

Hart District Local Cycling and Walking Infrastructure Plan

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About Sustrans

Sustrans is the charity making it easier for people to walk and cycle.

We are engineers and educators, experts and advocates. We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute.

Sustrans works in partnership, bringing people together to find the right solutions. We make the case for walking and cycling by using robust evidence and showing what can be done.

We are grounded in communities and believe that grassroots support combined with political leadership drives real change, fast.

Join us on our journey. www.sustrans.org.uk

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Foreword from Councillors



our public spaces more difficult to use. We have been challenged in recent years by walking and cycling advocates to do better.

Walking and cycling has the potential to replace shorter car trips made in Hampshire, including around a third of all commuting trips. Walking and cycling are practical everyday ways of travelling, for even just part of a journey, that can help to make us healthier, happier, greener, and more equal, and we look forward to supporting increases in these sustainable ways of travelling for everyone in Hampshire.

Hampshire County Council and Hart District Council officers, local interest groups and cross-party elected members have worked together to develop a common understanding of what improvements are needed. This has resulted in this document, the Hart Local Cycling and Walking Infrastructure Plan. We embrace the Government's objective of making walking and cycling the natural choice for short journeys. This aligns closely with our own aspirations. However, achieving our ambition and delivering the measures in this plan are dependent on Central Government supporting us with sustained and significant funding for active travel infrastructure. Having this plan in place is the first step we must take in order to be able to make the case for whatever funding the Government now makes available.

Councillor Rob Humby
Leader
Hampshire County Council

Hampshire County Council is committed to delivering better environments for people to walk and cycle both for their day-to-day journeys, and when spending time in our public spaces. Walking and cycling are a big part of the solution to a number of the greatest challenges that we face including climate change; air pollution; obesity; equality of opportunity and access for all.

If we are to meet our 2050 vision, be prosperous and expand our life opportunities, achieve our climate change emergency targets, and our public health goals we need walking and cycling to be safe, direct, and attractive for everyone from ages 8 to 80+. We need our networks to be accessible to everyone and cater for the majority of users, whether they are walking with a double buggy, have a health condition or disability that makes



to inform and progress the development of Hart's Green Grid.

We have already started creating the Green Grid with the cycling and walking pilot route between Hartland Village in Fleet and Fleet Railway Station, passing around Fleet Pond. The pilot opened in Summer 2022 and the route will be extended to Bramshot Lane at one end and into Hartland Village at the other.

Our joint commitment to the LCWIP reflects the fact that both Councils have declared a Climate Emergency and are pursuing practical measures to address it. Delivering the LCWIP is an important part of both Hampshire County Council's Local Transport Plan and Hart's Corporate Plan and Hart's Vision for 2040.

Councillor Graham Cockarill
Portfolio Holder for Planning Policy
Hart District Council

This Local Cycling and Walking Infrastructure Plan (LCWIP) is an important joint project between Hart District Council and Hampshire County Council to improve the opportunity for walking and cycling throughout the district.

A key priority of the Council's Corporate Plan 2023/2027 is to encourage more cycling and walking in Hart district by extending the Green Grid network and working with Hampshire County Council and others to improve infrastructure and reduce barriers to walking and cycling. By making Hart easier to get around on foot and by bicycle will help people make more sustainable and healthier travel choices. The Green Grid could help residents save money on fuel, boosting physical and mental health through exercise, and improving local air quality. The LCWIP will help

