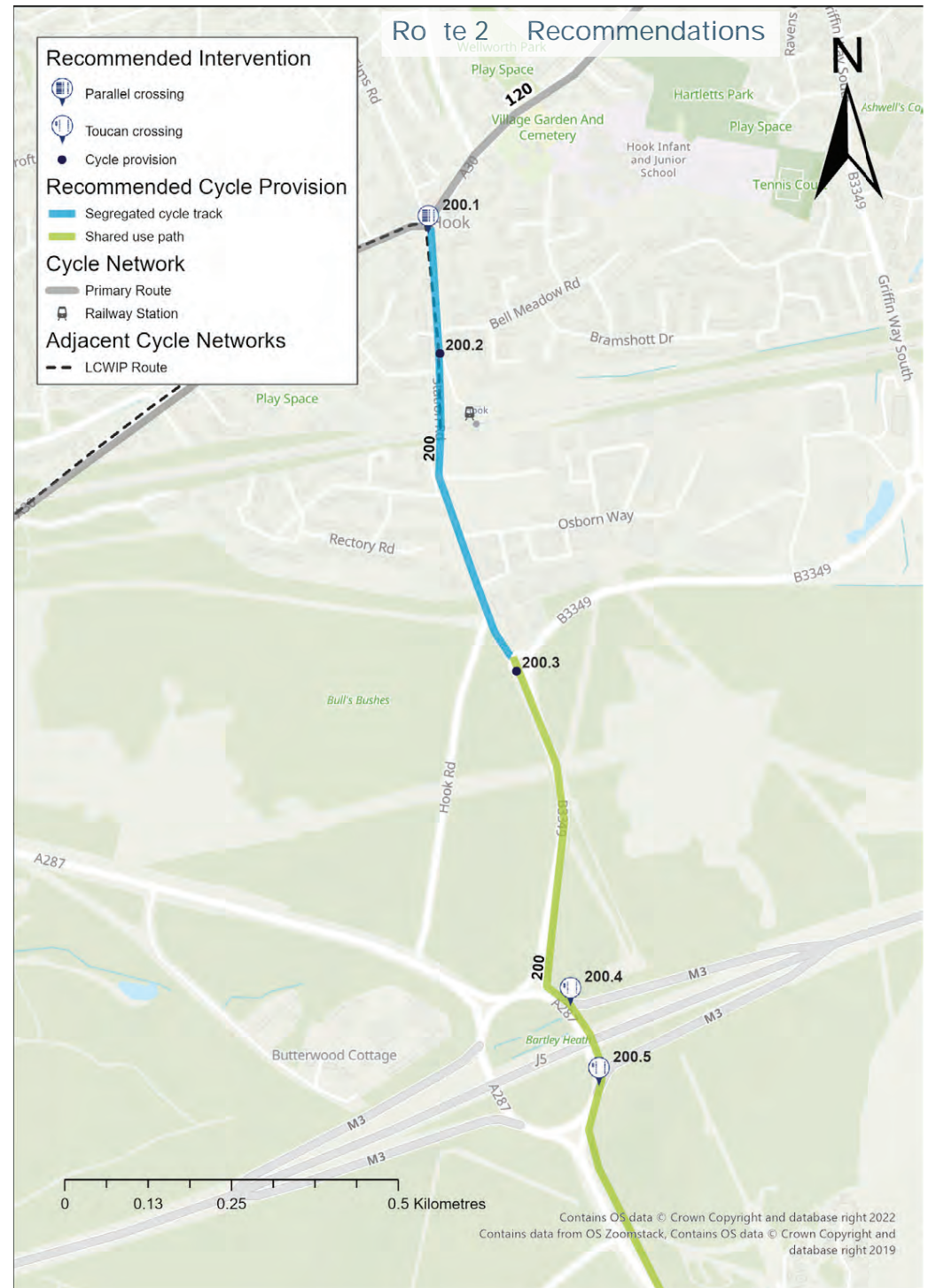


Figure 1.32 West Street, near Robert Mays School





| Intervention Number | Recommendation   |
|---------------------|--|
| 200.1               | Install parallel crossing on Station Road roundabout, south arm.   |
| 200.2               | Investigate feasibility of installing a segregated two way cycle track on Station Road from the A30 to B3349. If not possible investigate potential to add modal filter to reduce traffic flows on Station Road.   |
| 200.3               | Investigate feasibility of widening existing footway to create a minimum 3m wide shared use path with minimum 3m horizontal separation from the carriageway on the eastern side of the B3349 from the Station Road/B3349 roundabout to the A287/Hook Road/B3349 roundabout, this may require private land. |
| 200.4               | Install Toucan crossing at Hook Interchange.   |
| 200.5               | Add Toucan crossing at Hook Interchange.   |

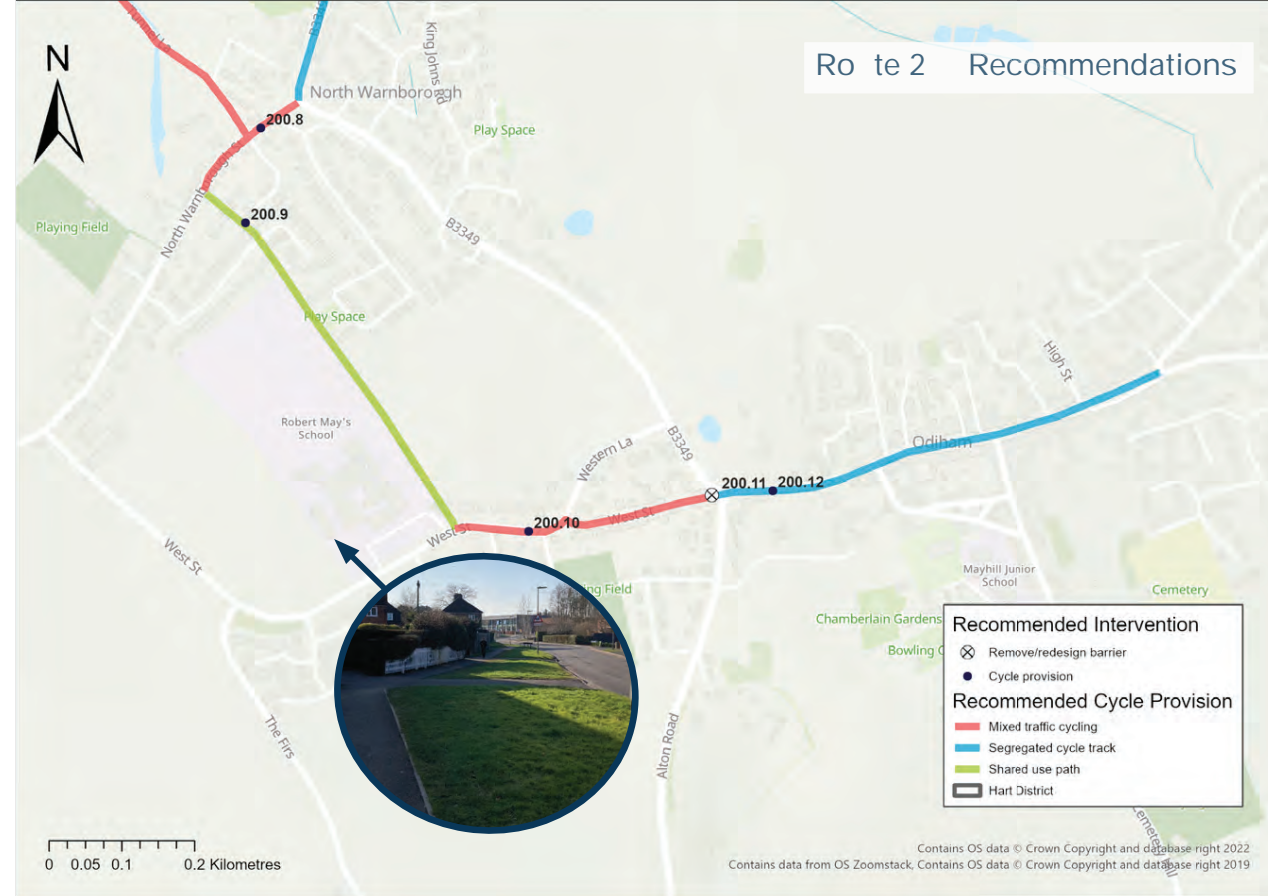




| Intervention Number | Recommendation  |
|---------------------|---|
| 200.6               | Add Toucan (or potentially grade separated) crossing to transition to southern side of A287 roundabout.   |
| 200.7               | Investigate feasibility of implementing a segregated cycle facility, if not feasible, consider alternative routing options.                           |
| 200.8               | Mixed traffic cycling provision suitable on North Warnborough Street from the B3349 roundabout to existing shared use path. Ensure 20mph speed limit. |
| 200.9               | Existing shared use path between North Warnborough Street and West Street is in good condition.   |



| Intervention Number | Recommendation   |
|---------------------|--|
| 200.10              | If traffic volumes are low, mixed traffic cycling provision would be suitable on West Street from Robert May's School to the B3349/Dunleys Hill. Consider additional traffic calming measures as required. |
| 200.11              | Ensure there is a 1.5m gap between existing bollards at the end of West Street.  |
| 200.12              | Investigate feasibility of installing segregated cycle facility. Due to width constraints, this will be challenging and may require realignment of existing on carriageway parking.                        |
| 200.13a             | Option to use narrow country lane with very low traffic volumes. Visibility improvements would be required, and the route is less overlooked.  |





# Route 210: Fleet to Crookham Village

## Route description

Route 210 starts at the Fleet Station roundabout on the eastern end, and travels west down Elvetham Road, up to the A323 (Hitches Lane / Elvetham Road) roundabout. The route then goes south down Hitches Lane and ends at the junction with Pilcot Road, where it meets with routes 110 and 160. There is a small section which continues down Pilcot Road, for which new footway has been recommended.

This route will allow for safer and more direct travel to and from key destination areas such as Crookham Village, Elvetham Heath, Fleet Hospital, and Fleet Station, reducing the need to navigate through the main town centre on Fleet Road which is typically busy, and where average traffic flows have reached up to 12,500 vehicles per day<sup>1</sup>.

## Route length

Approximately 4.5km.

## Existing Conditions

The A3013 roundabout (near Fleet Station) currently has minimal provisions for active travel users consisting of poor crossings and no dedicated cycling infrastructure leading up to the station. These conditions are similar going down Elvetham Road, and up to the A323 (Hitches Lane / Elvetham Road) roundabout. There is then a narrow existing shared use path along Hitches Lane to the south side of Calthorpe Park School.

## Barriers to walking and cycling

- Previous records showing average traffic flows reaching over 5,000 vehicles per day on Elvetham Road<sup>2</sup>

<sup>1</sup> Department for Transport (2021) Road Traffic Statistics <https://roadtraffic.dft.gov.uk/#16/51.2880/-0.8359/basemap-countpoints>

<sup>2</sup> Department for Transport (2009) Road Traffic Statistics <https://roadtraffic.dft.gov.uk/manualcountpoints/931069>

- Records showing average traffic flows reaching over 7,900 vehicles per day on Hitches Lane
- Lack of controlled crossing points throughout the route, particularly at the Elvetham Road / Hitches Lane roundabout
- Barriers to walking and cycling on the bridge near Elvetham Road.



