



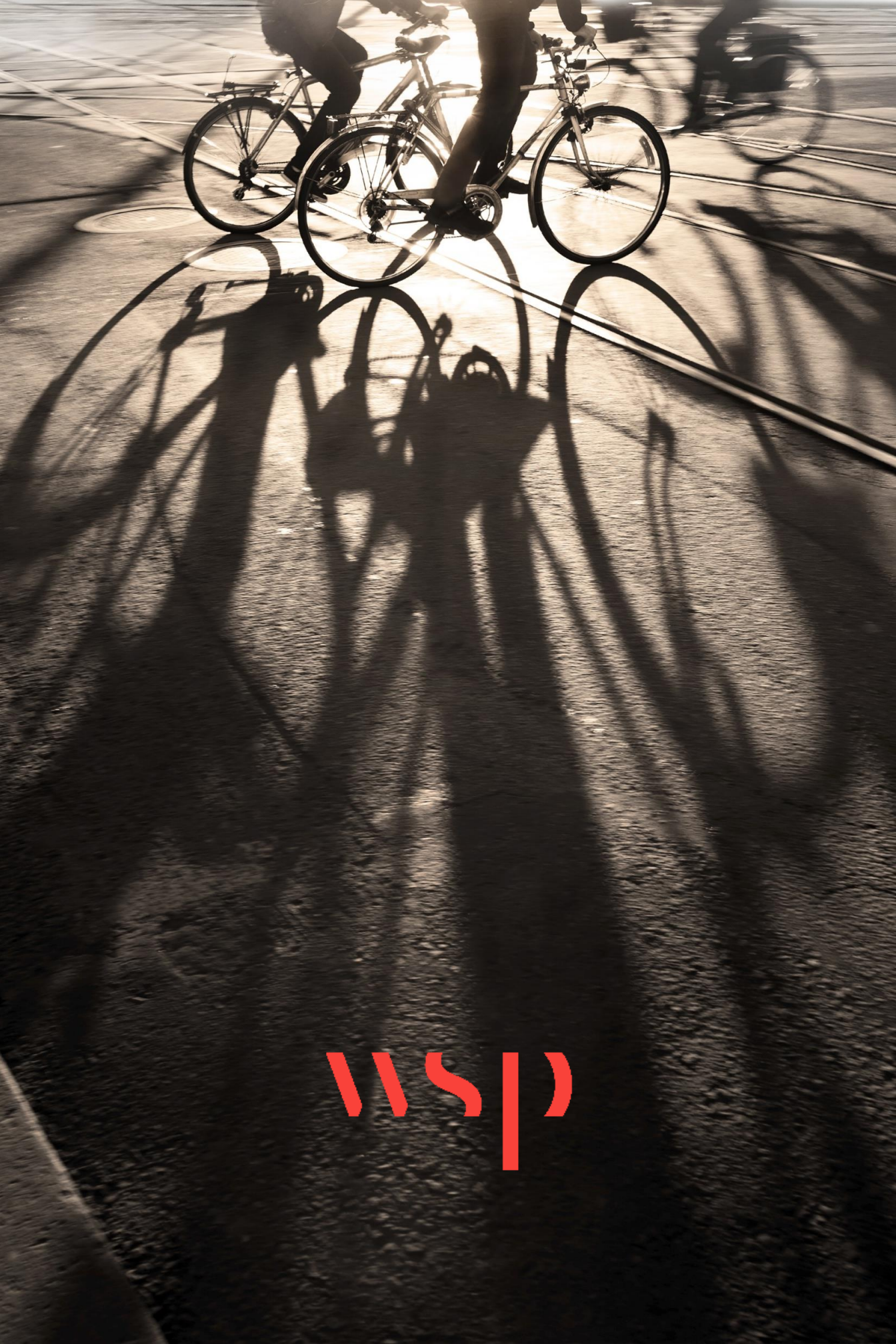
Future Investment Strategy

Active Travel Opportunities



GREATER
CAMBRIDGE
PARTNERSHIP

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Quality Control

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Background

Greater Cambridge Partnership's (GCP) *Future Investment Strategy* (FIS) – initially adopted in March 2019 – looks across the funding period for the *Greater Cambridge City Deal* (2015-2030) to identify priorities for investment, informed by a range of evidence. The GCP Executive Board has agreed to review the FIS in December 2020.

The *Greater Cambridge City Deal* programme has already agreed significant investment in active travel infrastructure schemes, which will improve links within the city and on several arterial routes, creating a network of “Greenways” out to neighbouring towns and villages.

The benefits of active travel, with regards to health, the environment and the capacity of the transport network are well documented. Encouraging modal shift to active travel and public transport is a key part of the *Greater Cambridge City Deal* and necessary to ensure the continued success of both Greater Cambridge and the wider area.

The GCP is now investigating how it should target any further active travel investment, particularly within the context of Covid-19.

Active Travel Study

As a result of the Covid-19 pandemic and government guidance, fewer journeys are currently being made to work; however, data suggests that trips by bicycle have increased. As such, **there is a unique opportunity to lock in long-term modal shift away from car travel towards active travel.**

Despite having a strong cycling culture, the *2019 Greater Cambridge Bike Life* report identified that **local residents felt there was a need for better quality / safer cycle routes**, in order to encourage more journeys to be undertaken by bicycle.

The purpose of this Active Travel Investment Study has been to identify options to invest additional funding in active travel infrastructure schemes, over and above those already funded by the Greater Cambridge City Deal (or those being delivered and funded by other sources). A working budget assumption of £20m was used, only for the purposes of illustrating the nature of the benefits that could be achieved with this level of investment.

Movements into the city from South Cambridgeshire will be greatly improved through the forthcoming “Greenway” network. However, there are still pockets of rural cycle infrastructure that would additionally benefit from further investment. Equally once in the city, cycle routes vary in quality, subsequently reducing connectivity and safety.

Based on these factors this study has focused upon identifying high-trafficked cycle radial routes within the City and South Cambridgeshire, which are currently poorly served by attractive and safe cycle infrastructure.

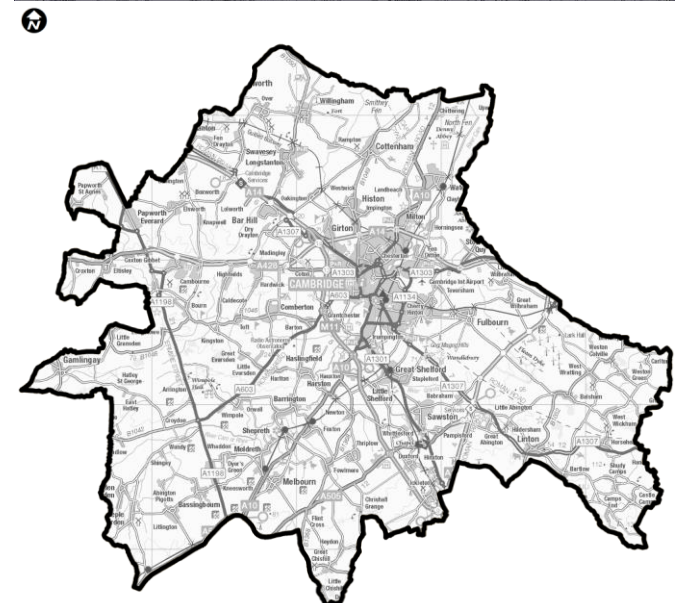
Following engagement with key business organisations and locations, a strategic evaluation of each of the identified active travel corridors has been undertaken. The schemes have been assessed using an Multi Criteria Assessment Framework (MCAF) which allowed options to be ranked against one another, across two sifts (objectives & overall deliverability), based upon a series of equally-weighted criteria.

The outcome of this exercise has led to a scheme prioritisation and a recommendation for the GCP Executive Board to consider and review.

Study Area

This Active Travel Investment Study has focussed on the Greater Cambridge Area, which covers the local authority districts of Cambridge City and South Cambridgeshire, as shown in Figure 1.

Figure 1 Study Area



Our Approach



Methodology

The *Active Travel Investment Study* provides the GCP with an opportunity to decide whether the *Greater Cambridge City Deal* should make further investments in the active travel network, beyond those schemes that are already funded.

In order to assess where further investment should be made, an **understanding is required of the quality of the existing cycle network and the contribution of funded schemes towards creating a comprehensive network.**

From this analysis, and WSP's extensive local knowledge (from our Cambridge office), this study has focussed upon highly-trafficked routes which provide direct connectivity to key existing and future trip attractors across Greater Cambridge, but are currently poorly served by low-quality cycle infrastructure, and with no secured funding for investment at this time.

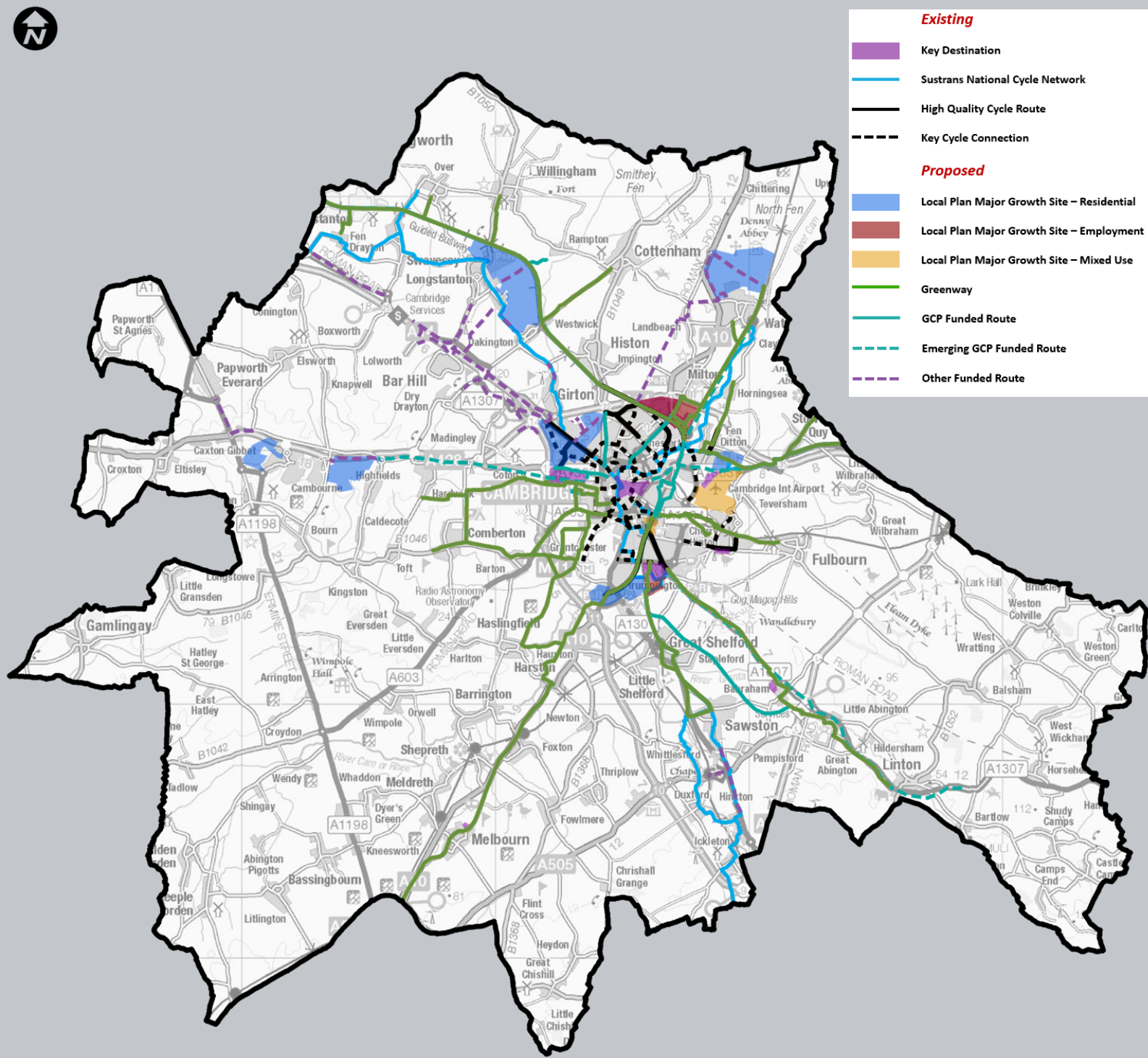
This Active Travel Study has followed a five-step approach, as outlined in Figure 2, which has led to the identification of a strategic active travel recommendations for inclusion in the FIS and for the GCP Executive Board to review. A revised strategic cycling map of Cambridge has also been produced, in order to assist in understanding where planned improvements are occurring and where there are still gaps.

The methodology adopted is consistent with delivery of other strategic active travel studies (building upon WSP's experience from assisting Local Authorities with the recent *Emergency Active Travel Fund (EATF)* implementation) including appropriate levels of stakeholder engagement, concept design development and high-level scheme appraisal.

Figure 2 Study Approach



The Cycle Network & Key Trip Attractors



Wider Cycle Network

The Greater Cambridge area benefits from a good existing cycle network. The wider area is well connected via existing National Cycle Network (NCN) routes and funding is in place for a series of “Greenways” (high-quality, segregated cycle routes) which will connect local towns, villages and major planned growth sites in South Cambridgeshire with key destinations in and around the city.

Ongoing studies by various organisations, including the GCP, have also identified new active travel routes (or upgrades to existing routes) which would improve connectivity within the Greater Cambridge area. Through a variety of sources, several of these schemes are already funded.

Whilst the **existing and funded cycle routes will facilitate movements into the city from the outer areas**, the existing routes within Cambridge City and in South Cambridgeshire vary in quality and gaps in the network reduce connectivity on some key desire lines. This has the potential to dissuade use of the “Greenways” due to poor quality and safety concerns of cycle infrastructure at the edge of city and within the city stage of a journey.