Contents

Section One - The LCWIP Context and process	5	Section Four - Route/Zone Audits	51
1.1 Introduction	7	4.1 Introduction	53
1.2 Hart district LCWIP Boundary	9	4.2 Walking Audits - Core Walking Zones	54
1.3 Methodology	10	Z1. Yateley core walking zone	57
1.4 Implementation	11	Z2. Blackwater core walking zone	60
1.5 Funding and next steps	12	Z3. Fleet core walking zone	63
1.6 Hampshire County Council walking and cycling principles	13	Z4. Church Crookham core walking zone	66
1.7 Government vision for walking and cycling	14	Z5. Hartley Wintney core walking zone	68
1.8 Liveable neighbourhoods	16	Z6. Hook core walking zone	70
Section Two - Evidence base	17	Z7. Odiham core walking zone	74
2.1 Introduction	19	4.3 Cycling Audits - Proposed Cycle Network	76
2.2 Gathering information and network planning	20	Route 100: Yateley to Blackwater	79
2.3 Existing transport network	22	Route 110: Hartley Wintney to Elvetham Heath	83
2.4 Trip generators	23	Route 120: Hook to Hartley Wintney	86
2.5 Propensity to cycle tool data	24	Route 130: A30 to Hook	92
2.6 Collisions	34	Route 140: Fleet to Farnborough	95
2.7 Stakeholder engagement	36	Route 150: Fleet to Church Crookham	99
Section Three - The network	41	Route 160: Crookham Village and Sandy Lane	104
3.1 Proposed Hart district network overview	43	Route 200: Hook to Odiham	109
3.2 Core Walking Zones	47	Route 210: Fleet to Crookham Village	114
3.3 Prioritisation	48	Route 220: Fleet station to Crookham Village	119
		Route 230: Yateley to Fleet railway station	123
		Route 240: Blackwater to Hawley	127
		4.4 Next Steps	130
		Appendices	131
		Glossary	137

Section One - The LCWIP Context and process

Section One Contents

1.1 Introduction	7
1.2 Hart district LCWIP Boundary	9
1.3 Methodology	10
1.4 Implementation	11
1.5 Funding and next steps	12
1.6 Hampshire County Council walking and cycling principles	13
1.7 Government vision for walking and cycling	14
1.8 Liveable neighbourhoods	16

1.1 Introduction

Hart District Council and Hampshire County Council share a desire to secure investment in sustainable transport measures, including walking and cycling infrastructure. This will provide a healthy alternative to the car for local short journeys to work, local services, and schools. Both Councils want to work with health authorities to ensure that transport policy supports ambitions for health and well-being. This approach is integral to Hampshire's new Local Transport Plan 4.

In doing so, all residents of Hart district will experience benefits, such as: reduction in air pollution, fewer delays and decreasing frequency of collisions on the highway and improving accessibility for people of all ages and ability.

What is an LCWIP?

Local Cycling and Walking Infrastructure Plans (LCWIP), as set out in the Government's Cycling and Walking Investment Strategy, are a strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing walking and cycling networks, ideally over a 10-year period, and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle.

The key outputs of LCWIPs are:

- a network plan for walking and cycling which identifies preferred routes and core zones for further development;
- a prioritised programme of infrastructure improvements for future investment; and
- a report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

LCWIPs are critical to delivering the interlinked priorities of:

- Accessibility & inclusivity;
- Health & wellbeing;
- Climate change & air quality;
- Mitigating development;
- Place shaping & place making; and
- Economic vitality.

Local policies

This LCWIP is supported by policies developed and delivered by Hampshire County Council and Hart district Council including the new Local Transport Plan 4, the Hart Local Plan, and Hampshire's Walking and Cycling strategies which:

- provide a clear statement on aspirations to support walking and cycling in the short, medium, and long term;
- provide a framework to support local walking and cycling strategies;
- provide a means of prioritising funding

to achieve best value walking and cycling investments, and

- support in realising funding opportunities for walking and cycling measures.

The aims of the respective Hampshire County Council walking and cycling strategies are:

- **walking:** By 2025, walking will be the travel mode of choice for short trips and the most popular and accessible means of recreation;
- **cycling:** By 2025, cycling will be a convenient, safe, healthy, affordable and popular means of transportation and recreation within Hampshire.

An LCWIP for Hart district

Hampshire County Council and Hart District Council have both declared a Climate Emergency, committing to put environmental issues at the heart of everything they do. With more than a third of carbon emissions in the United Kingdom coming from transport, this report supports important mitigation measures and adaptation to climate change, including supporting targets to get to net zero.

Transformative walking and cycling improvement programmes in other parts of the country are helping to build healthy and inclusive neighbourhoods. In this regard, the plan will help to improve both the physical and mental health of residents. It will support the aims of public health strategies by making local places healthy and safe and building physical activity into daily routines.