Figure 1.33 Narrow existing footway near the A323 roundabout



Figure 1.34 Narrow existing shared use path down Hitches Lane

## Potential options

- Opportunity to widen the existing shared use path down Hitches Lane and potentially convert some sections into a segregated cycle facility, however this may be subject to land ownership data adjacent to the path
- Along Elvetham Road a shared use path is recommended due to limited space within the highway boundary



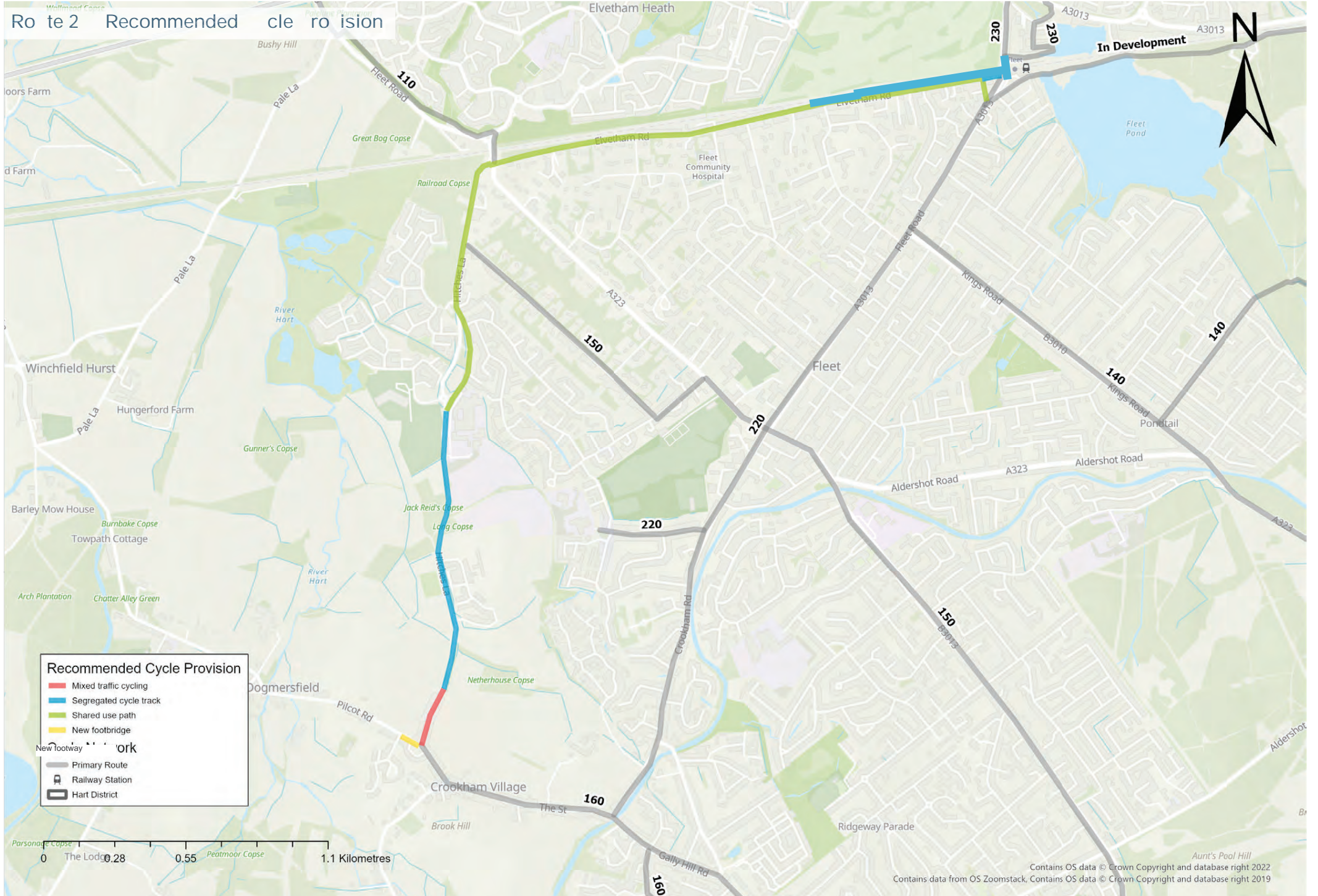
Figure 1.35 Additional barriers near Elvetham Road



Figure 1.36 Private land near the pavement Hitches Lane, which may act as a constraint to widening the path



# Route 2 Recommended cycle provision



**Recommended Cycle Provision**

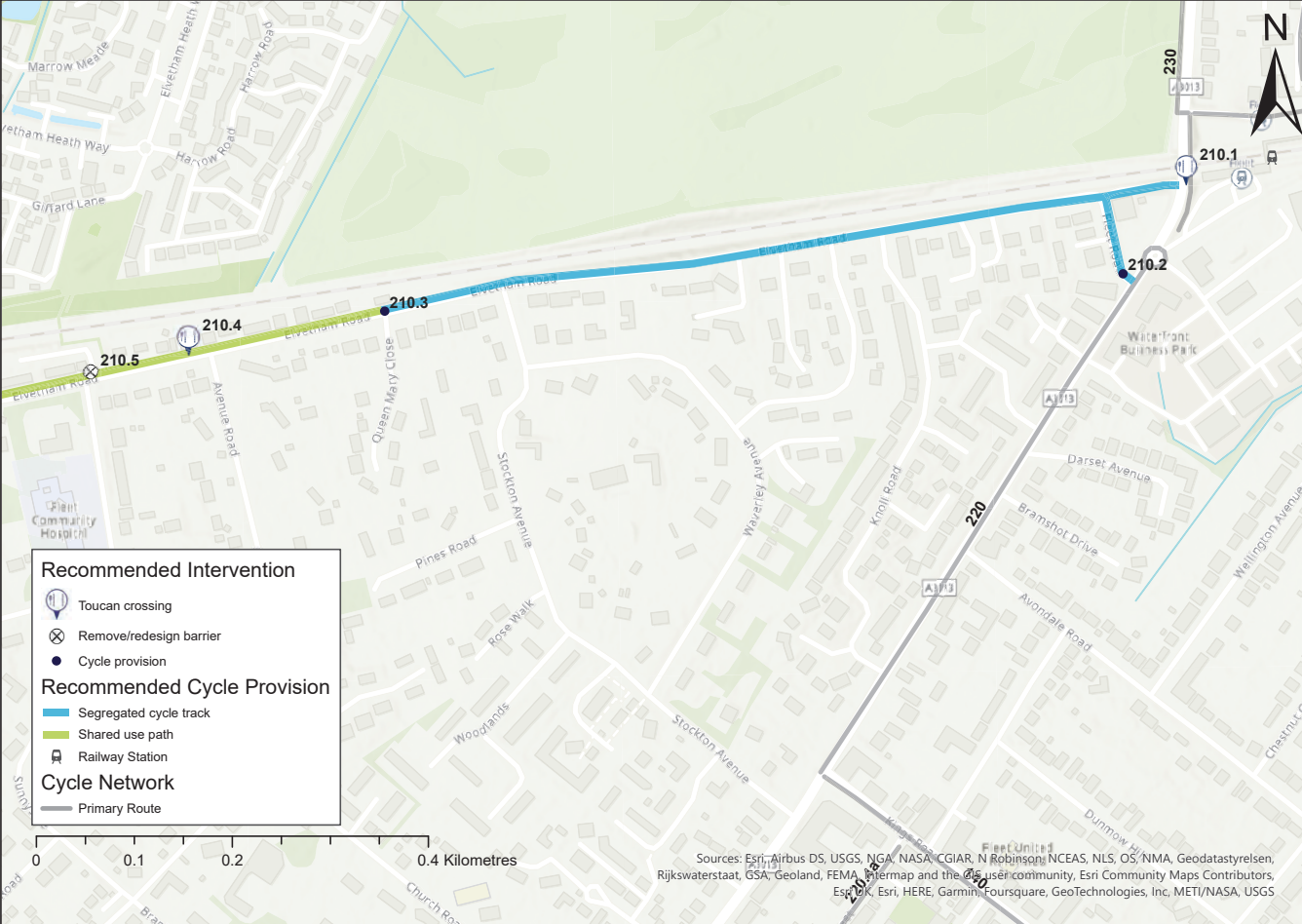
- Mixed traffic cycling
- Segregated cycle track
- Shared use path
- New footbridge

**Other Symbols:**

- Primary Route
- Railway Station
- Hart District

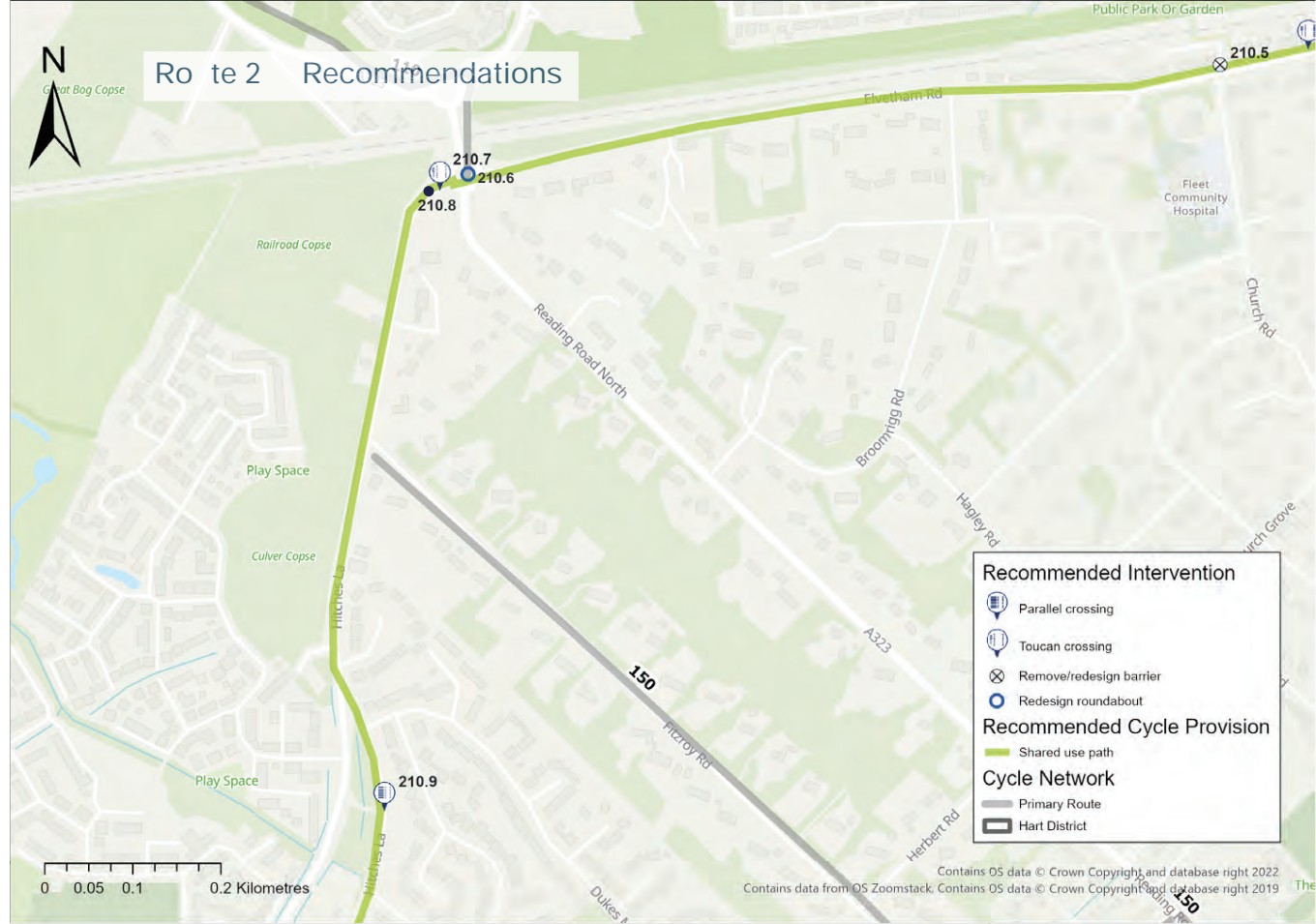
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| Intervention Number | Recommendation  |
|---------------------|---|
| 210.1               | Investigate feasibility of installing controlled crossing over the A3013.   |
| 210.2               | Investigate feasibility of installing a two-way segregated cycle track on Elvetham Road between A3013/Fleet Road and Queen Mary Close. Explore options for car park reallocation.   |
| 210.3               | Investigate feasibility of installing a shared use path between Queen Mary Close and the A323/Reading Road North.   |
| 210.4               | Install a controlled crossing over Elvetham Road to connect to existing footbridge.   |
| 210.5               | Remove barriers on both sides of the footbridge (Elvetham Road and Giffard Lane). If a specific safety issue is identified, then barriers can either be replaced with a bollard, or widen the chicanes to allow for a minimum 1.5m gap. |