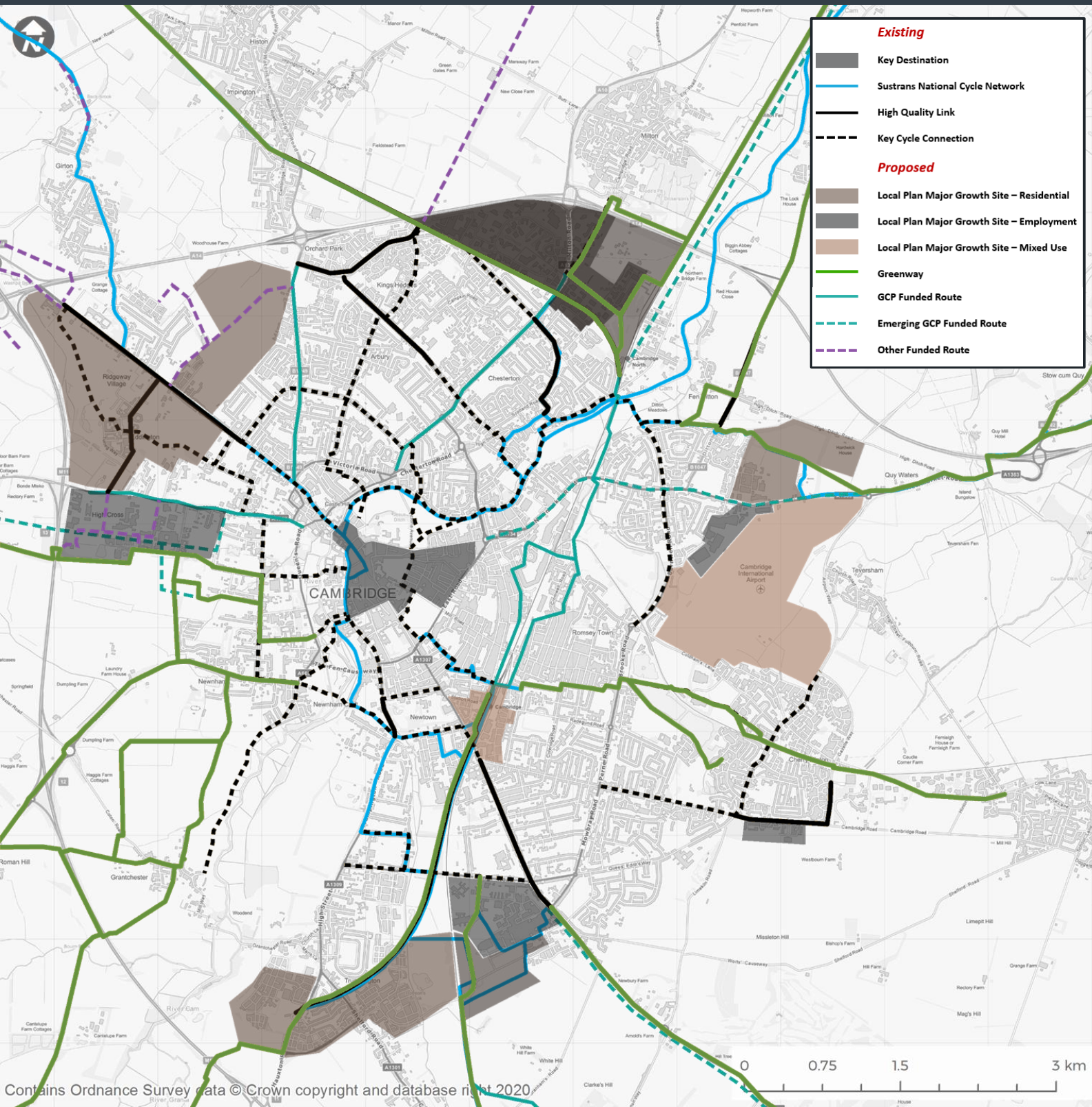
Key Trip Attractors

The majority of key **existing destinations and planned major growth sites within the wider study area are covered by existing or funded routes.**

An exception is for the major growth sites to the west of Cambridge, namely Bourn Airfield and Cambourne West. However, the GCP are developing proposals for a high-quality public transport and cycle corridor from Cambourne to Cambridge. This “gap” in provision is therefore being covered by a separate study already funded by the GCP.

This review of the strategic network has therefore led the study to focus on improvements within South Cambridgeshire and the city area of Cambridge, in order to enhance the investment committed to the “Greenways” and other strategic radial routes within the wider Greater Cambridge region.

The Cycle Network & Key Trip Attractors



City Cycle Network

Within the city, £8m of *Greater Cambridge City Deal* funding has been used to complete five Cross City cycling improvement schemes, which form part of an extensive cycle network. Despite recent investment, other **existing routes within the city vary in quality, thereby creating “gaps” in the network** and reducing connectivity on some key desire lines.

In line with Department for Transport (DfT) guidance Cambridgeshire County Council has been developing a *Local Cycling and Walking Infrastructure Plan (LCWIP)*. The emerging LCWIP identifies priority routes for funding to increase the levels of walking and cycling in the County and the work undertaken for Cambridge has been taken into account within this study.

Key Growth Areas

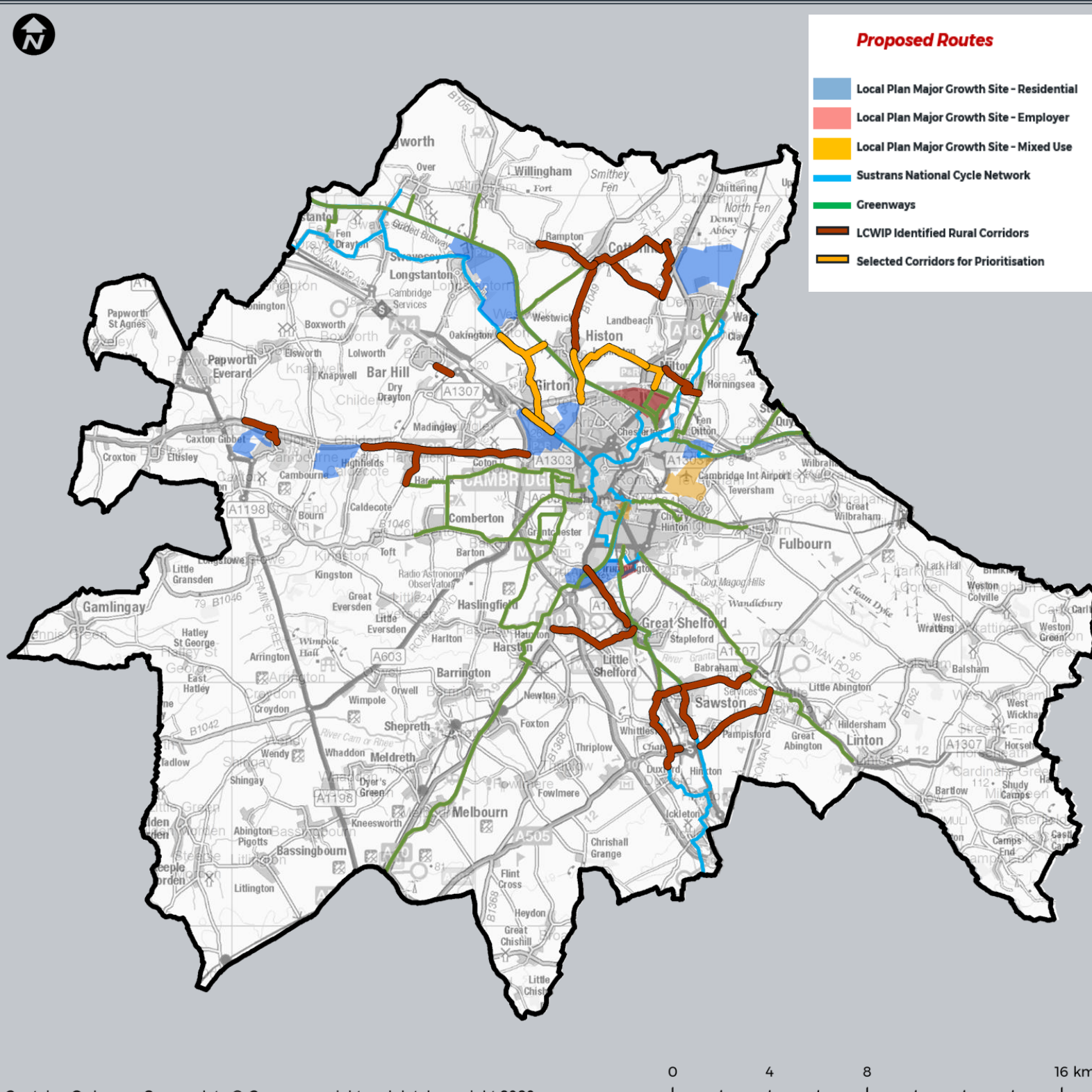
Key existing destinations within Cambridge include the city centre, the science and research parks, the University, the Biomedical Campus, and the West Cambridge site.

Within the *Local Plans* for Cambridge City and South Cambridgeshire, there are **plans for significant residential development along with growth of the existing employment locations** (Biomedical Campus, Science Park and Cambridge Business Park). A series of *Area Action Plan* areas have been developed where significant change is forecast.

The city trip attractors are some of the most popular destinations for trips (varying in purpose). Therefore, it is essential that the key trip attractors benefit from a well connected and cohesive active travel network.

In considering the gaps in the existing network and key desire lines, a number of *‘opportunity corridors’* for improvement have been identified in both the City and South Cambridgeshire..

Corridor Identification – South Cambs



Key Rural Corridors

Starting outside the City, an analysis of routes serving South Cambridge communities was initially undertaken.

As part of CCC’s earlier LCWIP work, origin and destination points were mapped, creating a network of desire lines. These had then been crossed referenced with Propensity to Cycle Tool (PCT) to determine the number of forecasted trips on each link, and **through this process, a shortlist of 18 South Cambridgeshire LCWIP cycle corridor opportunities had been identified by CCC’s Cycle officers as part of the LCWIP work.**

Taking this work as a starting point, we undertook an independent review of each of these 18 short listed options, mapping them in GIS (as shown) and comparing them using the PCT Tool, to identify which corridors best formed part of a cohesive network with the ‘Greenway’ cycle routes and also which routes were likely to be most heavily used by cyclists.

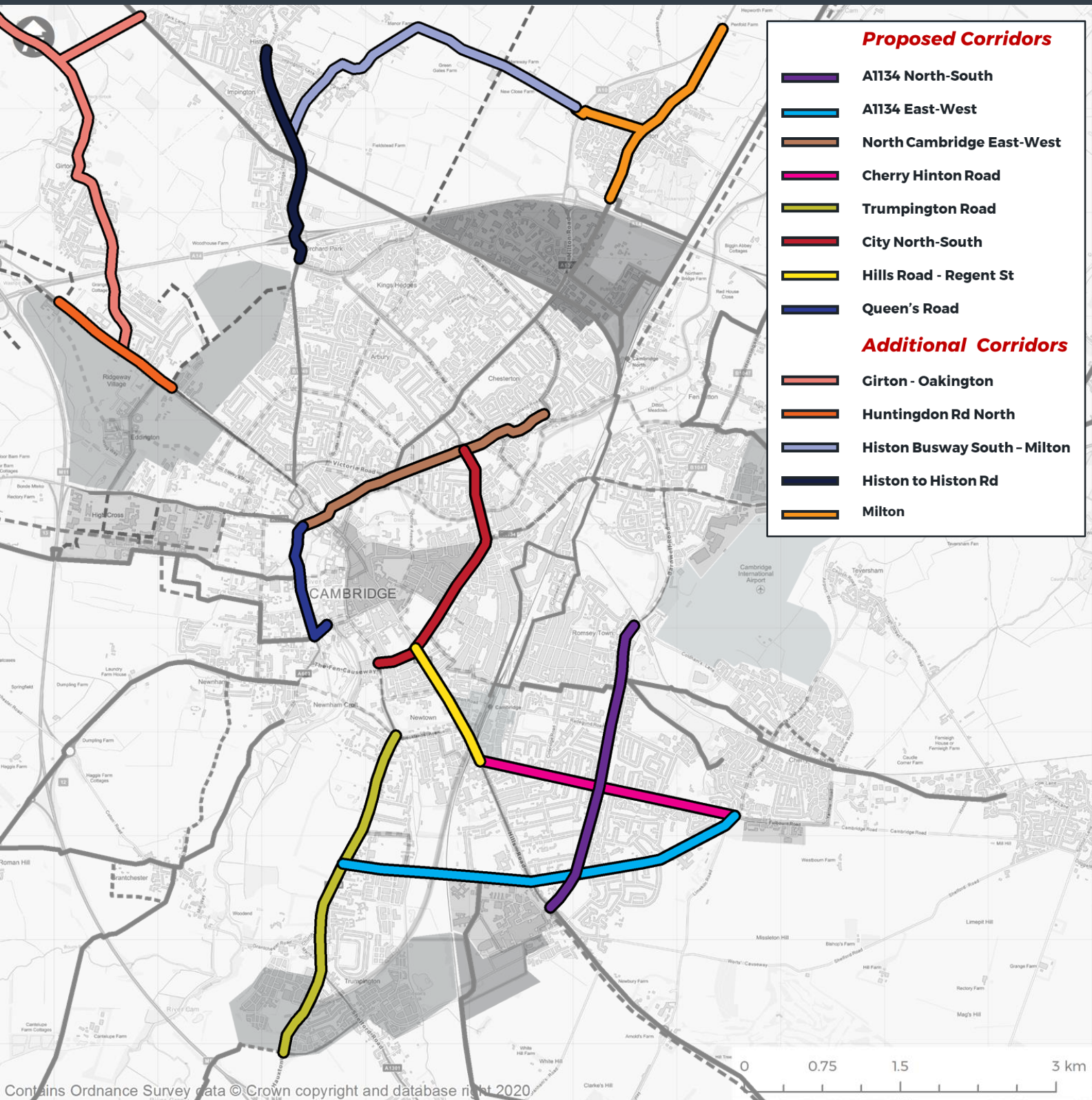
Specifically, to determine which routes had the highest propensity to encourage current and additional cycling, the PCT tool was used to identify the highest flow on each of the routes. These figures were then uplifted to account for bi-directional commuter, school and leisure trips.

Of the 18 rural cycle corridors identified through the LCWIP process, 5 presented significantly higher flows than the other options, with over 1000 trips a day. Those options with less than 1000 trips a day were therefore not taken forward as they were felt to be less likely to generate a positive BCR. Based on this early sift the 5 routes taken forward for prioritisation are:

- Girton to Huntingdon Road
- Huntingdon Road North
- Histon to Histon Road
- Impington to Milton
- Milton Village

These routes have then been reviewed against the City options detailed in the next stage.

Corridor Identification - City Schemes



Identification of City Corridors

Looking next at the City, the evidence gathered from Step 1 and Step 2 indicated that the city **cycle routes, although well used, vary in quality subsequently were reducing potential connectivity in key areas of the network.**

Using a review of the *Rapid Cycleway Prioritisation Tool (RCPT)* – which identifies priority locations for new cycleways, ranking roads by their “cycling potential” (Figure 3) – in combination with WSP’s extensive local knowledge, **a series of City based active travel corridors for potential investment was identified** which:

- focused upon high-trafficked radial routes which provide direct connectivity across the city but are poorly served by attractive cycle infrastructure;
- focused upon access to / from existing and future residential areas / strategic growth sites and the city; and
- focused upon the existing lack of segregation along the main radials that is inhibiting modal shift, particularly for school children and workers.
- focused upon junctions which act as a barrier to less confident cyclists or have a cycle accident record.

The methodology used to identify these corridors broadly aligns with that which underpinned the DfT’s guidance for LCWIP and EATF, as well as being similar the LCWIP work for South Cambridgeshire.

The next section of this report reviews each of these short listed City and South Cambridgeshire corridors in detail, for opportunities and constraints, and has been conducted in consultation with Cambridgeshire County Council’s cycling team, in order to identify indicative scheme proposals.

If selected for investment these proposal will require further detailed investigation as a next stage of work.