Walking and cycling are good for the economy. Whilst it might be harder to do a weekly shop without a car, studies have shown that pedestrians and cyclists spend more than drivers in local shops per month, through multiple visits; and those [retailers frequently overestimate access by car](#). Walking and cycling schemes frequently achieve better value for money than schemes aimed at relieving congestion, and have wider benefits such as [improved public health, better air quality, reduced community severance and congestion relief](#).

Description of Hart district

Hart district is located in north-east Hampshire with an estimated population of [99,400](#). At just over 21,500ha in size, it is bounded to the north by Berkshire and to the east by Surrey. Within Hampshire, Hart district is adjoined by Rushmoor, Basingstoke and Deane Borough and East Hampshire.

The M3 and the South Western Main Line bisect the district, as well as the Basingstoke Canal. The A30 and the A287 also run east-west across the district, connecting Basingstoke/Camberley and Farnham respectively. East-west movements predominate. The M3 and the railway line contribute to significant north-south severance across the district.

The South Western Main Line runs across the District, with stations at Fleet, Winchfield and Hook. The Reading to Redhill Line runs along the northeastern border of the district, with stations at

Sandhurst and Blackwater (Sandhurst being just outside of the district).

Much of Hart is rural in nature, and large swathes of the district are active Ministry of Defence (MoD) training areas.

There are around 35 settlements across the district, although some are just isolated groups of homes with no community facilities. The Hart Local Plan 2032 categorises the settlements within the district by their size and the services and facilities they offer, using criteria on employment opportunities, schools, health services, recreation and leisure opportunities, shops, accessibility and population. The towns and villages have been categorised by tiers. Fleet, including Church Crookham and Elvetham Heath, is the main urban area. Blackwater, Hook and Yateley are the primary local service centres, Hartley Wintney, Odiham and North Warnborough are the secondary local service centres.

Transport and travel: walking and cycling in Hart district

To the east, journeys between Hart and Rushmoor are constrained by MoD land and the Farnborough Airport. To the west, journeys between Hook and Basingstoke are limited due to the lack of dedicated cycling and walking provision along the A30.

Within the district, the A30, A287, B3013 and the B3272 create substantial severance within and between settlements. These high-speed carriageways carry large volumes of motor vehicle

traffic, and outside of Fleet there is no dedicated cycling and walking provision along these key corridors.

There are currently no National Cycle Network (NCN) routes traversing Hart district. Although there are no NCN routes, the Basingstoke canal with its towpath, runs east to west across the district. The canal tow path could be developed to offer an ideal environment for walking and cycling, although this is likely to best serve leisure trips. Any development would need to respect Basingstoke Canal's Conservation Area status.

Local trip generators

Fleet is the major settlement in the district, and is a primary destination for employment, shopping and leisure facilities.

There are 28 infant/junior/primary schools and 5 secondary schools in the district, excluding private schools. Many students travel outside of the district for post-16 education.

Creating a Green Grid for Hart

Green Grid is Hart District Council's plan to enhance the environment to live in, work in and enjoy through the creation of green corridors between settlements to encourage sustainable healthy transport and provide cycles for hire to enable movement.

The results of the 2020 consultation on the Green Grid strategy have informed the development of this LCWIP. The proposals in this LCWIP will

support and inform the development of the Green Grid.

Hart District Council have already started creating the Green Grid with the cycling and walking pilot route between Hartland Village in Fleet and Fleet Railway Station, passing around Fleet Pond. The pilot opened in Summer 2022 and the route will be extended to Bramshot Lane at one end and into Hartland Village at the other. Hartland Village will deliver a cycle for hire facility as part of the facilities in the heart of its development of 1,500 homes.

Developments and Opportunities

The Hart Local Plan (Strategy & Sites) 2032, published in April 2020, identified sites across the district which would be made available for residential, business or mixed-use development. The largest of these is Hartland Village, with the delivery of 1,500 homes.

New economic development will be focused on existing sites in Hook, Fleet town centre, Blackwater and Cody Technology Park.