| Intervention Number | Recommendation   |
|---------------------|--|
| 210.6               | Consider implementing a Dutch style roundabout in the long term at Elvetham Road/Fleet Road/Hitches Lane.  |
| 210.7               | Signalised Toucan crossing to be installed over Hitches Lane junction arm in summer 2023.  |
| 210.8               | Investigate the feasibility of providing a shared use path and widening the existing shared use path to a minimum of 3m, and reduce the speed limit to 20 mph on Hitches Lane from the Reading Road roundabout to Emerald Avenue roundabout. Alternatively, investigate potential to accommodate a segregated cycle facility in this location. |
| 210.9               | Install a signalised crossing over Hitches Lane.   |





| Intervention Number | Recommendation  |
|---------------------|---|
| 210.10              | Consider implementing a Dutch style roundabout Hitches Lane/Emerald Avenue.   |
| 210.11              | Investigate feasibility of installing segregated cycle facility on Hitches Lane from Emerald Avenue to Crookham Village.  |
| 210.12              | Install parallel crossing on eastern roundabout arm at Featherfall Road.  |
| 210.13              | Mixed traffic cycling provision through Crookham Village to Pilcot Road. Ensure a 20mph speed limit with supporting traffic calming measures and possible modal filters to reduce traffic volume. |
| 210.14              | Investigate feasibility of installing a zebra crossing over Pilcot Road.  |
| 210.15              | Gap in footway on south side of Pilcot Road - install new footway.  |

## Route 2 Recommendations



# Route 220: Fleet station to Crookham Village

## Route description

Route 220 starts at Fleet station and proceeds to the A3013 roundabout. It travels south-west down Fleet Road (A3013), travelling along Albert Road to the southeast of the town centre, and continues south on Crookham Road. The route then ends at the Crookham Road and The Street junction.

This route will promote safer and more direct travel between Crookham Village and Fleet town centre and will help to link key destinations such as the railway station and Calthorpe Park.

## Route length

Approximately 4.5km.

## Existing conditions

Starting near the A3013 roundabout, there is minimal cycling infrastructure on the route. However, there is extra space on the carriageway.

There are a number of junctions which have insufficient crossing facilities. For example, at the Kings Road (B3010) and Fleet Road (A3013) junction, there are no pedestrian signals.

## Barriers to walking and cycling

- High traffic flow on Fleet Road (A3013) previously reaching up to over 12,000 vehicles per day.
- Poor crossing facilities, with pedestrian countdown timers and crossing buttons missing at some junction arms, for example at the Fleet Road / Reading Road South junction

## Potential options

- Implement a segregated cycle facility on Fleet Road until the B3010, then utilise Albert Road with mixed traffic cycling provision. South of Reading Road, implement mixed traffic

cycling provision, however this may require possible modal filters and other traffic calming measures

- Opportunity for mixed traffic provision on Lea Wood Road (spur leading to All Saints Church of England Aided Junior School). This is subject to low traffic flows and a 20 mph speed limit



Figure 1.38 Extra carriageway space that could be re-allocated to cycling infrastructure at the Kings Road / Fleet Road junction



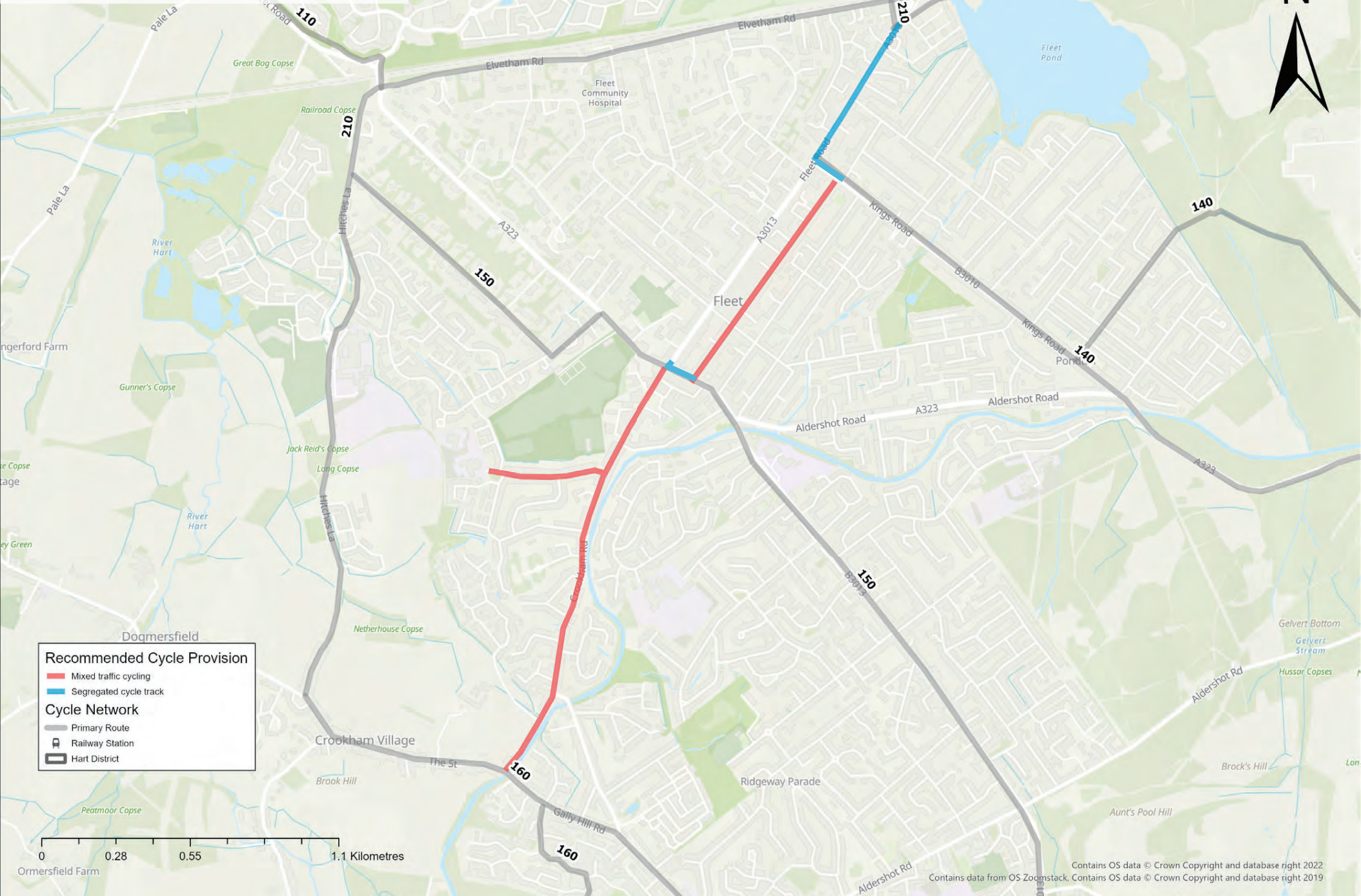
Figure 1.37 Inadequate crossing facilities at the A3013 junction (near Fleet train station)



Figure 1.39 Inadequate crossing facilities at The Street / Crookham Road junction (southern end of route)



# Route 22 Recommended cycle provision



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## Route 22 Recommendations



| Intervention Number | Recommendation   |
|---------------------|--|
| 220.1               | Re-design of Fleet Road roundabout (near the station) required to improve safety for all users. High traffic volumes would require segregated cycling facilities and signalised/controlled crossings for pedestrians. Further feasibility study for roundabout re-design is needed.              |
| 220.2               | Consider installing a signalised crossing for cyclists and pedestrians over Fleet Road, near the Shell Fleet (south of the station)  |
| 220.3               | Due to high traffic volumes, a segregated cycle track is required on Fleet Road from Fleet station to Kings Road. It is noted that this road is also a bus route. Bus operations will need to be considered as part of traffic study.  |
| 220.4               | Mixed traffic cycling provision on Albert Road from the B3010 to the A323. This is subject to a 20mph speed limit, possible modal filters, and other traffic calming measures. This would also include segregated cycle provision on B3010, and A323, connecting to either end of Albert Street. |
| 220.5               | Complete re-design of junction required in order to meet the needs of all road users. Upgrades to include segregated cycle provision at all arms of junction, pedestrian signals and countdown timers. Opportunities to re-allocate excess carriageway space to create improved public realm.    |



| Intervention Number | Recommendation   |
|---------------------|--|
| 220.6               | Install cycle parking facilities at junction.  |
| 220.7               | Implement mixed traffic cycling provision on Crookham Road from the A323 to The Street. This would include a 20mph speed limit, possible modal filters and other traffic calming measures. |
| 220.8               | Implement mixed traffic cycling provision on Lea Wood Road, subject to low traffic volumes, as well as a 20mph limit, and physical traffic calming measures as required.                   |



# Route 230: Yateley to Fleet railway station

## Route description

Route 230 links Yateley with Fleet along Cricket Hill Lane and the B3013. This route provides a key active travel link between large settlements in Hart District.