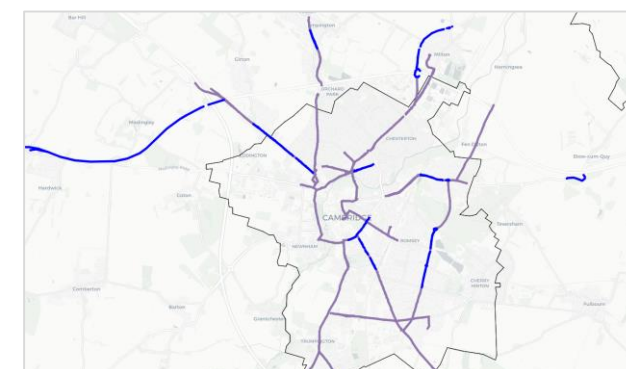
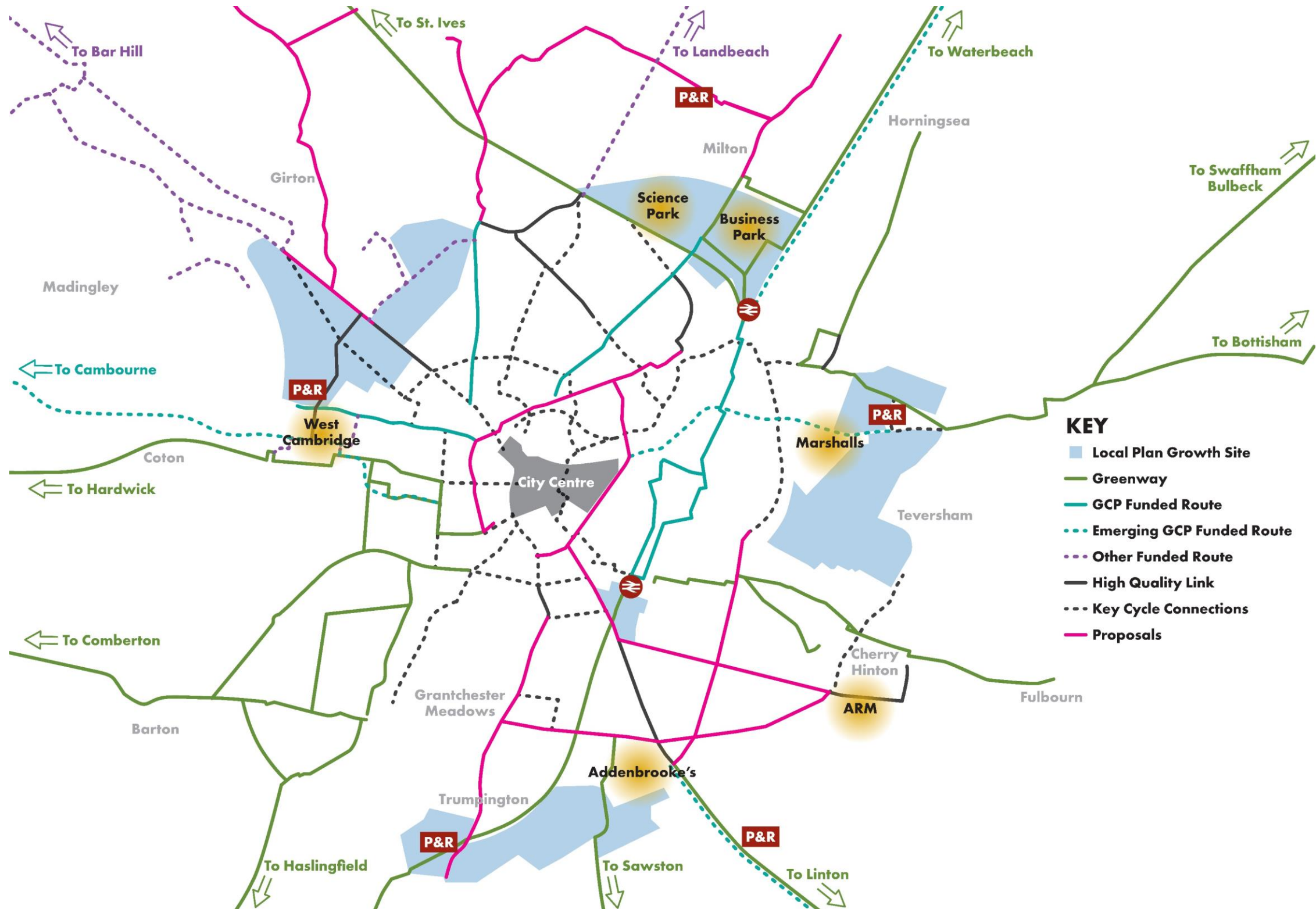
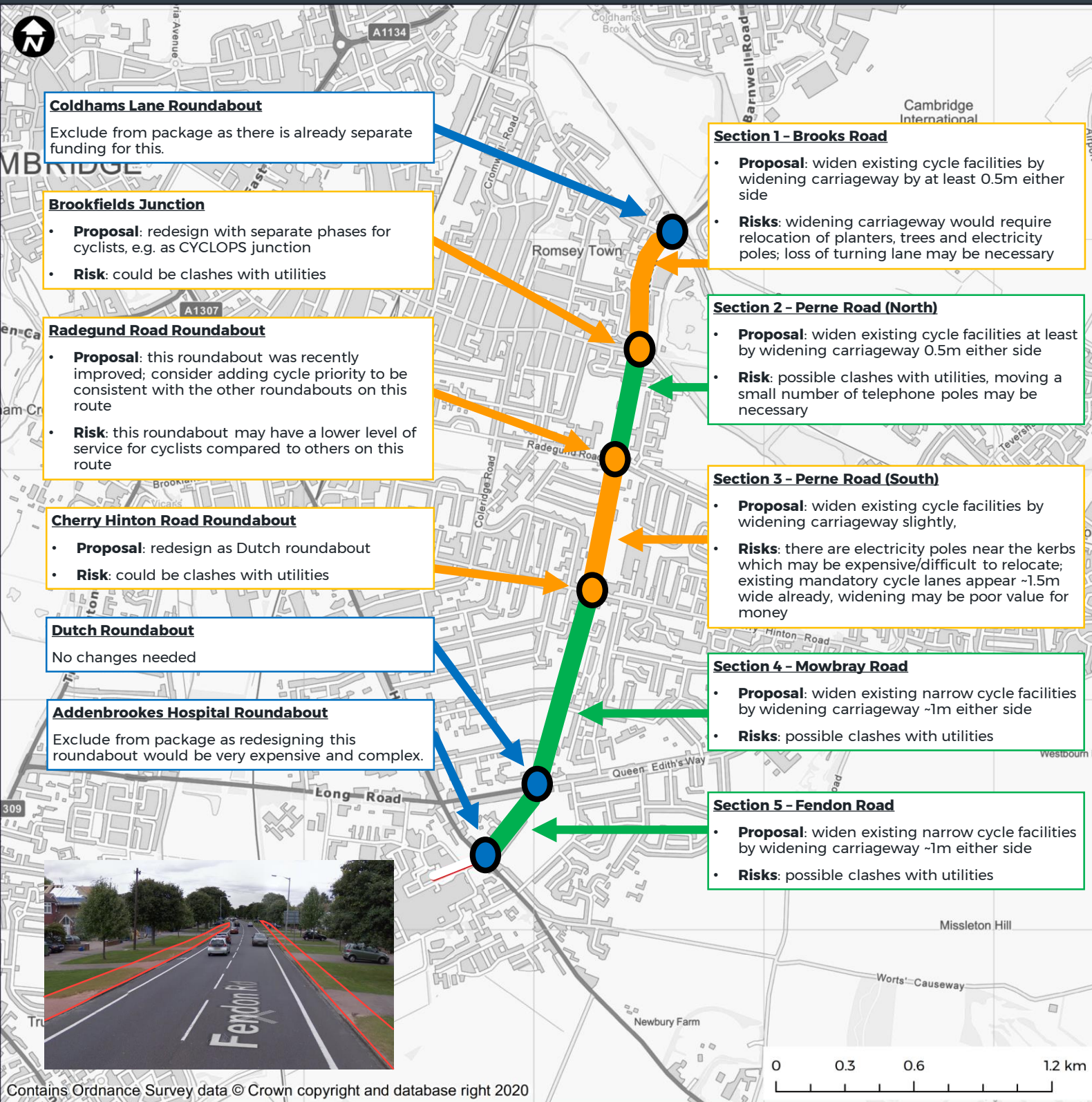


Figure 3 Extract from RCPT for Cambridge

Corridor Identification - Opportunity Areas



Corridor Identification - Gap Analysis



A1134 North-South (Mowbray Road & Perne Road)

This corridor stretches from Coldhams Lane Roundabout in the north to Addenbrookes Hospital Roundabout in the south and builds upon the investment already made in the Dutch Roundabout at the Queen Edith's way Junction.

Assumptions:

- Where possible, improved cycle facilities should be raised cycleways 2.2m wide. Where this is not possible, narrower lanes (1.7-2.0m wide) with light segregation may be acceptable
- Existing traffic lanes are around 3m wide and cannot be narrowed
- Highway boundary is at back of footway

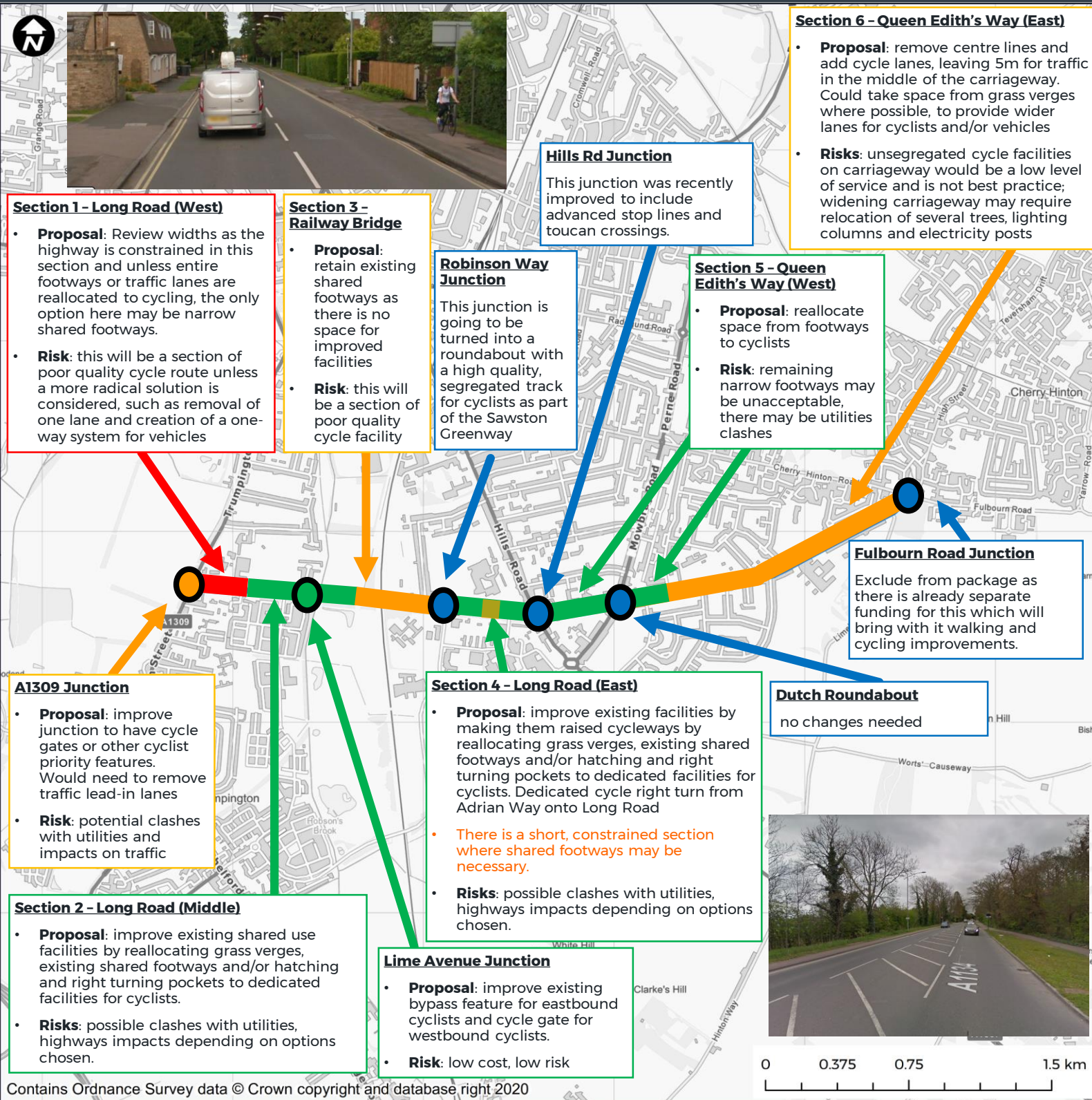
Impacts and Challenges:

- All sections will require kerb changes, relocation of lighting columns, bus stop improvements, side road treatments, adjustment of signalised crossings
- Some sections may require relocation of telephone poles
- Some sections may require tree removal / replacement
- The potential cost of upgrading junctions is the main challenge on this route, along with physical constraints on Sections 3 and 1

Key

- Section with few challenges to installing segregated cycling infrastructure
- Section with some challenges to installing segregated cycling infrastructure
- Section with many challenges to installing segregated cycling infrastructure
- Junction with few challenges to adding cycle priority features
- Junction with some challenges to adding cycle priority features
- Junction with many challenges to adding cycle priority features
- Out of scope section/junction

Corridor Identification - Gap Analysis



A134 East-West (Long Road & Queen Edith's Way)

This corridor stretches from the A1309 junction in the west to the Fulbourn Road in the east and again builds on the investment already made in the Dutch Roundabout at the Queen Edith's way Junction, as well as the existing funding proposals for improvements at the Fulbourn Road Junction