The route begins at the junction of the B2372/Reading Road and Cricket Hill Lane in Yateley. It continues southward through the A30 and A327 roundabouts, before continuing on the B3013/Minley Road.

After crossing the M3, the route has two potential options. It may continue on the B3013/A3013 directly to Fleet railway station, or it may travel through the Ancells Farm development on parallel, but less direct alignment.

## Route length

Approximately 6.5km.

## Existing conditions

There is no dedicated cycling and walking provision on the majority of the route, with the section between the A30 roundabout and the M3 being primarily rural in character. There are narrow advisory cycle lanes on parts of Cricket Hill Lane.

South of the M3 the route runs between the Ancells Farm development to the east and the North Hants Golf club to the west. The route terminates at Fleet railway station. The B3013 is fairly narrow in this location.

## Barriers to walking and cycling

- Lack of dedicated cycling and walking provision on the majority of the route.
- The A30 and Minley Road roundabouts are significant barriers to active travel.

- The existing A3013 bridge over the South Western Main line only has footways and lacks sufficient space for a dedicated cycling facility.

## Potential options

- A segregated cycle track is recommended along Cricket Hill Lane in the built up area of Yateley
- South of Handford Lane, a feasibility study is recommended to evaluate the potential of creating a shared use path on the eastern side of Cricket Hill Lane, through the A30 and Minley Road roundabout, with the potential to use Ministry of Defence land further south
- There is excess carriageway space on the bridge over the M3, this could likely be re-purposed to accommodate a segregated cycling facility.
- Due to limited highway space on the B3013 between the M3 and Fleet railway station, an option using existing paths through the Ancells Farm development is proposed in addition to investigating the feasibility of a segregated cycle track on the western side of the B3013.



Figure 1.40 Minley Road near North Hants Golf Club



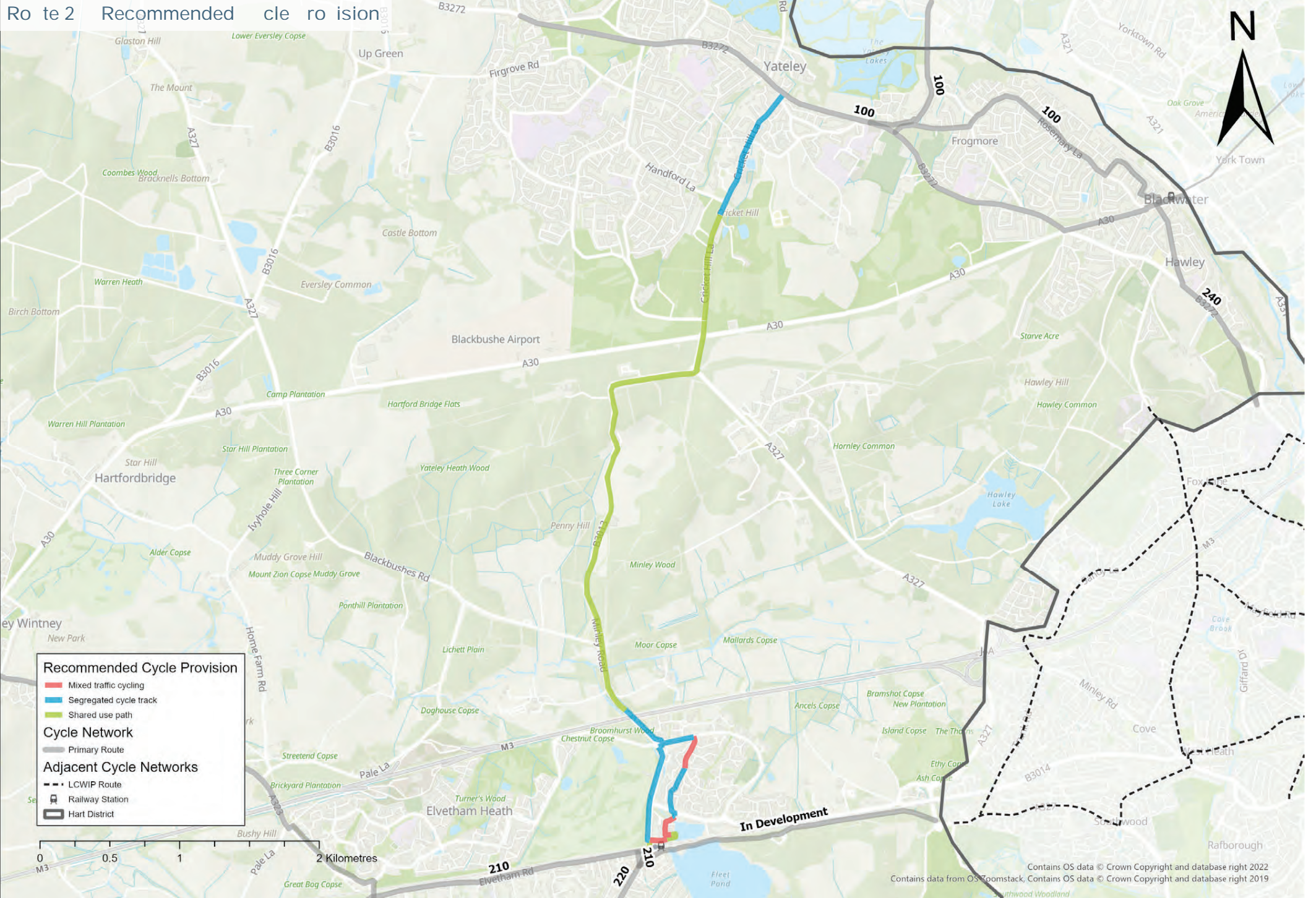
Figure 1.41 Minley Road M3 overpass



Figure 1.42 Minley Road



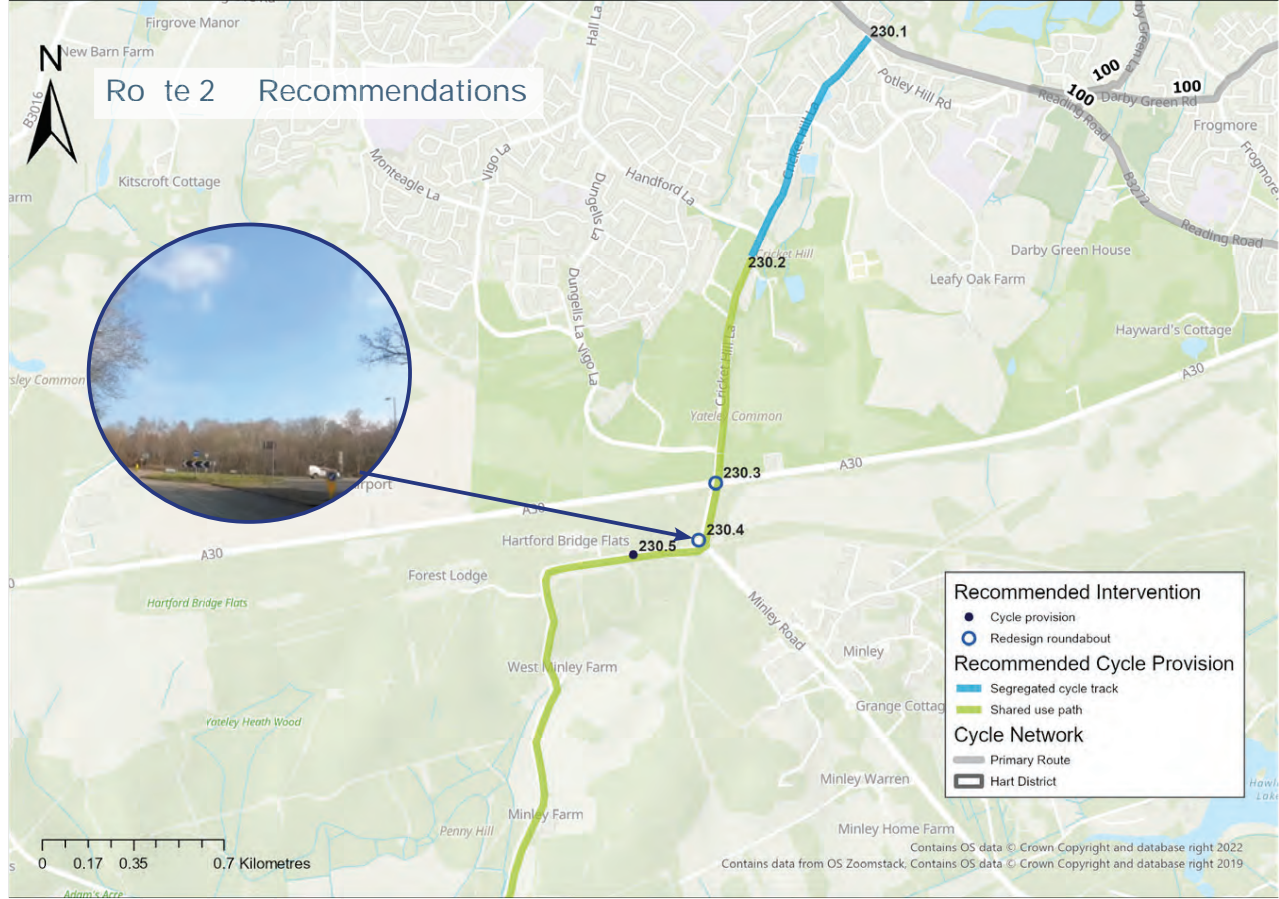
# Route 2 Recommended cycle provision



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| Intervention Number | Recommendation  |
|---------------------|---|
| 230.1               | Investigate feasibility of using verge space to install a two-way segregated cycle track on Cricket Hill Lane from the B3272 to Handford Lane.  |
| 230.2               | Investigate feasibility of adding minimum 3m wide shared use path on Cricket Hill Lane from south of Handford Lane to Minley Road roundabout. Due to high traffic speeds, the path will need horizontal separation from carriageway.  |
| 230.3               | Complete re-design of roundabout required. Re-designed roundabout must include controlled cyclist/ pedestrian crossings.  |
| 230.4               | Complete re-design of roundabout required. Re-designed roundabout must include controlled cyclist/ pedestrian crossings.  |
| 230.5               | Conduct feasibility study on construction of minimum 3m wide shared use path with horizontal separation from the carriageway, on Minley Road from Minley Road roundabout to M3 overpass. Note: Will require use of private and MoD land. Subject to ecology studies - lighting also needed to ensure route is LTN 1/20 compliant. MoD land is also subject to potential restrictions. |





| Intervention Number | Recommendation  |
|---------------------|---|
| 230.6               | Investigate feasibility of using verge, green space and unused carriageway space on the eastern side of Minley Road to add a two-way segregated cycle track on the M3 overpass to Ancells Road. There is space to fully accommodate a two-way segregated cycle track within the bridge over the M3 using the unused/excess lanes. |
| 230.7               | Install Toucan crossing over Minley Road.   |
| 230.8               | Investigate feasibility of using verge/private land on west side of Minley Road to create a two-way segregated cycle track and minimum 2m footway.  |
| 230.9               | Install Toucan crossing over the A3013.   |
| 230.10              | Due to space constraints investigate widening existing path to minimum 3m. Long term: Install minimum 5m wide pedestrian/cyclist bridge over the railway line in order to be LTN 1/20 compliant.  |
| 230.11a             | Investigate using green space on south side of Ancells Road to allow for minimum 3m two-way segregated cycle track and minimum 2m footway.  |
| 230.12a             | Tighten kerb radii at Farm Drive and Ancells Road to reduce vehicle turning speeds onto Farm Drive.   |
| 230.13a             | Implement mixed traffic cycling provision on Farm Drive from Ancells Road to Tamworth Drive. Reduce speed limit to 20mph, ensure traffic volumes less than 2,000 vehicles per day.  |
| 230.14a             | Remove or re-design existing barrier.   |
| 230.15a             | Investigate feasibility of widening existing shared use path between Farm Drive and the A3013 to 5m to allow for 3m of two-way segregated cycle track and 2m footway. May not be possible to width constraints.   |
| 230.16a             | Remove or re-design existing barrier.   |
| 230.17a             | Install Toucan crossing across Cove Road.   |
| 230.18a             | Implement mixed traffic cycling provision on Waterside Court. Ensure 20mph speed limit.   |
| 230.19a             | Investigate feasibility of constructing off-highway shared use path to connect Fleet Station Car Park to Waterside Court. Will require use of private land.   |



# Route 240: Blackwater to Hawley

## Route description

Route 240 links Blackwater and Hawley, providing a connection to Hawley Primary School, and through a new development site, Hawley Park Farm, at the boundary of Hawley and Frimley. The route is relatively short, but provides a key link to proposed cycle routes in the Rushmoor Borough LCWIP.

## Route length

Approximately 2km.

## Existing conditions

- There is no dedicated cycle provision on Vicarage Road on the B3272

## Barriers to walking and cycling

- High traffic volumes on both Vicarage Road and the B3272/Hawley Road

## Potential options

- Due to limited space and high traffic volumes on Vicarage Road, it is recommended that a detailed traffic study is undertaken to assess the potential of traffic reduction through the use of a modal filter, in order to create a low-speed environment that is suitable for mixed traffic cycling.
- On the B3272/Hawley Road, a segregated cycle facility is recommended. There is potential to use the verge on the western side of the carriageway.
- There is potential to include a cycle route through the new development at Hawley Park Farm, this would be subject to further refinement and coordinated with the approved site plans.



Figure 1.43 Vicarage Road



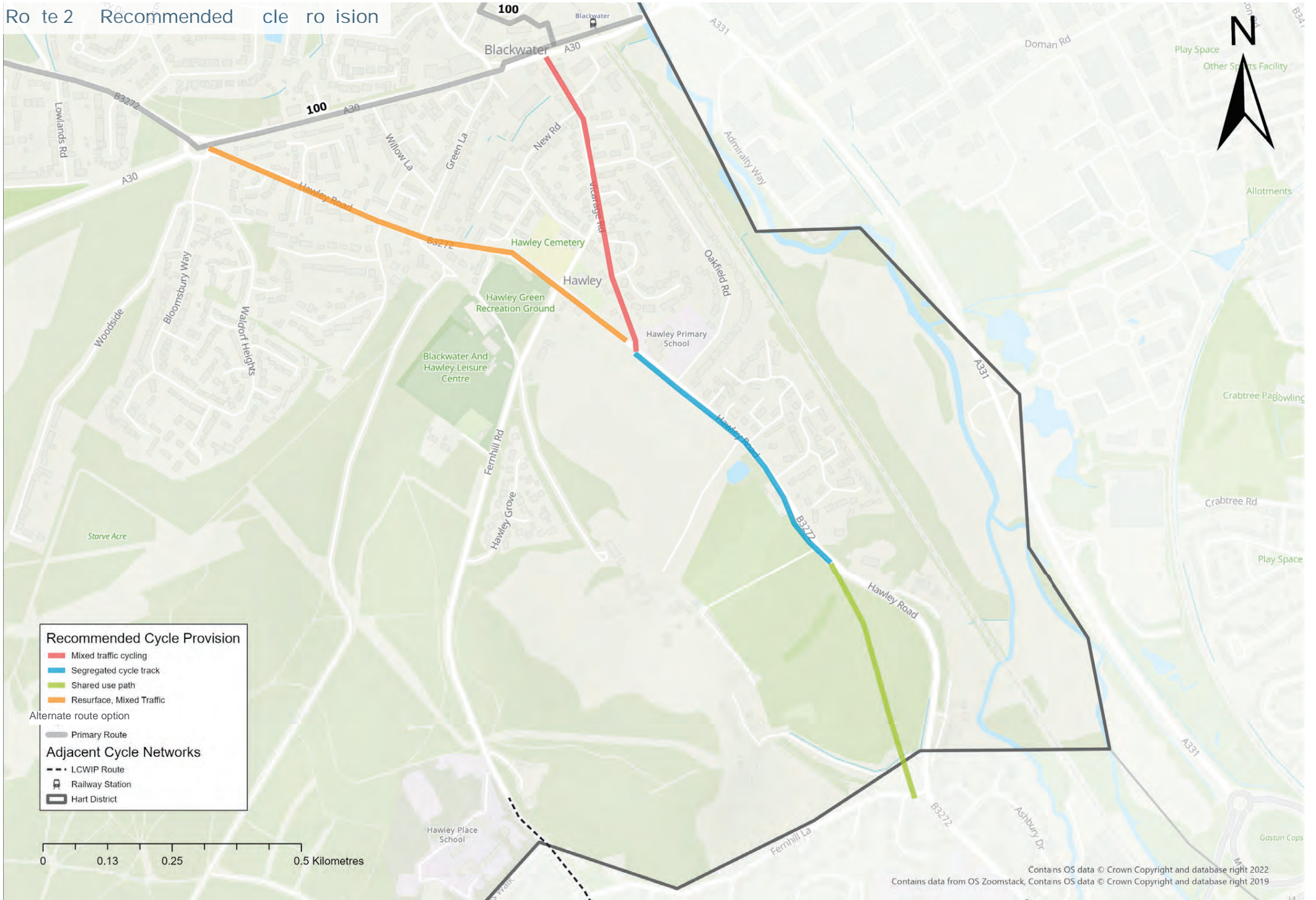
Figure 1.44 B3272/Hawley Road

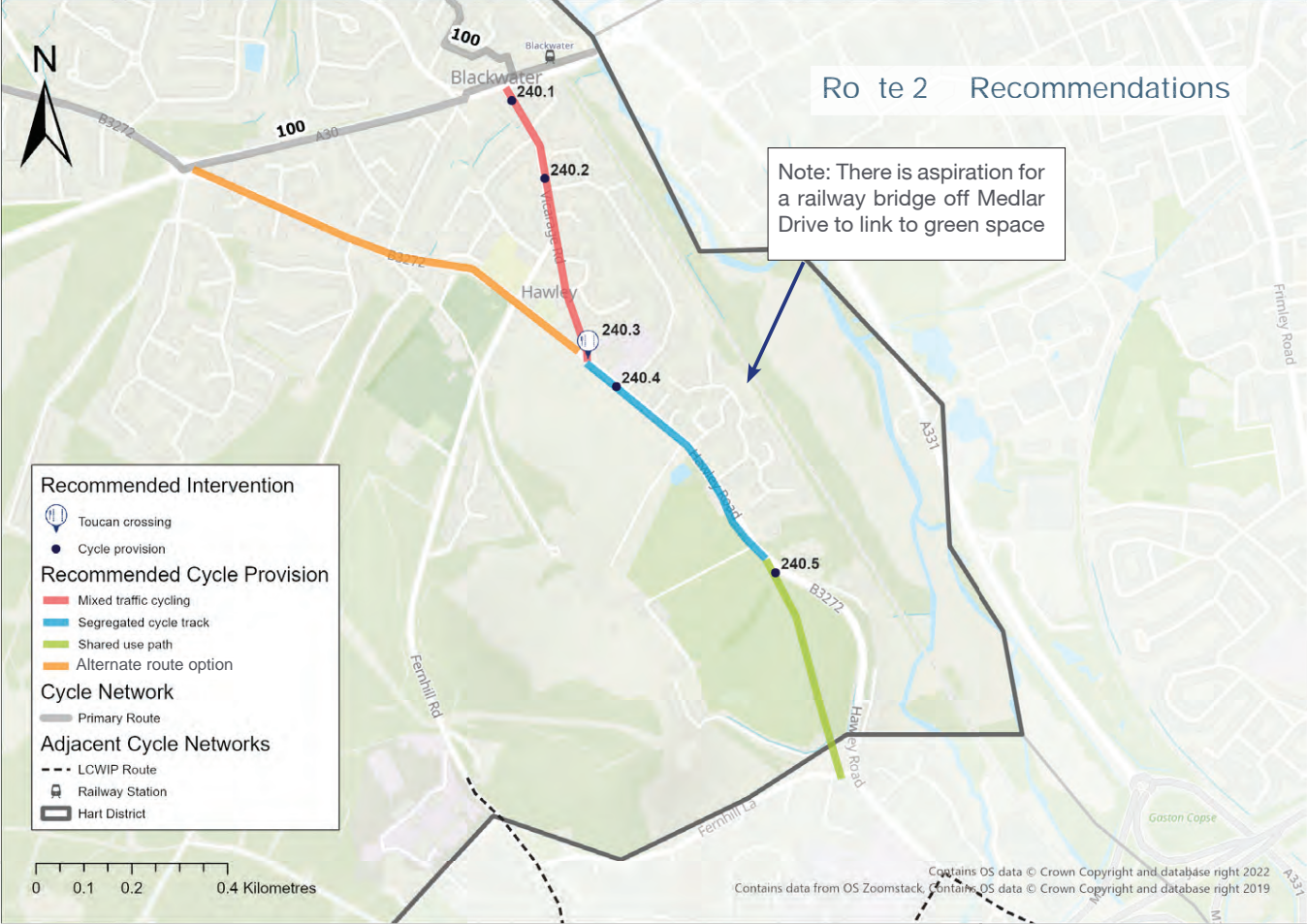


Figure 1.45 B3272/Hawley Road at Hawley Park Farm



Route 2 Recommended cycle provision





### Route 2 Recommendations

Note: There is aspiration for a railway bridge off Medlar Drive to link to green space

| Intervention Number | Recommendation   |
|---------------------|--|
| 240.1               | Further study needed to determine if a modal filter could be installed on Vicarage Road to make the carriageway suitable for mixed traffic cycling.  |
| 240.2               | Potential modal filter location. A modal filter would likely also be required on New Road/The Glebe. Further study is required.  |
| 240.3               | Investigate feasibility of installing Toucan crossing over Hawley Road.  |
| 240.4               | Investigate using western verge to create a segregated cycle track from Vicarage Road to the SANG's northern boundary.   |
| 240.5               | Investigate feasibility of adding shared use path through SANG. This may align with site plans for this development. It may require widening pedestrian paths and ensuring permissive cycle access is allowed through the development. |



# Prioritisation

## Prioritisation

Core Walking Zones (CWZ) and cycle route prioritisation is the final step of the LCWIP process and aims to identify the routes that are more likely than others to present higher benefits and achieve modal shift.