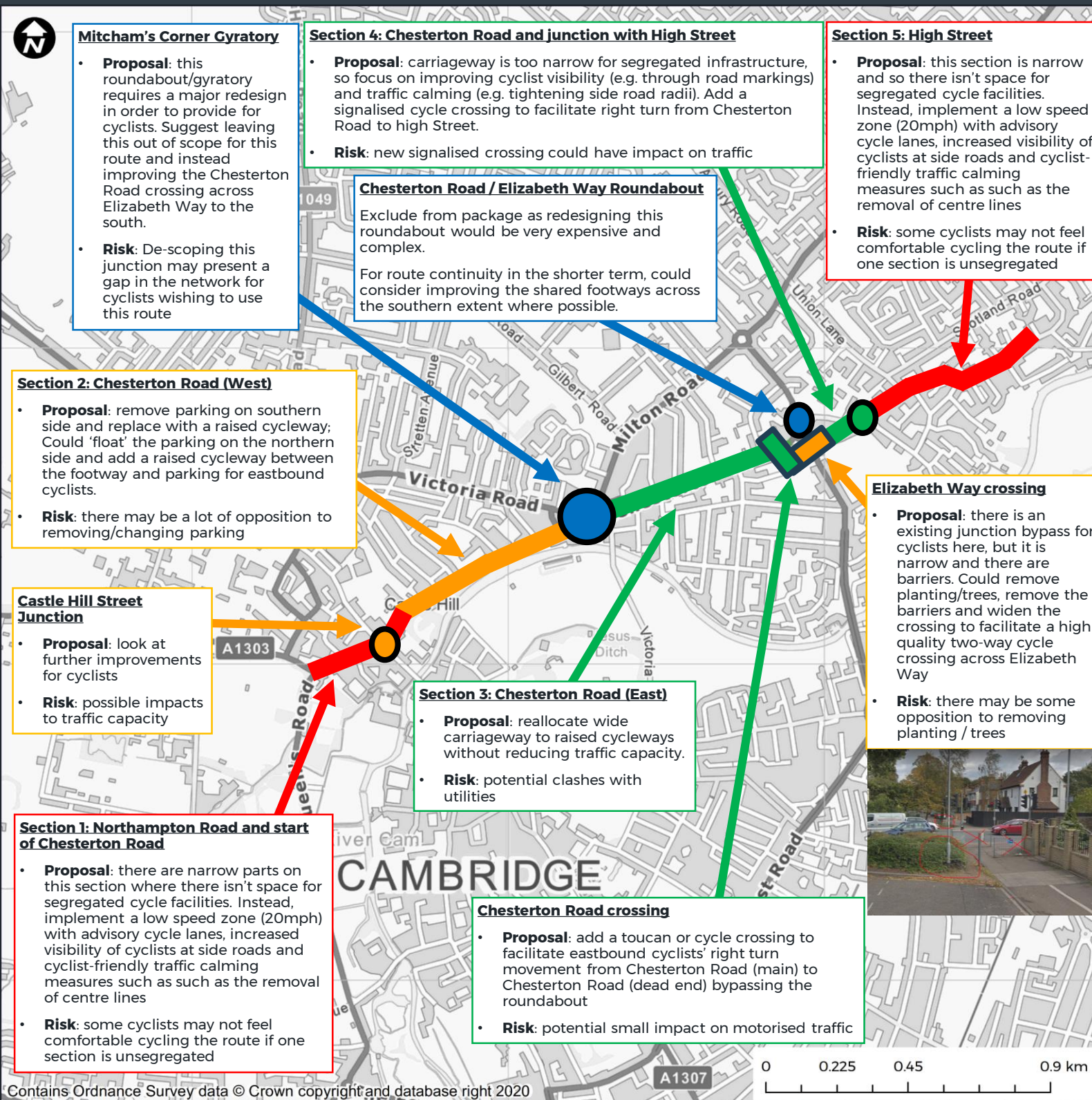
Assumptions:

- Where possible, improved cycle facilities should be raised cycleways 2.2m wide. Where this is not possible, narrower lanes (1.7-2.0m wide) with light segregation may be acceptable
- Most existing traffic lanes are around 3m wide and cannot be narrowed
- Highway boundary is at back of footway

Impacts and Challenges:

- All sections will require kerb changes, relocation of lighting columns, bus stop improvements, side road treatments, adjustment of signalised crossings
- Some sections may require relocation of electricity poles
- Some sections may require tree removal / replacement
- The constrained sections on this route are the main challenge on this route, as there may not be enough width to provide separated cycle facilities

Corridor Identification - Gap Analysis



Mitcham's Corner Gyratory

- Proposal:** this roundabout/gyratory requires a major redesign in order to provide for cyclists. Suggest leaving this out of scope for this route and instead improving the Chesterton Road crossing across Elizabeth Way to the south.
- Risk:** De-scoping this junction may present a gap in the network for cyclists wishing to use this route

Section 4: Chesterton Road and junction with High Street

- Proposal:** carriageway is too narrow for segregated infrastructure, so focus on improving cyclist visibility (e.g. through road markings) and traffic calming (e.g. tightening side road radii). Add a signalised cycle crossing to facilitate right turn from Chesterton Road to high Street.
- Risk:** new signalised crossing could have impact on traffic

Chesterton Road / Elizabeth Way Roundabout

- Exclude from package as redesigning this roundabout would be very expensive and complex.
- For route continuity in the shorter term, could consider improving the shared footways across the southern extent where possible.

Section 5: High Street

- Proposal:** this section is narrow and so there isn't space for segregated cycle facilities. Instead, implement a low speed zone (20mph) with advisory cycle lanes, increased visibility of cyclists at side roads and cyclist-friendly traffic calming measures such as the removal of centre lines
- Risk:** some cyclists may not feel comfortable cycling the route if one section is unsegregated

Section 2: Chesterton Road (West)

- Proposal:** remove parking on southern side and replace with a raised cycleway; Could 'float' the parking on the northern side and add a raised cycleway between the footway and parking for eastbound cyclists.
- Risk:** there may be a lot of opposition to removing/changing parking

Castle Hill Street Junction

- Proposal:** look at further improvements for cyclists
- Risk:** possible impacts to traffic capacity

Section 3: Chesterton Road (East)

- Proposal:** reallocate wide carriageway to raised cycleways without reducing traffic capacity.
- Risk:** potential clashes with utilities

Elizabeth Way crossing

- Proposal:** there is an existing junction bypass for cyclists here, but it is narrow and there are barriers. Could remove planting/trees, remove the barriers and widen the crossing to facilitate a high quality two-way cycle crossing across Elizabeth Way
- Risk:** there may be some opposition to removing planting / trees

Section 1: Northampton Road and start of Chesterton Road

- Proposal:** there are narrow parts on this section where there isn't space for segregated cycle facilities. Instead, implement a low speed zone (20mph) with advisory cycle lanes, increased visibility of cyclists at side roads and cyclist-friendly traffic calming measures such as the removal of centre lines
- Risk:** some cyclists may not feel comfortable cycling the route if one section is unsegregated

Chesterton Road crossing

- Proposal:** add a toucan or cycle crossing to facilitate eastbound cyclists' right turn movement from Chesterton Road (main) to Chesterton Road (dead end) bypassing the roundabout
- Risk:** potential small impact on motorised traffic

North Cambridge (Chesterton Road & Chesterton High Street)

This corridor stretches from Chesterton High Street in the east to the Magdalene Street Junction in the west and provides complementary active travel improvements to those already developed in the local vicinity of Milton Road, adding to the continuity of provision in the area.

Assumptions

- Raised cycleways are the preferred form of cycle facility on this type of road (high traffic volumes and traffic speeds)
- With the exception of the residential streets, existing traffic lanes are around 3m wide and cannot be narrowed
- Highway boundary is at back of footway

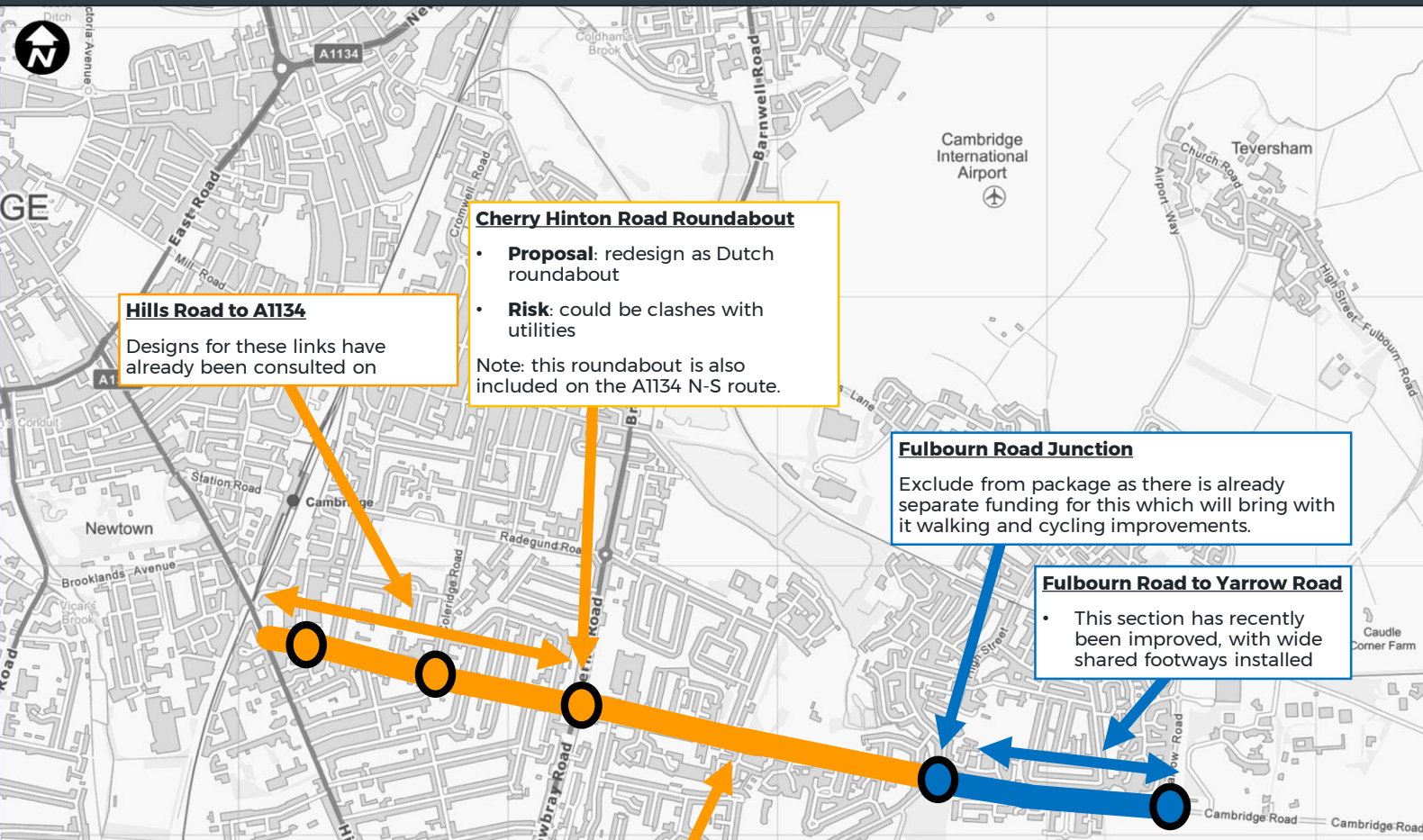
Impacts and Challenges

- Mitcham's Corner Gyratory is the main challenge on this route, along with physical constraints in Sections 1 and 5, and the need to remove/change parking in Section 2
- Several lead-in lanes require removing, kerb changes are required along much of the length of the route
- Bus stops, side road treatments and lighting column relocations will be required in places along the whole route, along with removal of guard railing

Key

- Section with few challenges to installing segregated cycling infrastructure
- Section with some challenges to installing segregated cycling infrastructure
- Section with many challenges to installing segregated cycling infrastructure
- Junction with few challenges to adding cycle priority features
- Junction with some challenges to adding cycle priority features
- Crossing with few challenges to adding cycle priority features
- Crossing with some challenges to adding cycle priority features
- Out of scope section/junction

Corridor Identification - Gap Analysis



Cherry Hinton Road Roundabout

- Proposal:** redesign as Dutch roundabout
- Risk:** could be clashes with utilities

Note: this roundabout is also included on the A1134 N-S route.

Hills Road to A1134

Designs for these links have already been consulted on

Fulbourn Road Junction

Exclude from package as there is already separate funding for this which will bring with it walking and cycling improvements.

Fulbourn Road to Yarrow Road

- This section has recently been improved, with wide shared footways installed

Cherry Hinton Road

- Proposal:** take space from footways to provide mandatory cycle lanes (1.5m wide) and/or consider shared footways. Consider raised cycleway for wider sections.
- Risks:** taking space from footways may leave unacceptably narrow footways.. There is also quite a lot of street furniture in this section which may require relocating



Cherry Hinton Road

This corridor stretches from the Hills Road junction in the west to the Yarrow Road junction in the east and further strengthens the improvement recently made on the Fulbourn Road to Yarrow Road section of the route, as well as detailed design proposals that have been developed to improve active travel on the section between Hills Road and A1134.

Assumptions

- Existing traffic lanes are around 3m wide and cannot be narrowed
- Highway boundary is at back of footway

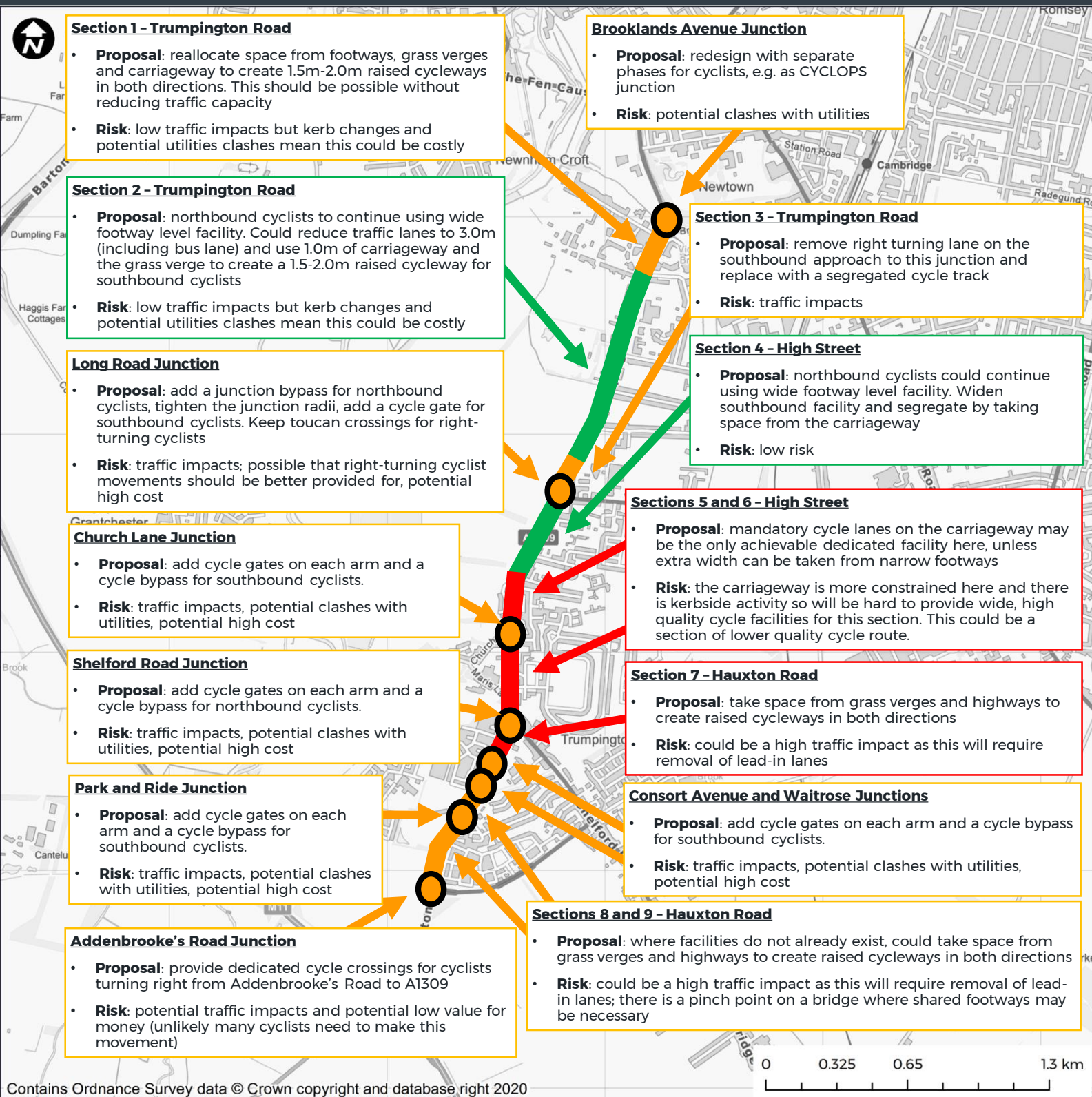
Impacts and Challenges

- Some sections will require kerb changes, relocation of lighting columns, bus stop improvements, side road treatments, adjustment of signalised crossings

Key

- Section with few challenges to installing segregated cycling infrastructure
- Section with some challenges to installing segregated cycling infrastructure
- Section with many challenges to installing segregated cycling infrastructure
- Junction with few challenges to adding cycle priority features
- Junction with some challenges to adding cycle priority features
- Junction with many challenges to adding cycle priority features
- Out of scope section/junction

Corridor Identification - Gap Analysis



Trumpington Road

This corridor stretches from the Brooklands Avenue junction in the north to the Addenbrookes Road junction in the south, helping to further increase cycle uptake for housing growth areas in the southern fringe of Cambridge.

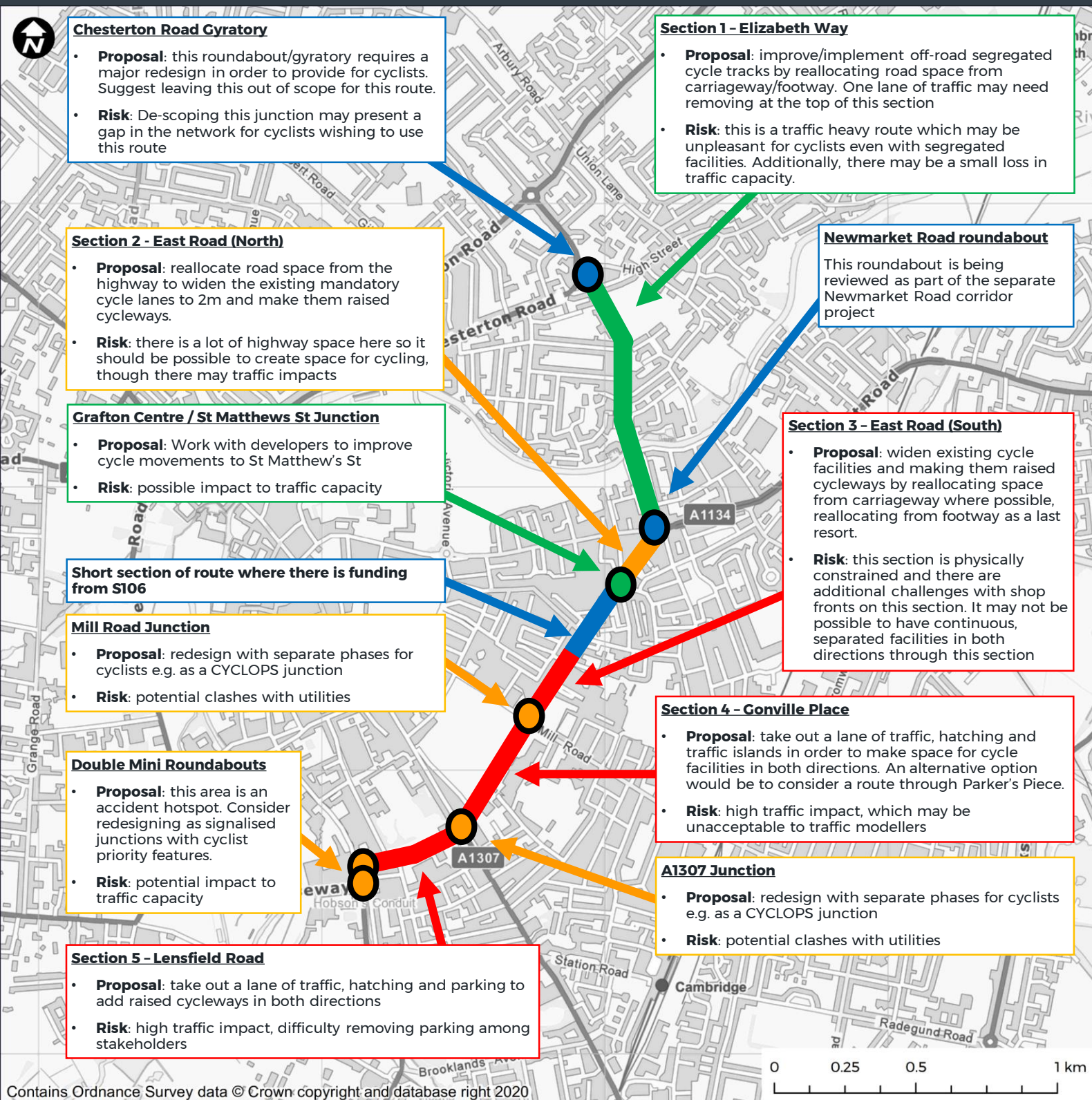
Assumptions

- Raised cycleways are the preferred form of cycle facility on this type of road (high traffic volumes and traffic speeds)
- Highway boundary is at back of footway

Impacts and Challenges

- The number of junctions which need upgrading is the main challenge on this route, along with physical constraints in Sections 5-7
- Several lead-in lanes require removing, kerb changes are required along much of the length of the route
- Bus stops, side road treatments and lighting column relocations will be required in places along the whole route, along with removal of guard railing

Corridor Identification - Gap Analysis



City (North-South) (Lensfield Road, East Road & Elizabeth Way)

This corridor stretches from Chesterton Road in the north to the double mini roundabouts at the end of Lensfield Road to the south, helping to contribute to an outer ring road of better quality cycle provision around the City Centre, thus potentially avoiding the need for cyclist to travel through the City Centre,

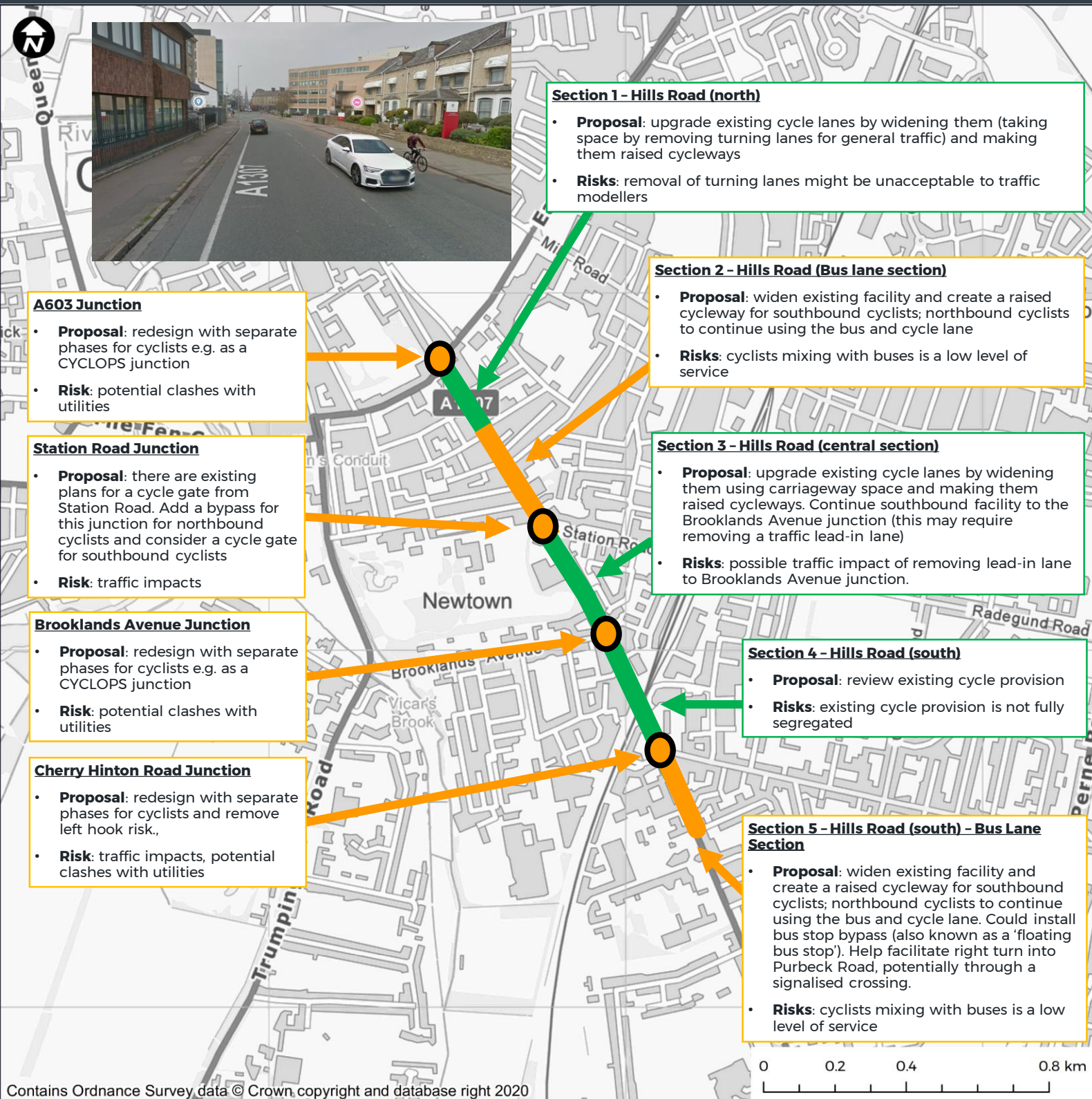
Assumptions

- Raised cycleways are the preferred form of cycle facility on this type of road (high traffic volumes and traffic speeds)
- Highway boundary is at back of footway

Impacts and Challenges

- Several sections will require kerb changes, relocation of lighting columns, bus stop improvements, side road treatments, adjustment of signalised crossings
- The main challenge on this route is the Newmarket Road roundabout, as well as the physical constraints / likely high traffic impact on sections 3 and 4

Corridor Identification - Gap Analysis



Hills Road - Regent Street

This corridor stretches from A603 Junction in the north to just past the Cherry Hinton Road Junction to the south, building upon the investment of cycling improvements already implemented further south along Hills Road

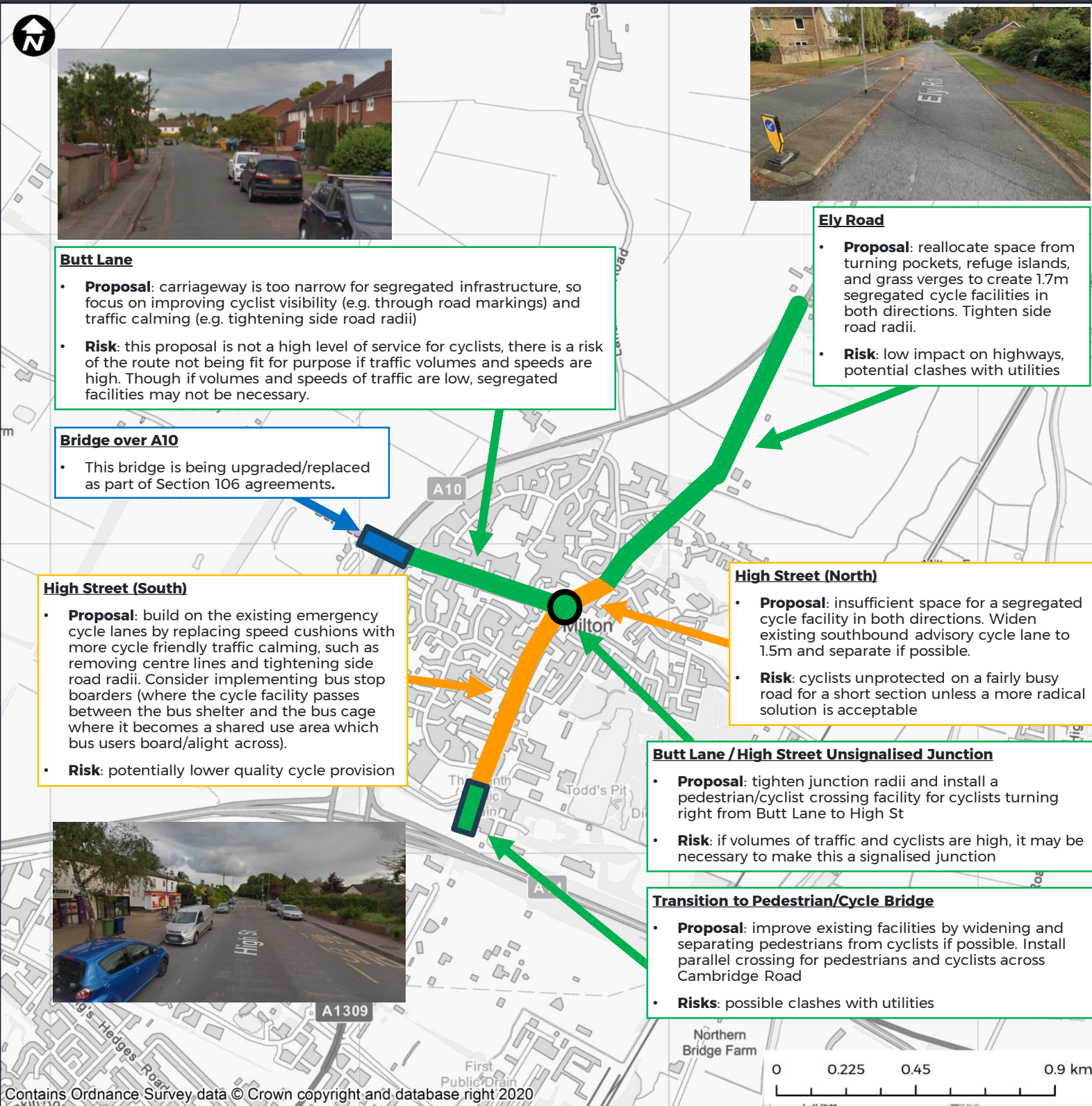
Assumptions

- Raised cycleways are the preferred form of cycle facility on this type of road (high traffic volumes and traffic speeds)
- Existing traffic lanes are around 3m wide and cannot be narrowed

Impacts and Challenges

- The main challenge to this route is the removal of the bus lane and traffic turning lanes and whether the impacts of this on bus journey times and general traffic queues is acceptable
- There are four junctions on this route which need redesigning and this will be expensive

Corridor Identification - Gap Analysis



Milton (High Street & Butt Lane)

This corridor includes Ely Road, Butt Lane and the High Street, connecting the Milton Park & Ride to the existing pedestrian cycle bridge over the A14 and improving cycling within the key corridors of Milton itself.