A robust prioritisation methodology is required to identify which of the routes and zones are likely to be of the greatest importance and have the highest impact. Combining the information derived from all previous LCWIP steps, the routes were appraised using the LCWIP prioritisation methodology provided by Hampshire County Council, which assessed each route against the following categories: effectiveness, policy, economics and deliverability.

- **Effectiveness** refers to what extent the cycle route or CWZ will deliver modal shift and affect positive change in the public realm. The LCWIP guidance suggests that the following are considered within the 'effectiveness' theme:
  - The forecast increase in the number of walking and cycling trips
  - The population who directly benefit from the intervention
  - Improvement in road safety
  - Air quality impact
  - Impact on other users
  - Integration with other schemes
  - Safe routes to school
- **Policy** refers to what extent the cycle route or CWZ will support wider policy objectives. The LCWIP guidance suggests that the following are considered within the 'policy' theme:
  - Delivery against policy objectives, such as improvements to health and inclusion
  - Importance of the intervention for particular target user groups, e.g. people without access to a car/van, or with higher levels of poor health
  - Classification by type of journey (e.g., education, workplace, utility, recreation) to aid alignment with particular funding streams
  - Performance against local transport plans/local plan policies
  - Priority/importance of the intervention as defined through the engagement process

- **Economics** sets out, for each route and CWZ, the estimated cost of construction and potential to attract funding. Whilst this theme is not included within the LCWIP guidance, it will aid officers when considering the economic implications of the LCWIP potential options. This theme considers the following criteria:
  - Cost of construction
  - Potential to attract funding
- **Deliverability** (only for cycle routes) identifies to what extent each cycle route will be quick and easy to implement. The LCWIP guidance suggests that the following are considered within the 'deliverability' theme:
  - Scheme feasibility/deliverability
  - Environmental constraints, e.g. conservation areas

Each theme has several metrics. Some have more than others. In order to ensure the total score per theme is not affected by the number of metrics contained within each one, a "normalised" total score is provided as a percentage.

The normalised totals represent how each route/zone scores relative to the total possible score in that theme.

| Priority Category | Criteria Assessed | Relative Weighting Factors |
|-------------------|-------------------|----------------------------|
| Effectiveness     | 7                 | 25%                        |
| Policy            | 11                | 25%                        |
| Economics         | 2                 | 25%                        |
| Deliverability    | 2                 | 25%                        |

Figure 1.46 Prioritisation criteria

A scoring system of 1 to 3, with 1 being the worst and 3 being the best score that a route or zone could receive, was put in place.

The overall score over the four priority categories was compared for all routes which were then ranked, revealing where priority should be given.

Please note that this prioritisation serves as a guide for initiating routes and CWZ development when no other constraints are present. However, it's essential to understand that the implementation may not always align precisely with the stated priority order. This can occur due to various factors, including funding availability in different areas, shifts in funders' priorities related to specific issues, updated information that may alter the priority order, and other considerations.

In addition, the scores relate to the whole route or CWZ, and some routes/zones may have sections which would score very high, and others which would score very low if analysed by sections. Further analysis could be undertaken when delivery of part of a route or zone.



## Prioritisation of Cycling Routes

The table below presents the results of the cycle route prioritisation process, with scores across the four priority categories and their final ranking based on the overall score.

| Route     | Normalised Priority Scores |        |           |                | Overall Score | Ranking |
|-----------|----------------------------|--------|-----------|----------------|---------------|---------|
|           | Effectiveness              | Policy | Economics | Deliverability |               |         |
|           | 25%                        | 25%    | 25%       | 25%            |               |         |
| Route 150 | 94%                        | 73%    | 83%       | 83%            | 83.6%         | 1       |
| Route 160 | 78%                        | 67%    | 83%       | 100%           | 81.9%         | 2       |
| Route 130 | 56%                        | 77%    | 83%       | 83%            | 74.7%         | 3       |
| Route 220 | 67%                        | 77%    | 83%       | 67%            | 73.3%         | 4       |
| Route 120 | 61%                        | 63%    | 67%       | 100%           | 72.8%         | 5       |
| Route 210 | 56%                        | 63%    | 83%       | 83%            | 71.4%         | 6       |
| Route 240 | 61%                        | 73%    | 67%       | 83%            | 71.1%         | 7       |
| Route 110 | 44%                        | 67%    | 67%       | 100%           | 69.4%         | 8       |
| Route 100 | 89%                        | 77%    | 33%       | 67%            | 66.4%         | 9       |
| Route 200 | 61%                        | 77%    | 83%       | 33%            | 63.6%         | 10      |
| Route 140 | 67%                        | 57%    | 50%       | 50%            | 55.8%         | 11      |
| Route 230 | 61%                        | 60%    | 67%       | 33%            | 55.3%         | 12      |

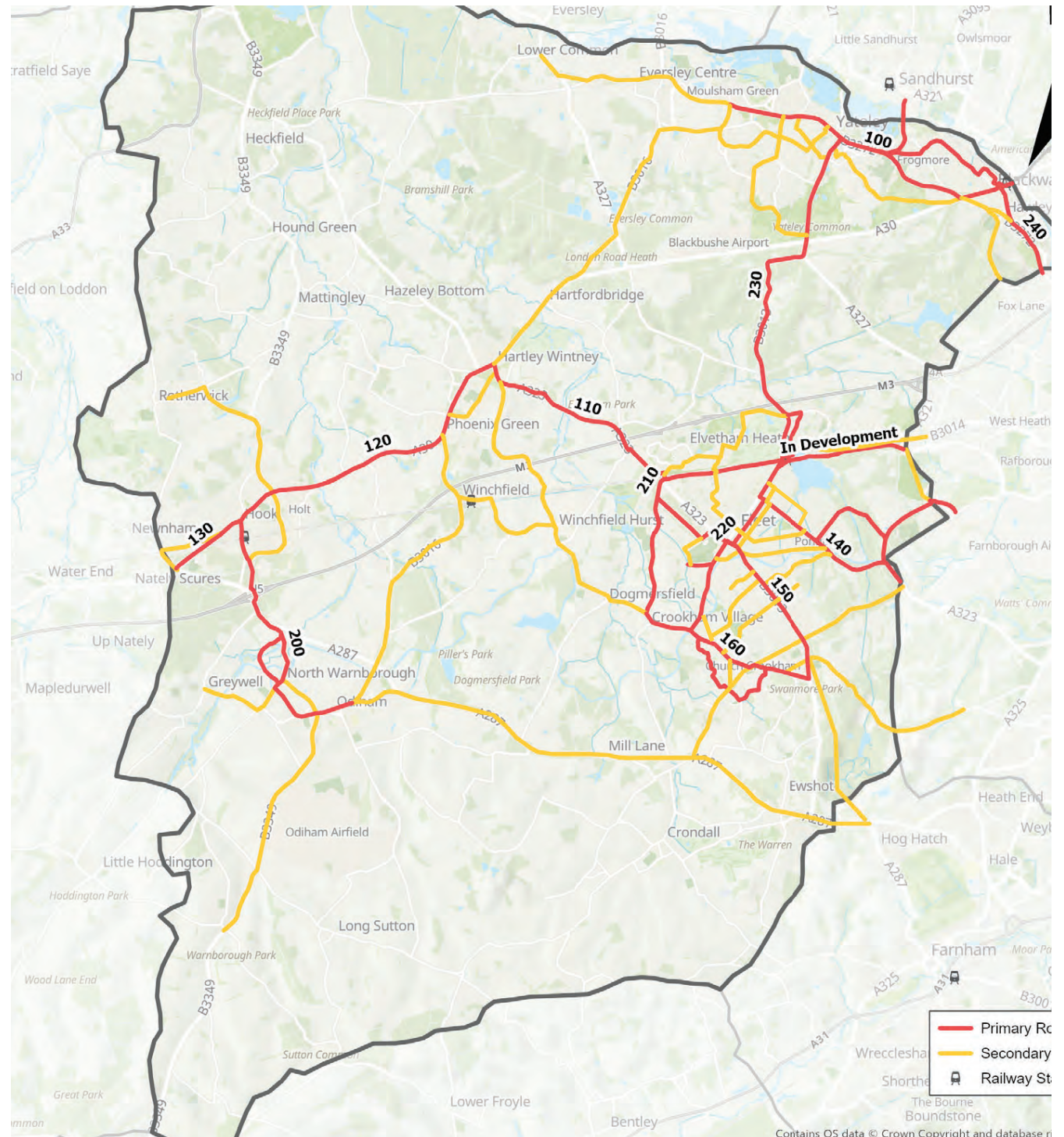
Figure 1.47 Prioritisation of Cycling Routes

The prioritisation process suggests that Route 150 should be prioritised over other routes, as it scored higher overall. Route 160 was ranked second, followed by Route 130 ranked third.

Routes 200 and 230 had the lowest scores in terms of deliverability, reflecting greater feasibility and environmental constraints.

Route 100 received low scores in the economics criteria, primarily due to low potential to attract funding and the higher cost estimate. The high cost is mainly attributed to its long length of segregated cycle track.

Route 110 performed low in terms of effectiveness, with low scores in almost all aspects within this criterion. The only exception is its 'integration with other schemes,' where it was rated as medium.



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## Prioritisation of Core Walking Zones

The table below presents the results of the CWZ prioritisation process, with scores across three priority categories and their final ranking based on the overall score.