Assumptions

- Where possible, improved cycle facilities should be raised cycleways 2.2m wide. Where this is not possible, narrower lanes (1.7-2.0m wide) with light segregation may be acceptable
- Existing traffic lanes are around 3m wide and cannot be narrowed
- Highway boundary is at back of footway

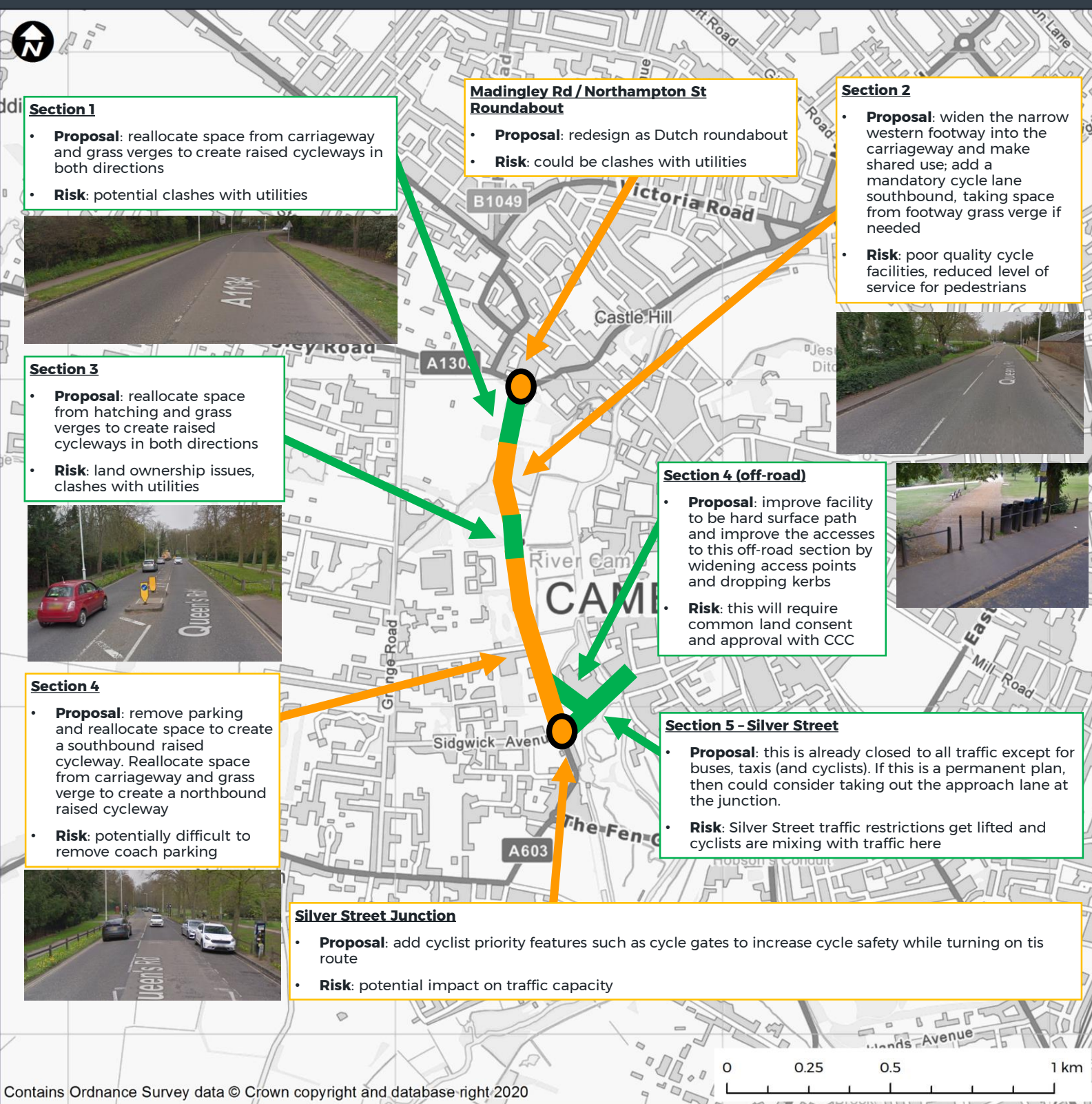
Impacts and Challenges

- High Street South where there are many different street features that would be removed/relocated in order to make space for cycling
- High Street (North Central) where there may not be enough space for segregated facilities in both direction
- The narrow, shared bridge over A10 may be a barrier to high numbers of cyclists using this route. Replacing this bridge may be expensive.

Key

- Section with few challenges to installing segregated cycling infrastructure
- Section with some challenges to installing segregated cycling infrastructure
- Section with many challenges to installing segregated cycling infrastructure
- Junction with few challenges to adding cycle priority features
- Junction with some challenges to adding cycle priority features
- Junction with many challenges to adding cycle priority features
- Out of scope crossing / bridge

Corridor Identification - Gap Analysis



Queens Road

This corridor stretches from Madingley Road / Northampton Street Roundabout in the north to Silver Street in the south, helping to contribute to an outer ring road of better quality cycle provision around the City Centre, thus potentially avoiding the need for cyclist to travel through the City Centre.

Assumptions

- Raised cycleways are the preferred form of cycle facility on this type of road (high traffic volumes and traffic speeds)
- Existing traffic lanes are around 3m wide and cannot be narrowed
- Highway boundary is at back of footway

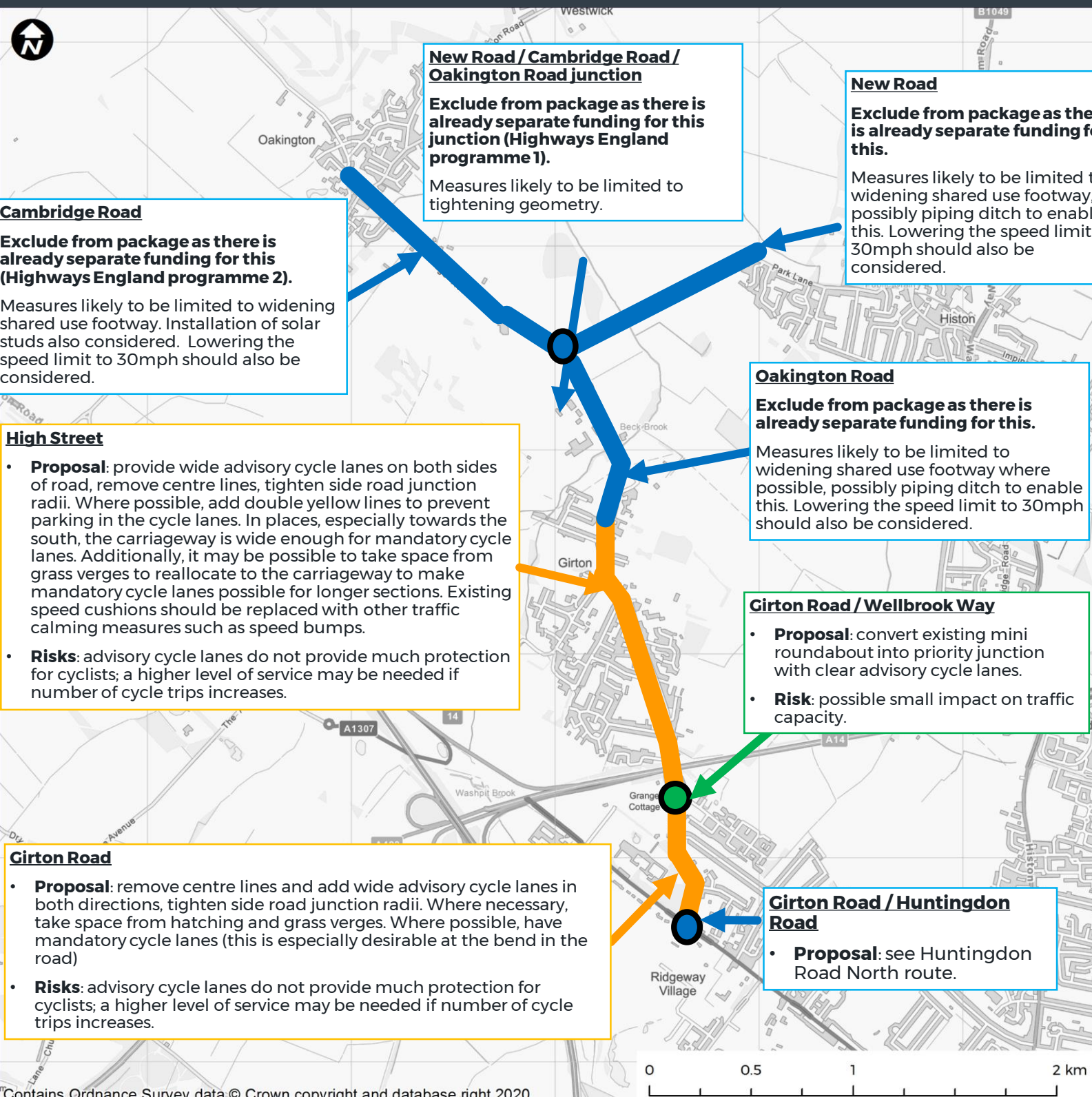
Impacts and Challenges

- Removing parking and the cost of upgrading junctions are the main challenges on this route.
- Difficulties on where coach parking on Queens road could be relocated road space to active travel.
- Side road treatments and lighting column relocations will be required along the whole route

Key

- Section with few challenges to installing segregated cycling infrastructure
- Section with some challenges to installing segregated cycling infrastructure
- Section with many challenges to installing segregated cycling infrastructure
- Junction with few challenges to adding cycle priority features
- Junction with some challenges to adding cycle priority features
- Crossing with some challenged to adding cycle priority features
- Out of scope section/junction

Corridor Identification - Gap Analysis



Girton to Huntingdon Road

This corridor extends from Oakington to Huntingdon Road via Girton, supporting onwards trips into Cambridge City Centre and the University colleges via Huntingdon Road. The section between Girton High Street and Oakington has been excluded as this has already received funding.

Assumptions

- Wide advisory cycle lanes are better than narrow mandatory cycle lanes in these rural settings.
- Highway boundary is at back of footway

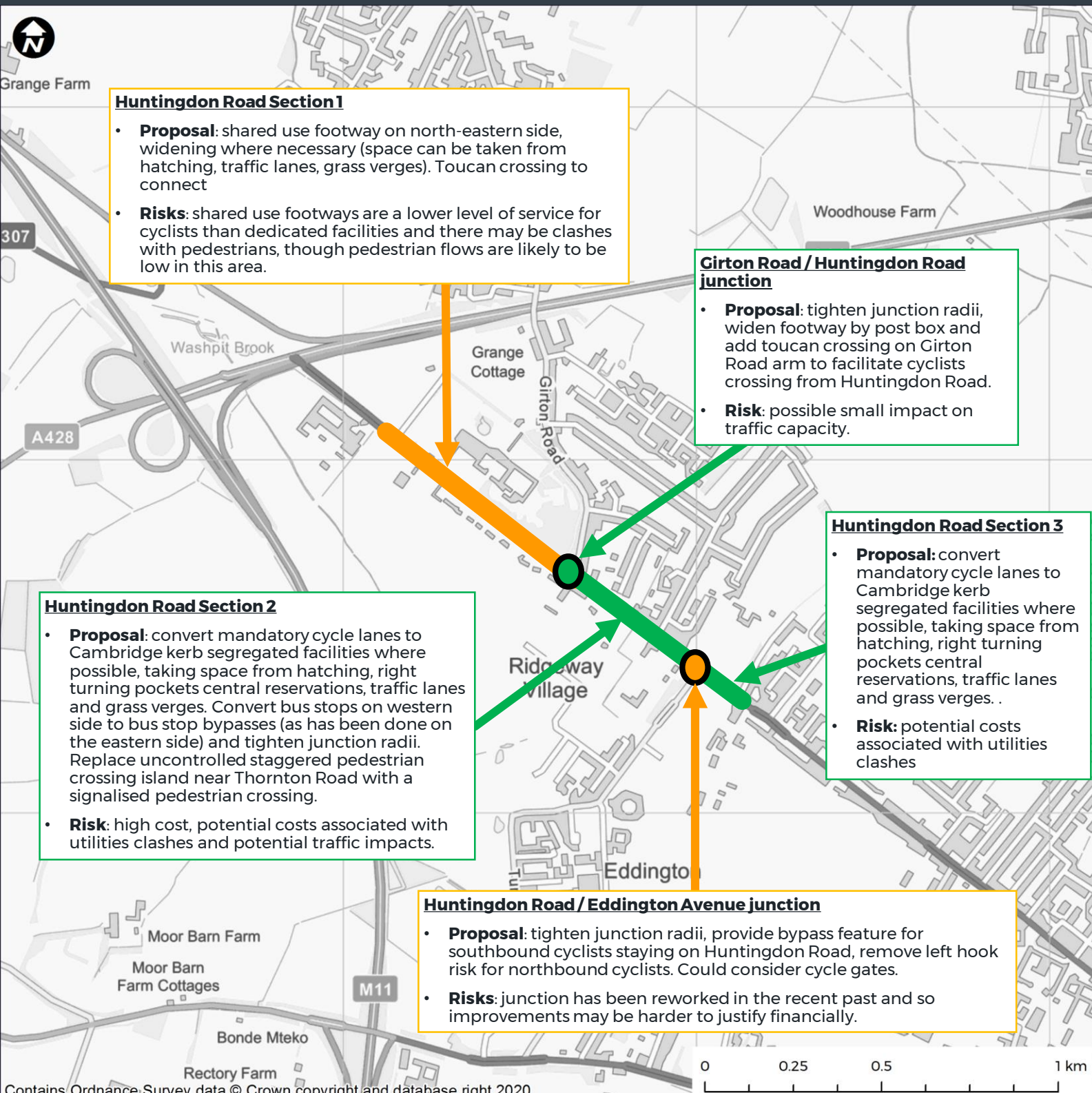
Impacts and Challenges

- Small sections will require kerb changes, relocation of lighting columns, bus stop improvements, side road treatments, adjustment of signalised crossings
- Some sections may require relocation of telephone poles

Key

- Section with few challenges to installing segregated cycling infrastructure
- Section with some challenges to installing segregated cycling infrastructure
- Section with many challenges to installing segregated cycling infrastructure
- Junction with few challenges to adding cycle priority features
- Junction with some challenges to adding cycle priority features
- Crossing with some challenged to adding cycle priority features
- Out of scope section/junction

Corridor Identification - Gap Analysis



Huntingdon Road North

This corridor stretches from Whitehouse Lane towards the A428 at the northern extent of Huntingdon Road. This route serves Girton College, University of Cambridge supporting University trips between the various colleges and journeys into the city centre.

Assumptions

- Where possible, improved cycle facilities should be raised cycleways 2.2m wide
- Existing traffic lanes are around 3m wide and cannot be narrowed
- Highway boundary is at back of footway

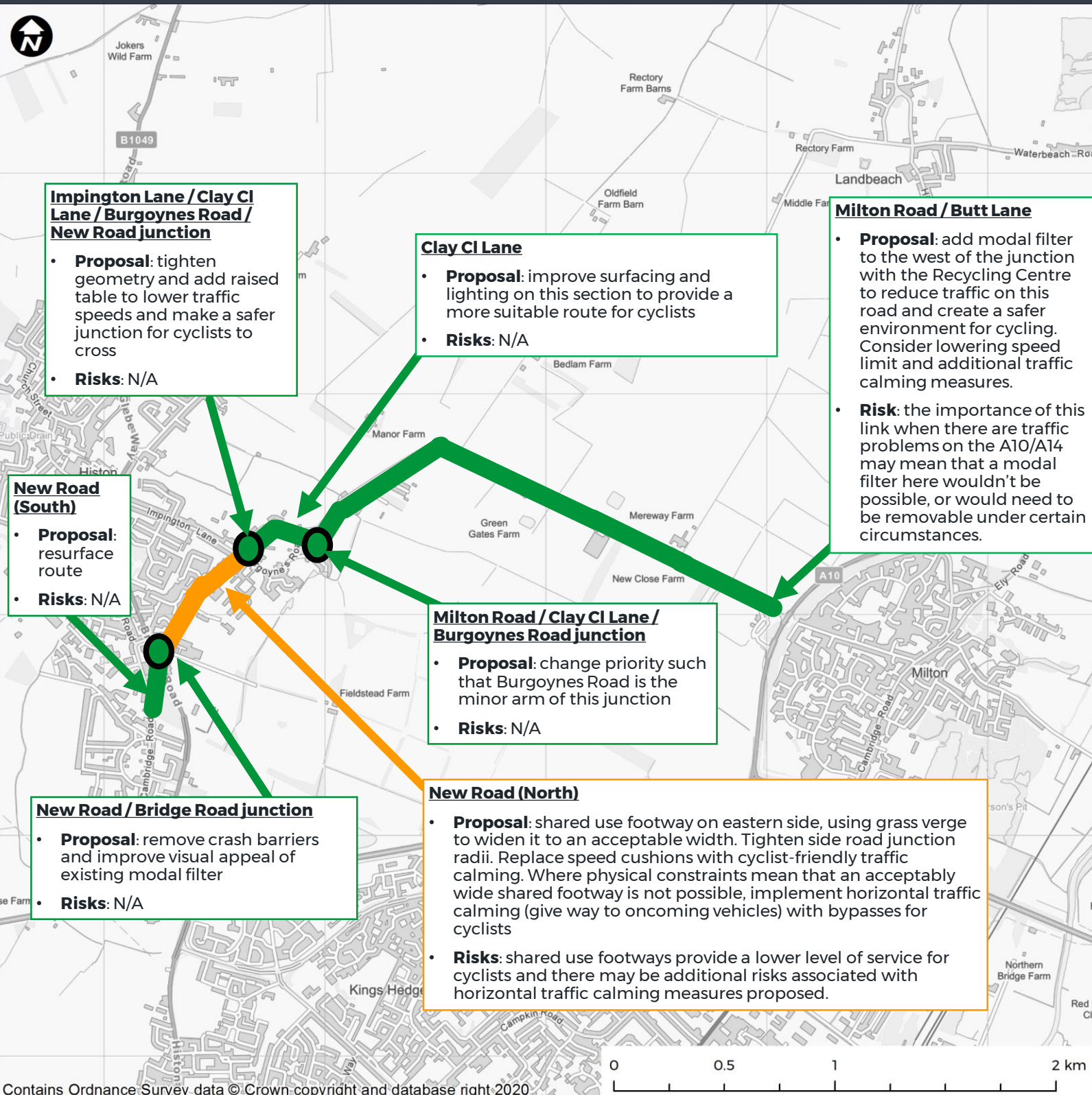
Impacts and Challenges

- All sections will require kerb changes, relocation of lighting columns, bus stop improvements, side road treatments, adjustment of signalised crossings
- The potential cost of upgrading Section 2 and the two junctions is the main challenge on this route

Key

- Section with few challenges to installing segregated cycling infrastructure
- Section with some challenges to installing segregated cycling infrastructure
- Section with many challenges to installing segregated cycling infrastructure
- Junction with few challenges to adding cycle priority features
- Junction with some challenges to adding cycle priority features
- Crossing with some challenged to adding cycle priority features
- Out of scope section/junction

Corridor Identification - Gap Analysis



Impington to Milton

This corridor connects Butt Lane to the southern extent of Histon via Milton Road and Impington Lane. It improves the connectivity between Histon and Milton, whilst supporting eastbound trips to the Milton Park & Ride.

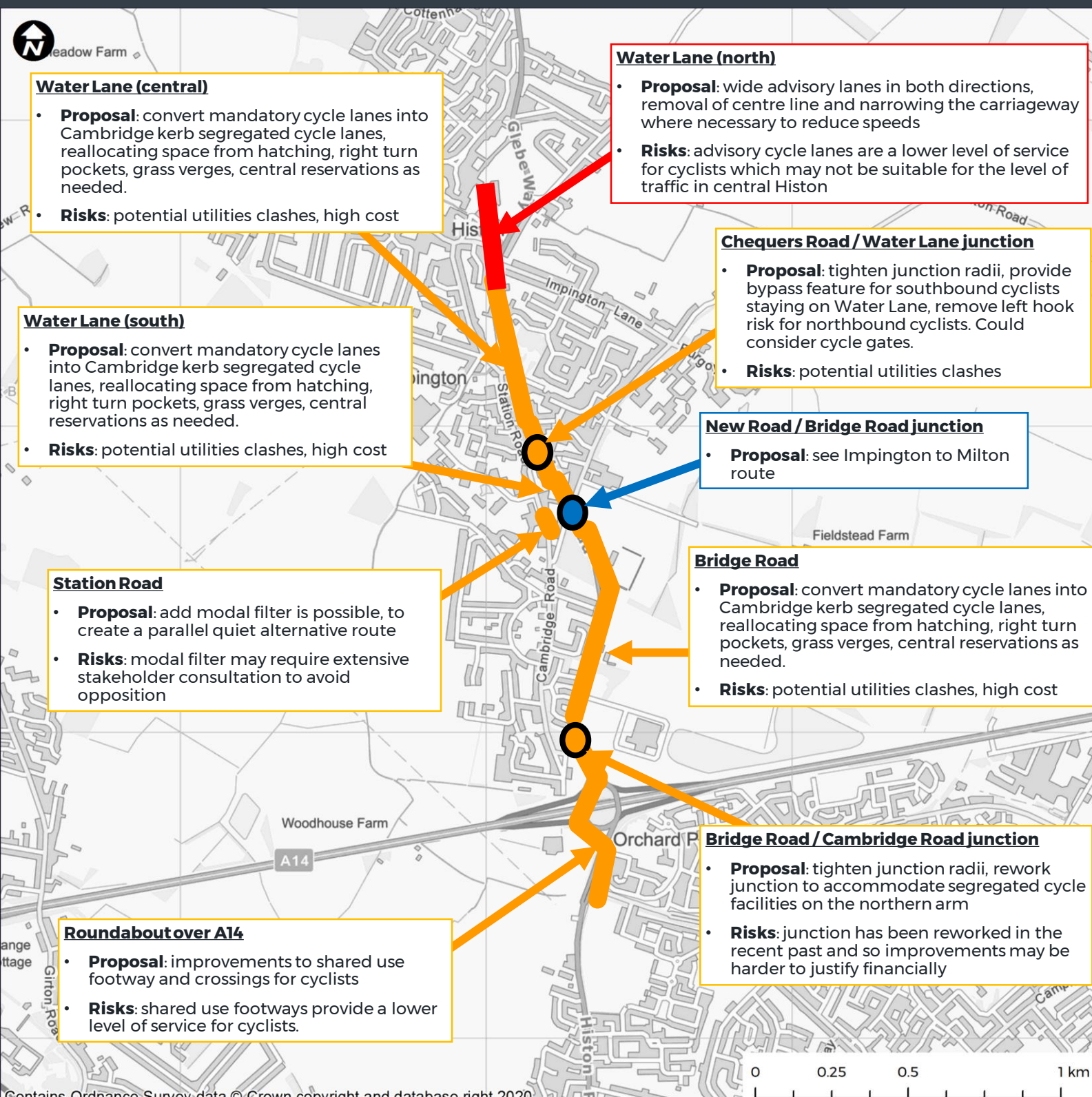
Assumptions

- Existing traffic lanes are around 3m wide and cannot be narrowed
- Highway boundary is at back of footway

Impacts and Challenges

- Cycle safety on New Road (north) and Milton Road Butt Lane is the main challenge on this route. There is uncertainty as to whether a modal filter on Butt Lane and traffic calming on New Road will be possible and whether the latter will work for cyclists

Corridor Identification - Gap Analysis



Histon to Histon Road

This corridor runs through the centre of Histon, and is a key route overcoming the severance between Histon and Cambridge caused by the A14 to the south.

Assumptions

- Where possible, improved cycle facilities should be raised cycleways 2.2m wide. Where this is not possible, narrower lanes (1.7-2.0m wide) may be acceptable. Unsegregated mandatory cycle lanes are not suitable on this style of road, according to the new LTN 1/20 guidance
- Highway boundary is at back of footway

Impacts and Challenges

- Most sections will require kerb changes, relocation of lighting columns, bus stop improvements, side road treatments, adjustment of signalised crossings

Key

- Section with few challenges to installing segregated cycling infrastructure
- Section with some challenges to installing segregated cycling infrastructure
- Section with many challenges to installing segregated cycling infrastructure
- Junction with few challenges to adding cycle priority features
- Junction with some challenges to adding cycle priority features
- Crossing with some challenged to adding cycle priority features
- Out of scope section/junction

Corridor Identification - Summary



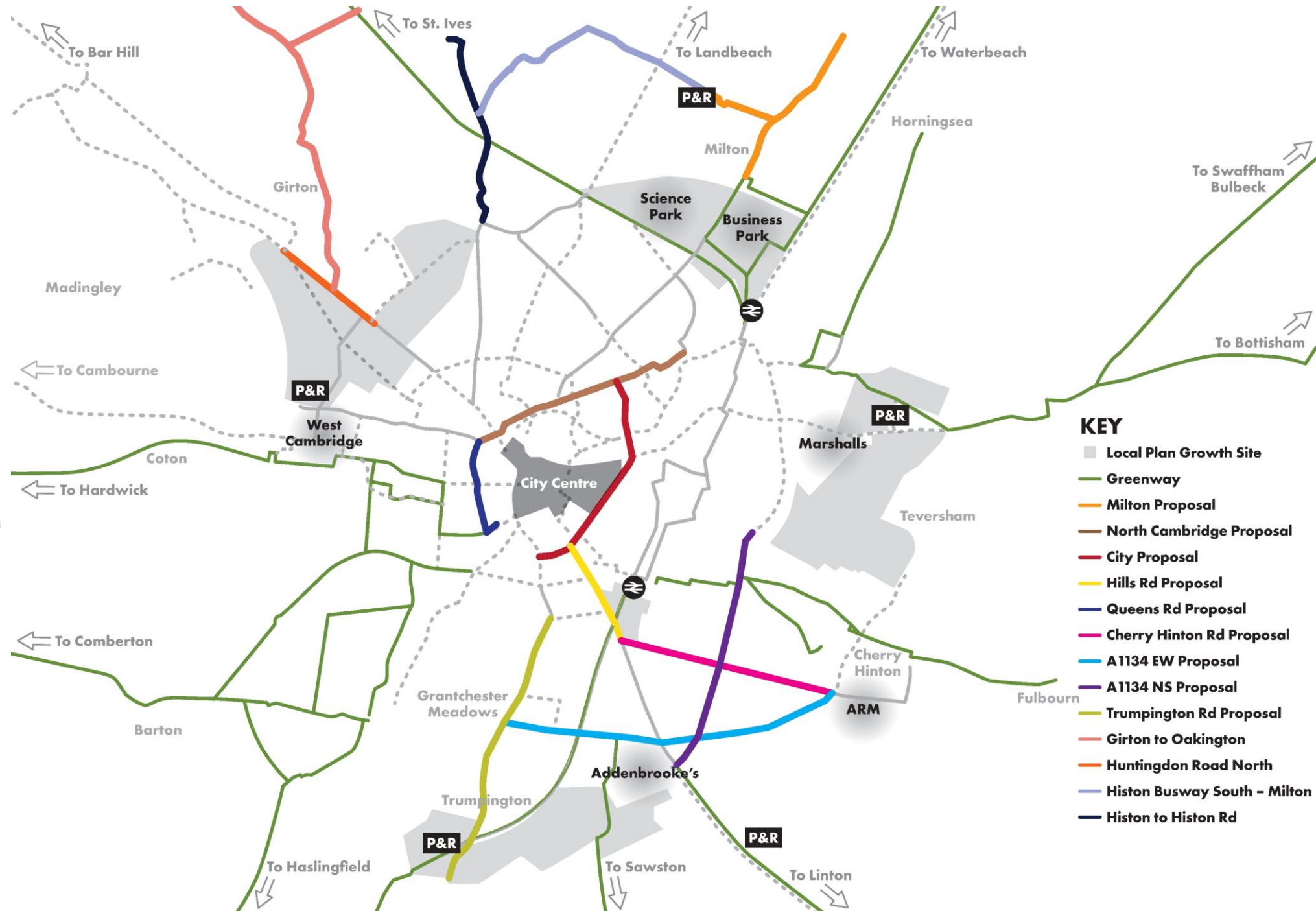
Proposed Cycle Network

The identified City Centre and South Cambs corridors compliment the Greenway plans to provide a cohesive Cambridge cycle network.

The rural corridors to the north of the city centre join up other previously disconnected sections of the network. For example, the new Girton to Oakington route allows a connection to the greenway route between Oakington and Cottenham. These routes will also offer better east west connections, such as between Histon and Milton.

A number of city centre routes form an orbital route surrounding the centre with arterial routes such as Hills Road and Greenway connections supporting outward trips to West Cambridge and Addenbrookes' and ARM to the south east.

Overall, the new routes identify the gaps between existing and future origin destination points, improving safety and comfort for cyclists and encouraging cycling to be the desired mode of transport between these locations.



- KEY**
- Local Plan Growth Site
 - Greenway
 - Milton Proposal
 - North Cambridge Proposal
 - City Proposal
 - Hills Rd Proposal
 - Queens Rd Proposal
 - Cherry Hinton Rd Proposal
 - A1134 EW Proposal
 - A1134 NS Proposal
 - Trumpington Rd Proposal
 - Girton to Oakington
 - Huntingdon Road North
 - Histon Busway South - Milton
 - Histon to Histon Rd

Stakeholder Engagement



Engagement

During Step 3, and following the identification of a series of corridors of focus, virtual workshops were held with a series of major Cambridge employers to discuss the purpose of this *Active Travel Study* and provide an opportunity for these key stakeholders to provide feedback and influence the outcomes of this study.

Information was provided on the study aims and objectives, methodology and initial areas of focus that had been identified as potential locations for additional funding in active travel infrastructure.

The major employers who were engaged, shown in Figure 4, welcomed this study and were supportive of more investment in active travel interventions generally. The overall approach and methodology used within this *Active Travel Study* was agreed and supported.