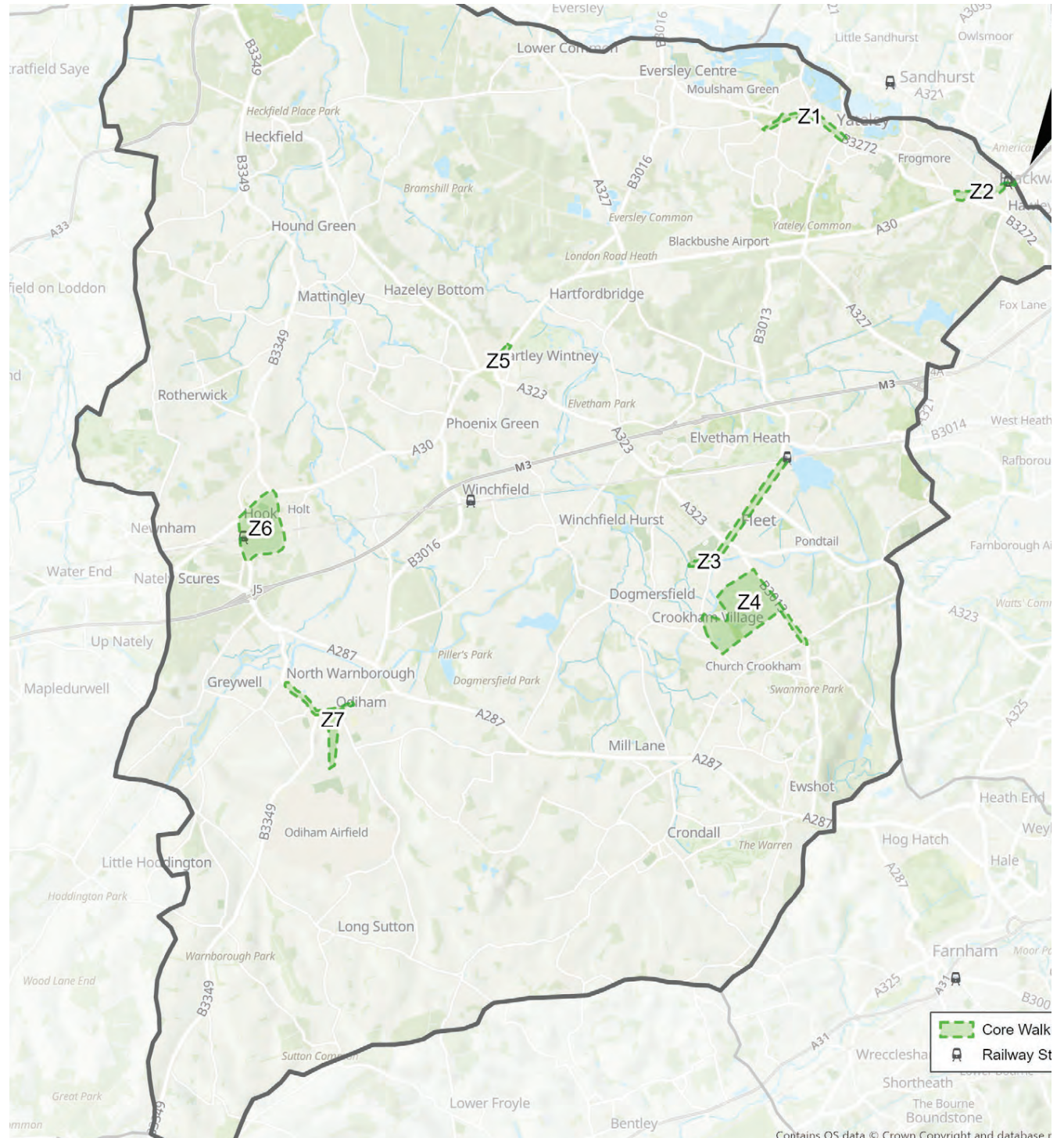
| Core Walking Zone    | Normalised Priority Scores |        |           | Overall Score | Ranking |
|----------------------|----------------------------|--------|-----------|---------------|---------|
|                      | Effectiveness              | Policy | Economics |               |         |
|                      | 33%                        | 33%    | 33%       |               |         |
| Core Walking Zone Z6 | 67%                        | 63%    | 83%       | 71.1%         | 1       |
| Core Walking Zone Z3 | 73%                        | 50%    | 83%       | 68.9%         | 2       |
| Core Walking Zone Z4 | 67%                        | 57%    | 83%       | 68.9%         | 2       |
| Core Walking Zone Z1 | 53%                        | 50%    | 67%       | 56.7%         | 3       |
| Core Walking Zone Z7 | 33%                        | 63%    | 67%       | 54.4%         | 4       |
| Core Walking Zone Z5 | 33%                        | 50%    | 67%       | 50.0%         | 5       |
| Core Walking Zone Z2 | 47%                        | 57%    | 33%       | 45.6%         | 6       |

Figure 1.48 Prioritisation of Core Walking Zones

The prioritisation process suggests that Z6 should be prioritised over other CWZ, as it scored higher overall. Z3 and Z4 were ranked second, followed by Z1 and Z7 which ranked third and fourth, respectively.

CWZ Z2, Z5 and Z7 scored low in terms of effectiveness, with low scores in the following criteria: “road safety”, “air quality impact”, “integration with other schemes” and “safe routes to school”.

CWZ Z2 also received low scores in the economics criteria, primarily due to its limited potential to attract funding and a higher cost estimate. The higher cost is primarily attributed to a major roundabout re-design (Recommendation Z2.2).





# Next steps

# Next Steps

## Medium to longer term:

### Further stakeholder and community engagement

This should fit into all stages of the design process. An example could include a mini-engagement package over two or three days involving members of the public in the street with targeted discussion of the results of route audits and the LCWIP. Testing the conclusions of the report will help ensure the solutions being advanced are appropriate as well as ensuring there is appetite and support for such change.

### Identify sources of funding

Potential sources include:

- DfT LCWIP funding stream
- DfT Capability Fund
- DfT Active Travel Fund
- Local economic regeneration funding
- Community Infrastructure Levy (CIL) & s106 s278 contributions from developers

### Integration into local policy and planning documents

Promote the LCWIP outputs for inclusion into local planning and transport policies, strategies and delivery plans and continually review and update the LCWIP as a working document.

### Further studies and surveys

Consider commissioning further studies and surveys required as part of scheme development process and help de-risk schemes, for example:

- Business Case (making the case for investment for prospective funders, especially relevant if bringing the whole network forward together or the traffic-free sections).
- Feasibility design:
  - Engineering design review
  - Traffic count surveys
  - Traffic modelling
  - Topographic surveys
  - Land registry searches
  - Ecological surveys

### Making the Case

Schemes that involve significant change to the existing highway network to improve cycling and walking provision can be a challenge in a car dominated context. The political, economic and policy element is often pivotal; therefore, ensuring any schemes are underpinned by strong and robust arguments that join up with the local political and community context is key.



# Appendices

# Design principles

The options outlined in this study have been based on the standards presented in the Department for Transport (DfT) Cycle Infrastructure Design guidance document Local Transport Note (LTN) 1/20.

All new scheme designs should meet the current highway infrastructure design guidance as identified by the Department for Transport and its new executive agency, Active Travel England.

Another resource for design guidance is the [Kent Design Guide](#). It communicates key guidance on placemaking for the county.

Some of the most relevant criteria considered for cycle corridor design guidance are presented as follows:

## Local Transport Note 1/20

This national guidance provides a basis for design based on five core principles and 22 summary principles, as follows:

### Core design principles

The five core design principles represent the essential requirements to achieve more people travelling by cycle, based on best practice both internationally and across the UK.

There are five core design outcomes for cycle routes:

- Coherent
- Direct
- Safe
- Comfortable
- Attractive

### Summary Principles

1. Cycle infrastructure should be accessible to everyone from 8 to 80 and beyond: it should be planned and designed for everyone. The opportunity to cycle in towns and cities should be universal.
2. Cycles must be treated as vehicles and not as pedestrians. On urban streets, cyclists must be physically separated from pedestrians and should not share space with pedestrians. Where cycle routes cross pavements, a physically segregated track should always be provided. At crossings and junctions, cyclists should not share the space used by pedestrians but

should be provided with a separate parallel route.

3. Cyclists must be physically separated and protected from high volume motor traffic, both at junctions and on the stretches of road between them.
4. Side street routes, if closed to through traffic to avoid rat-running, can be an alternative to segregated facilities or closures on main roads – but only if they are truly direct.
5. Cycle infrastructure should be designed for significant numbers of cyclists, and for non-standard cycles. The aim is that thousands of cyclists a day will use many of these schemes.
6. Consideration of the opportunities to improve provision for cycling will be an expectation of any future local highway schemes funded by Government.
7. Largely cosmetic interventions which bring few or no benefits for cycling or walking will not be funded from any cycling or walking budget.
8. Cycle infrastructure must join together, or join other facilities together by taking a holistic, connected network approach which recognises the importance of nodes, links and areas that are good for cycling.
9. Cycle parking must be included in substantial schemes, particularly in city centres, trip generators and (securely) in areas with flats where people cannot store their bikes at home. Parking should be provided in sufficient amounts at the places where people actually want to go.
10. Schemes must be legible and understandable.
11. Schemes must be clearly and comprehensively signposted and labelled.
12. Major 'iconic' items, such as overbridges must form part of wider, properly thought-through schemes.
13. As important as building a route itself is maintaining it properly afterwards.
14. Surfaces must be hard, smooth, level, durable, permeable and safe in all weathers.
15. Trials can help achieve change and ensure a permanent scheme is right first time. This will avoid spending time, money and effort modifying a scheme that does not perform as anticipated.
16. Access control measures, such as chicane barriers and dismount signs, should not be used.

17. The simplest, cheapest interventions can be the most effective.
18. Cycle routes must flow, feeling direct and logical
19. Schemes must be easy and comfortable to ride.
20. All designers of cycle schemes must experience the roads as a cyclist.
21. Schemes must be consistent.
22. When to break these principles.

## Cycle parking

Cycle parking is integral to any cycle network, and to wider transport systems incorporating public transport.

The availability of secure cycle parking at home, the end of a trip or at an interchange point has a significant influence on cycle use.

LTN 1/20 states that:

Cycle parking is an essential component of cycle infrastructure. Sufficient and convenient residential cycle parking enables people to choose cycling. At the trip end, proximity to destinations is important for short stay parking, while for longer-stay parking security concerns can be a factor. As with other infrastructure, designers should consider access for all cycles and their passengers.

Cycle parking would be considered as part of relevant schemes.



## Accessibility for all

### Coherent



**DO** Cycle networks should be planned and designed to allow people to reach their day to day destinations easily, along routes that connect, are simple to navigate and are of a consistently high quality.

### Direct



**DO** Cycle routes should be at least as direct – and preferably more direct – than those available for private motor vehicles.

### Safe



**DO** Not only must cycle infrastructure be safe, it should also be perceived to be safe so that more people feel able to cycle.

### Comfortable



**DO** Comfortable conditions for cycling require routes with good quality, well-maintained smooth surfaces, adequate width for the volume of users, minimal stopping and starting and avoiding steep gradients.

### Attractive



**DO** Cycle infrastructure should help to deliver public spaces that are well designed and finished in attractive materials and be places that people want to spend time using.



**DON'T** Neither cyclists or pedestrians benefit from unintuitive arrangements that put cyclists in unexpected places away from the carriageway.



**DON'T** This track requires cyclists to give way at each side road. Routes involving extra distance or lots of stopping and starting will result in some cyclists choosing to ride on the main carriageway instead because it is faster and more direct, even if less safe.



**DON'T** Space for cycling is important but a narrow advisory cycle lane next to a narrow general traffic lane and guard rail at a busy junction is not an acceptable offer for cyclists.



**DON'T** Uncomfortable transitions between on-and off carriageway facilities are best avoided, particularly at locations where conflict with other road users is more likely.



**DON'T** Sometimes well-intentioned signs and markings for cycling are not only difficult and uncomfortable to use, but are also unattractive additions to the street scape.