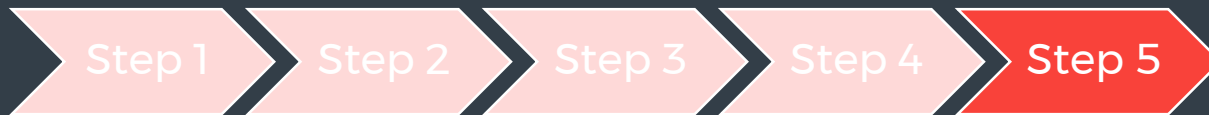
The ideas and comments received from the major employers were used to refine the list of options. In fact, two of the active travel options identified and included within this study were directly borne out of the virtual workshops. These included:

- Milton
- Queens Road

Figure 4 Major Employers Engaged



Appraisal & Prioritisation



Appraisal

A strategic, qualitative evaluation of each of the identified active travel investment corridors has been undertaken in order to sift and prioritise the schemes.

The schemes have been assessed using a *Multiple Criteria Assessment Framework (MCAF)* which allowed them to be ranked against one another based upon a series of criteria. At this stage, each of the criteria was equally-weighted. The appraisal process, shown in Figure 5, involved two simultaneous sifts:

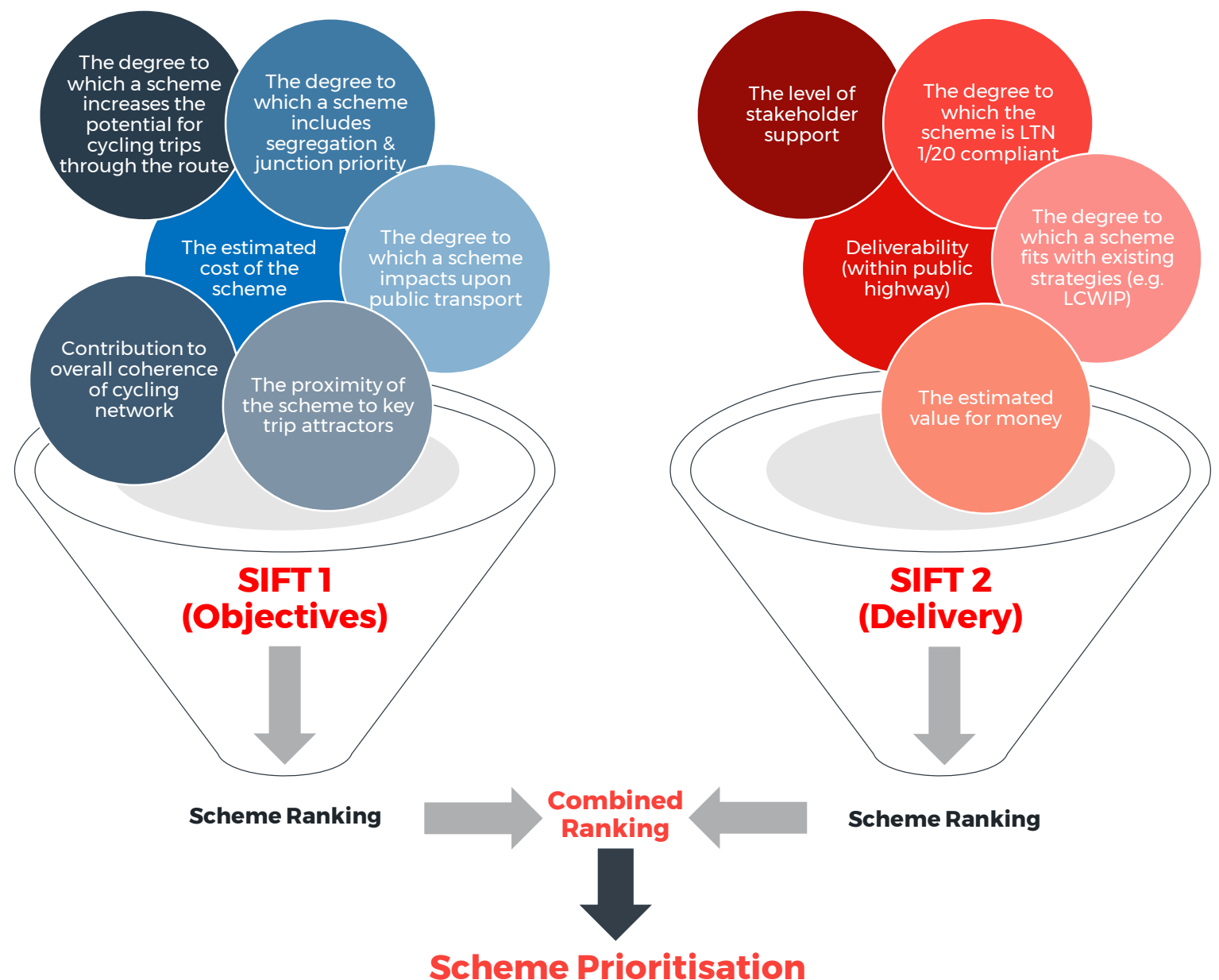
- Sift 1: the extent to which each scheme met with the **study objectives**; and
- Sift 2: the extent to which each scheme is **technically deliverable**.

For each criteria, a score is given between -2 and 2. The scores across all criteria are combined and a subsequent ranking is given. The rankings for each of the schemes, across both sifts have then been combined in order to prioritise the options.

Those that score the highest are deemed most likely to: meet GCP objectives; fit with wider active travel strategies and future ambition of the region; have stakeholder support; have the potential to increase cycling; comply with the most recent design guidance; offer value for money; and, be feasible and deliverable within the estimated budget and timescales.

The outcomes of this assessment and prioritisation (based upon data analysis and professional judgement) is summarised in the final section of this report.

Figure 5 Sifting Methodology & Criteria



Appraisal & Prioritisation



	A1134 (North-South)	A1134 (East-West)	North Cambridge (East-West)	Cherry Hinton Road	Trumpington Road	City (North-South)	Hills Road - Regent Street	Milton	Queens Road	Girton - Huntingdon Road	Huntingdon Road North	Histon - Histon Road	Impington - Milton
Segregation / Cycle Priority	2	1	1	1	1	2	1	2	1	-1	1	-1	1
Coherence of Network	2	2	2	2	2	2	2	1	2	2	2	2	2
Cycling Potential (PCT informed)	2	1	2	1	0	1	2	1	0	-1	-1	-1	-2
Minimal Impact on Public Transport	1	1	1	1	1	1	1	1	0	1	1	2	2
Proximity to Trip Attractors	2	2	2	2	2	2	2	2	2	0	2	1	1
Estimated Cost	0	1	1	1	-2	-2	0	2	2	2	2	2	2
Total Score	9	8	9	8	4	6	8	9	7	3	7	5	6
Sift 1 Rank (Objectives)	1	2	1	2	6	4	2	1	3	7	3	5	4
Ease of Deliverability	2	0	-1	0	-2	-2	1	1	1	0	1	0	-1
LTN 1/20 Compliance	2	2	2	1	1	1	1	1	1	-1	1	-1	-1
LCWIP Strategic Fit	2	1	2	0	2	2	2	2	1	2	2	2	2
Estimated Value for Money (VfM) [^]	0	2	0	0	-2	-1	0	-1	0	-2	-2	-2	-1
Total Score	6	5	3	1	-1	0	4	3	3	-1	2	-1	-1
Sift 2 Rank (Delivery)	1	2	4	6	8	7	3	4	4	8	5	8	8
Ranks Combined	2	4	5	8	14	11	5	5	7	15	8	13	12
Overall Prioritisation	1	2	3	5	9	6	3	3	4	10	5	8	7
Estimated Cost*	£11.5m	£8.5m	£6.0m	£8.0m	£18.5m	£13.0m	£10.5m	£4.5m	£5.5m	£24m	£1.8m	£2.9m	£1.5m

* Construction cost estimates have been built up using unit rates from industry standard data adjusted for working in and around the live carriageway. Allowances have been added for optimism bias, statutory utility diversion works, design costs and construction supervision costs. Therefore, costings identified for each potential corridor should be treated as indicative only, for the purposes of illustrating the nature of the benefits that could be achieved with this level of investment. Should any of these potential schemes proceed to the next stage of development, a budget setting process will be required as well as further detailed costing, once scheme designs are confirmed and a contractor is appointed.

[^] An initial BCR has been calculated using The Department for Transport's Active Mode Appraisal Toolkit (AMAT) which ensures that the calculation of a schemes benefits is in accordance with Department for Transport guidance and its value for money can be consistently compared against other proposed schemes. The AMAT calculates impacts linked to an increase in cycle and walking use based upon scheme-specific variables (e.g. scheme length and forecast users). The AMAT also includes a number of default assumptions which, for the purposes of this study, were retained.

Study Outcomes & Recommendation



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Recommendations

This study sets out a potential order for active travel investment and to inform development decisions. **Our top recommended corridor for investment is the A1134 (North / South) scheme (Mowbray Road & Perne Road).** It has high cycling potential, is deliverable, builds on the recent Dutch Roundabout investment, and would increase north-south connectivity through the city, whilst providing a key link between major trip attractors to the east and south of the city (including Addenbrookes Hospital and the wider Cambridge Biomedical Campus *which remains a key destination during COVID-19 recovery*).

It is understood that funding is not available to take all these schemes forward now, but this work should be used as an ongoing reference and be reflected on should additional funding opportunities present themselves, which may open up an ability to bring specific schemes forward sooner (ahead of their ranking), linked to wider City initiatives over the next 10 years.

Within the current funding situation, due to the estimated high cost and deliverability compromises, it is not initially recommended that City (North South) or Trumpington Road are progressed at this time. Rural schemes such as Impington to Milton, Histon to Histon Road and Girton to Huntingdon Road scored a lower benefit cost ratio and as such we would not recommend these are also taken forward as an initial priority.

However, the remaining schemes achieve similar ranking scores so we feel **there is value in the GCP Executive Board discussing and exploring these schemes in more detail to determine a future funding package**, in addition to the top ranking A1134 (Mowbray Road & Perne Road) Corridor.

A summary to help this discussion is set out in the table opposite, in order of ranking:

Scheme	Overall Rank	Cost* (Estimate)	Pros	Cons
A1134 (North-South) (Mowbray Road & Perne Road)	1	£11.5m	<ul style="list-style-type: none"> Connects with recently completed Dutch Rbt High cycling potential Relatively easy to deliver Supports emerging LCWIP Contributes to a coherent network 	<ul style="list-style-type: none"> Relatively high-cost scheme Good but not highest VfM
A1134 (East-West) (Long Road & Queen Edith's Way)	2	£8.5m	<ul style="list-style-type: none"> Connects with recently completed Dutch Rbt Supports emerging LCWIP Relatively high value for money Contributes to a coherent network 	<ul style="list-style-type: none"> May encounter deliverability issues Low level of segregation achievable in sections
Hills Road - Regent Street	3	£10.5m	<ul style="list-style-type: none"> High cycling potential Relatively easy to deliver Supports emerging LCWIP Contributes to a coherent network 	<ul style="list-style-type: none"> Relatively high-cost scheme Cyclists required to use bus lane in sections
North Cambridge (Chesterton Road & Chesterton High Street)	3	£6.0m	<ul style="list-style-type: none"> High cycling potential Relatively low-cost scheme Relatively high value for money Supports emerging LCWIP Contributes to a coherent network 	<ul style="list-style-type: none"> Low level of segregation achievable in sections Deliverability issues including Mitcham's Corner Gyration
Milton	3	£4.5m	<ul style="list-style-type: none"> Supports emerging LCWIP Helps facilitate trips from Park & Ride 	<ul style="list-style-type: none"> High cost / low VfM Low level of segregation achievable in sections
Queens Road	4	£5.5m	<ul style="list-style-type: none"> No bus stops impacted Relatively low-cost scheme Supports emerging LCWIP Contributes to a coherent network 	<ul style="list-style-type: none"> Relatively low cycling potential Few connections to key trip attractors May encounter deliverability issues Potential impact on coach parking
Huntingdon Road North	5	£1.8m	<ul style="list-style-type: none"> Connects with multiple schools and builds on existing infrastructure and route Relatively low-cost scheme Supports emerging LCWIP 	<ul style="list-style-type: none"> May encounter deliverability issues
Cherry Hinton Road	5	£8.0m	<ul style="list-style-type: none"> Relatively low-cost scheme Contributes to a coherent network 	<ul style="list-style-type: none"> May encounter deliverability issues Not identified in emerging LCWIP
City (North-South) (Lensfield Road, East Rd & Elizabeth Rd)	6	£13.0m	<ul style="list-style-type: none"> Contributes to coherent network Close to several key trip attractors 	<ul style="list-style-type: none"> High cost / low VfM Would be difficult to deliver due to physically constrained sections
Impington - Milton	7	£1.5m	<ul style="list-style-type: none"> Relatively low-cost scheme Helps facilitate sustainable trips to P&R Supports emerging LCWIP 	<ul style="list-style-type: none"> Low level of segregation achievable in sections
Histon - Histon Road	8	£2.9m	<ul style="list-style-type: none"> Extends the planned Histon Road scheme into Histon Relatively low-cost scheme Supports emerging LCWIP 	<ul style="list-style-type: none"> May encounter deliverability issues Low value for money
Trumpington Road	9	£18.5m	<ul style="list-style-type: none"> Supports emerging LCWIP Contributes to coherent network 	<ul style="list-style-type: none"> High cost / low VfM Would be difficult to deliver due to high number of junctions
Girton - Huntingdon Road	10	£2.4m	<ul style="list-style-type: none"> Relatively low-cost scheme Supports emerging LCWIP 	<ul style="list-style-type: none"> Low level of segregation achievable in sections May encounter deliverability issues Few connections to key trip attractors

Study Outcomes & Recommendation

Summary

The purpose of this Active Travel Investment Study has been to identify options to invest additional funding in active travel infrastructure schemes, over and above those already funded by the Greater Cambridge City Deal (or those being delivered and funded by other sources). A working budget assumption of £20m was used, to support discussion of options, though final investment levels would be for the GCP Executive Board to decide.

Movements into the city from South Cambridgeshire will be well supported through the forthcoming “Greenway” network. However, **in South Cambridgeshire and in the City, cycle routes vary in quality subsequently reducing connectivity and safety**. Therefore, this study has focused upon high-trafficked radial routes which provide direct connectivity to and across the city but are currently poorly served by attractive and safe cycle infrastructure.

Following engagement with key business organisations and locations, a **strategic evaluation of each of the identified active travel corridors has been undertaken**. The schemes have been assessed using an MCAF which allowed them to be ranked against one another across two sifts (objectives & overall deliverability) based upon a series of equally-weighted criteria.

The outcome of this exercise has led to a scheme prioritisation and recommendation, which is presented to the GCP Executive Board for consideration and review, with schemes in the City of Cambridge identified as generally offering the best value for money in terms of investment, due to the significantly higher user base.

() Please note: The costings identified for each potential corridor should be treated as indicative only. Should any of these potential schemes proceed to the next stage of development, a budget setting process will be required.*





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