# Design Standards

Relevant extracts from LTN 1/20 used as a basis for potential options in this report:

Figure 4.1: Appropriate protection from motor traffic on highways

| Speed Limit <sup>1</sup> | Motor Traffic Flow (pcu/24 hour) <sup>2</sup> | Protected Space for Cycling |                     |                   | Cycle Lane (mandatory/ advisory) | Mixed Traffic |
|--------------------------|---|-----------------------------|---------------------|-------------------|----------------------------------|---------------|
|                          |   | Fully Kerbed Cycle Track    | Stepped Cycle Track | Light Segregation |                                  |               |
| 20 mph <sup>3</sup>      | 0   |                             |                     |                   |                                  |               |
|                          | 2000  |                             |                     |                   |                                  |               |
|                          | 4000  |                             |                     |                   |                                  |               |
|                          | 6000+   |                             |                     |                   |                                  |               |
| 30 mph                   | 0   |                             |                     |                   |                                  |               |
|                          | 2000  |                             |                     |                   |                                  |               |
|                          | 4000  |                             |                     |                   |                                  |               |
|                          | 6000+   |                             |                     |                   |                                  |               |
| 40 mph                   | Any   |                             |                     |                   |                                  |               |
| 50+ mph                  | Any   |                             |                     |                   |                                  |               |

- Provision suitable for most people
- Provision not suitable for all people and will exclude some potential users and/or have safety concerns
- Provision suitable for few people and will exclude most potential users and/or have safety concerns

- Notes:
- If the 85<sup>th</sup> percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
  - The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow
  - In rural areas achieving speeds of 20mph may be difficult, and so shared routes with speeds of up to 30mph will be generally acceptable with motor vehicle flows of up to 1,000 pcu per day

Table 6-1: Minimum recommended horizontal separation between carriageway and cycle tracks\*

| Speed limit (mph) | Desirable minimum horizontal separation (m) | Absolute minimum horizontal separation (m) |
|-------------------|---|--|
| 30                | 0.5   | 0  |
| 40                | 1.0   | 0.5  |
| 50                | 2.0   | 1.5  |
| 60                | 2.5   | 2.0  |
| 70                | 3.5   | 3.0  |

\*Separation strip should be at least 0.5m alongside kerbside parking and 1.5m where wheelchair access is required.

Table 5-2: Cycle lane and track widths

| Cycle Route Type   | Direction | Peak hour cycle flow (either one way or two-way depending on cycle route type) | Desirable minimum width* (m) | Absolute minimum at constraints (m) |
|--|-----------|--|------------------------------|-------------------------------------|
| Protected space for cycling (including light segregation, stepped cycle track, kerbed cycle track) | 1 way     | <200   | 2.0                          | 1.5                                 |
|  |           | 200-800  | 2.2                          | 2.0                                 |
|  |           | >800   | 2.5                          | 2.0                                 |
|  | 2 way     | <300   | 3.0                          | 2.0                                 |
|  |           | >300-1000  | 3.0                          | 2.5                                 |
|  |           | >1000  | 4.0                          | 3.0                                 |
| Cycle lane   | 1 way     | All – cyclists able to use carriageway to overtake                             | 2.0                          | 1.5                                 |

\*based on a saturation flow of 1 cyclist per second per metre of space. For user comfort a lower density is generally desirable.

Table 6-3: Recommended minimum widths for shared use routes carrying up to 300 pedestrians per hour

| Cycle flows                 | Minimum width |
|-----------------------------|---------------|
| Up to 300 cyclists per hour | 3.0m          |
| Over 300 cyclists per hour  | 4.5m          |

Table 7-2: Minimum acceptable lane widths\*

| Feature  | Desirable minimum | Absolute minimum | Notes   |
|--|-------------------|------------------|---|
| Traffic lane (cars only, speed limit 20/30mph)                   | 3.0m              | 2.75m            | 2.5m only at offside queuing lanes where there is an adjacent flared lane                                     |
| Traffic lane (bus route or >8% HGVs, or speed limit 40mph)       | 3.2m              | 3.0m             | Lane widths of between 3.2m and 3.9m are not acceptable for cycling in mixed traffic.                         |
| 2-way traffic lane (no centre line) between advisory cycle lanes | 5.5m              | 4.0m             | 4.0m width only where AADT flow <4000 vehicles** and/or peak hour <500 vehicles with minimal HGV/Bus traffic. |

\* these lane widths assume traffic is free to cross the centre line, see 7.2.9 for details on critical widths at pinch points

\*\* While centre line removal is still feasible with higher flows, the frequency at which oncoming vehicles must enter the cycle lane to pass one another can make the facility uncomfortable for cycling.



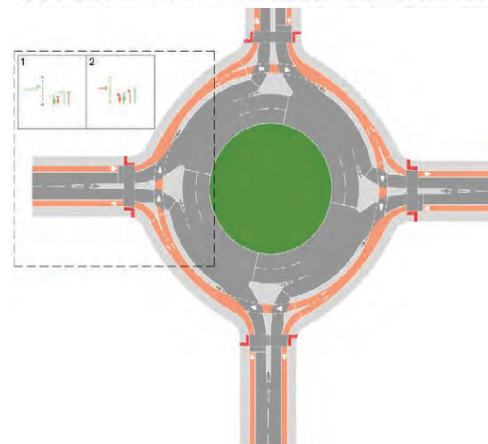
**Table 10-2: Crossing design suitability**

| Speed Limit       | Total traffic flow to be crossed (pcu) | Maximum number of lanes to be crossed in one movement | Uncontrolled | Cycle Priority | Parallel | Signal | Grade separated |
|-------------------|--|---|--------------|----------------|----------|--------|-----------------|
| ≥ 60mph           | Any                                    | Any   | Green        | Green          | Green    | Green  | Green           |
| 10 mph and 20 mph | > 10000                                | /any  | Green        | Green          | Green    | Green  | Green           |
|                   | 6000 to 10000                          | 2 or more   | Green        | Green          | Green    | Green  | Green           |
|                   | 0-6000                                 | 2   | Green        | Green          | Green    | Green  | Green           |
|                   | 0-10000                                | 1   | Yellow       | Green          | Green    | Green  | Green           |
| ≤ 30mph           | > 8000                                 | > 2   | Green        | Green          | Green    | Green  | Green           |
|                   | > 2000                                 | 2   | Green        | Green          | Green    | Green  | Green           |
|                   | 4000-8000                              | 2   | Yellow       | Green          | Green    | Green  | Green           |
|                   | 0-4000                                 | 2   | Green        | Green          | Green    | Green  | Green           |
|                   | 0-4000                                 | 1   | Green        | Green          | Green    | Green  | Green           |

- Provision suitable for most people
- Provision not suitable for all people and will exclude some potential users and/or have safety concerns
- Provision suitable for few people and will exclude most potential users and/or have safety concerns

- Notes:
1. If the actual 85<sup>th</sup> percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
  2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow

**Figure 10.39:** Carriageway-level cycle track used with 'hold the left' traffic staging



**Table 11-1: Suggested minimum cycle parking capacity for different types of land use**

| Land use type                       | Sub-category  | Short stay requirement (obvious, easily accessed and close to destination) | Long stay requirement (secure and ideally covered)   |
|-------------------------------------|---|--|--|
| <b>All</b>                          | Parking for adapted cycles for disabled people            | 5% of total capacity co-located with disabled car parking.                 | 5% of total capacity co-located with disabled car parking.   |
| <b>Retail</b>                       | Small (<200m <sup>2</sup> )                               | 1 per 100m <sup>2</sup>  | 1 per 100m <sup>2</sup>  |
|                                     | Medium (200-1,000m <sup>2</sup> )                         | 1 per 200m <sup>2</sup>  | 1 per 200m <sup>2</sup>  |
|                                     | >1,000m <sup>2</sup>                                      | 1 per 250m <sup>2</sup>  | 1 per 500m <sup>2</sup>  |
| <b>Employment</b>                   | Office/Finance (A2/B1)                                    | 1 per 1000m <sup>2</sup>   | 1 per 200m <sup>2</sup>  |
|                                     | Industrial/Warehousing (B2/B8)                            | 1 per 1,000m <sup>2</sup>  | 1 per 500m <sup>2</sup>  |
| <b>Leisure and Institutions</b>     | Leisure centres, assembly halls, hospitals and healthcare | Greatest of:<br>1 per 50m <sup>2</sup> or 1 per 30 seats/capacity          | 1 per 5 employees  |
|                                     | Educational Institutions                                  | –  | Separate provision for staff and students. Based on Travel Plan mode share targets, minimum:<br>Staff: 1 per 20 staff<br>Students: 1 per 10 students |
| <b>Residential</b>                  | All except sheltered/elderly housing or nursing homes     | –  | 1 per bedroom  |
|                                     | Sheltered/elderly housing/nursing homes                   | 0.05 per residential unit  | 0.05 per bedroom   |
| <b>Public Transport Interchange</b> | Standard stop   | Upon own merit   | –  |
|                                     | Major interchange   | 1 per 200 daily users  | –  |

**Cycle Dimensions and Cycle Design Vehicle:** Figure 5.2 shows the range of dimensions for cycles typically in use. It is important that infrastructure can accommodate the full range of cycles to ensure routes are accessible to all cyclists. The cycle design vehicle referred to in this document represents a composite of the maximum dimensions shown in Figure 5.2 is assumed as 2.8m long and 1.2m wide. Table 5-1 shows the minimum turning radii suitable only for low speed manoeuvres such as access to cycle parking.

Figure 5.2: Typical dimensions of cycles



Table 5-1: Size and minimum turning circles of cycles

| Type of Cycle                 | Typical length (m) | Typical width (m) | Minimum turning circle (m) |                             |
|-------------------------------|--------------------|-------------------|----------------------------|-----------------------------|
|                               |                    |                   | Outer radius               | Inner radius                |
| Cycle design vehicle          | 2.8 (max)          | 1.2 (max)         | 3.4 (max)                  | 0.1 (min)*                  |
|                               |                    |                   |                            | 2.5m (3 and 4 wheel cycles) |
| Solo upright cycle            | 1.8                | 0.65              | 1.65                       | 0.85                        |
| Cycle plus 850mm wide trailer | 2.7                | 0.85              | 2.65                       | 1.5                         |
| Tandem                        | 2.4                | 0.65              | 3.15                       | 2.25                        |

\*applies only to some cycles that can pivot at very low speeds

**Gradients:** Table 5-8 shows the desirable maximum length for gradients. People can cycle steep gradients that are fairly short but typically cannot maintain high levels of effort for long distances. Cycle routes along existing roads and paths will usually have to follow the existing gradient, but there may be opportunities to divert onto alternative routes for short sections or reducing gradients through earthworks where space is available.

Speed of travel is also important to consider. Steep gradients can lead to high speeds for descending cyclists and low speeds for climbing cyclists, which can create hazards for all users on the route. Stopping sight distances increase on down gradients greater than 3%.

Table 5-8: Maximum length for gradients

| Gradient % | Desirable maximum length of gradient (m) |
|------------|--|
| 2.0        | 150                                      |
| 2.5        | 100                                      |
| 3.0        | 80                                       |
| 3.5        | 60                                       |
| 4.0        | 50                                       |
| 4.5        | 40                                       |
| 5.0        | 30                                       |



# Glossary

|          |   |
|----------|---|
| CWZ      | Core Walking Zone                             |
| DfT      | Department for Transport                      |
| HSDC     | Healthy Streets Design Check                  |
| LCWIP    | Local Cycling and Walking Infrastructure Plan |
| LTN      | Low Traffic Neighbourhood                     |
| LTN 1/20 | Local Traffic Note (1/20)                     |
| MoD      | Ministry of Defence                           |
| PCT      | Propensity to Cycle Tool                      |
| WRAT     | Walking Route Audit Tool                      |