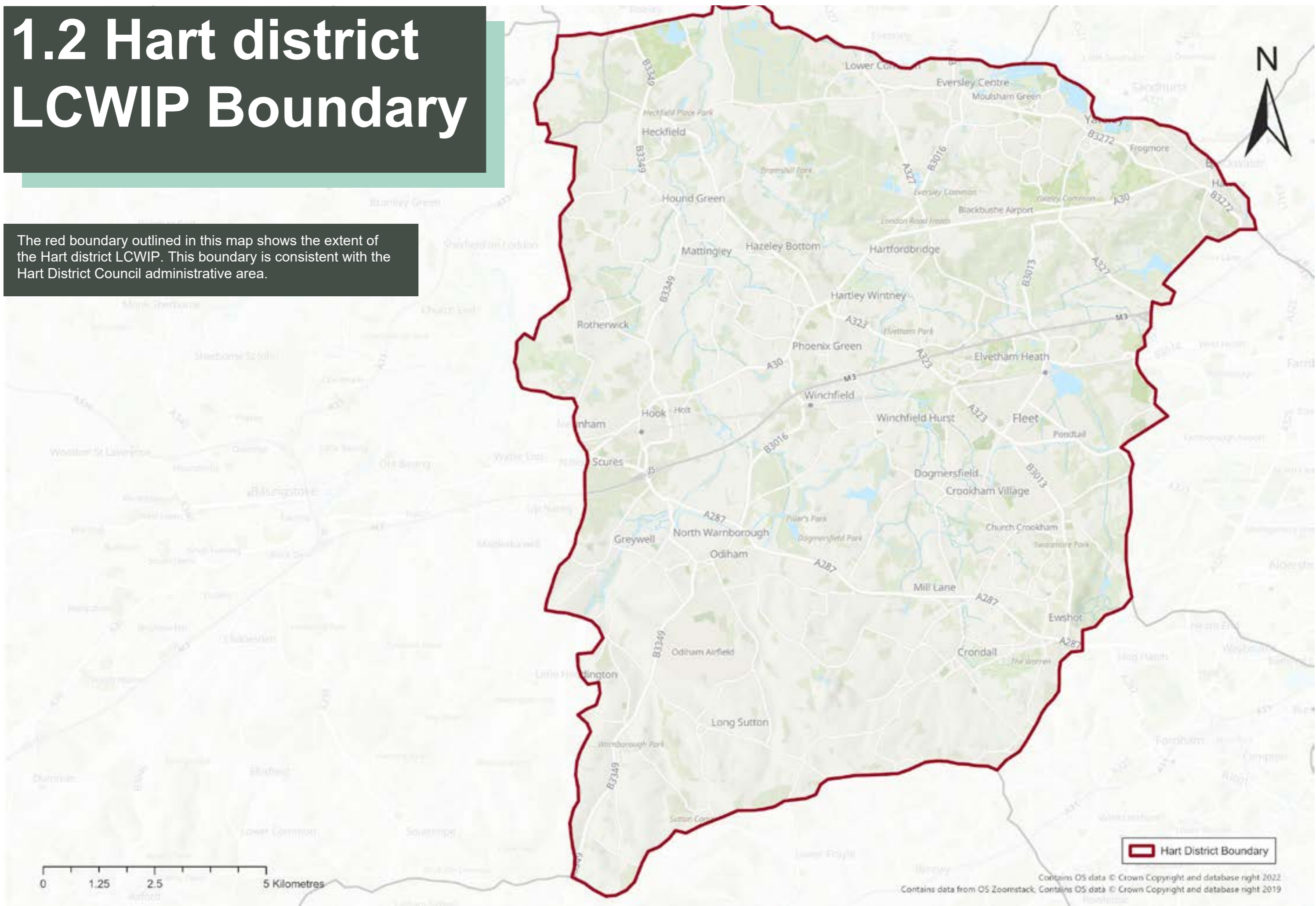
The Local Plan also identifies 13 locally important employment sites:

- Ancells Business Park, Fleet,
- Bartley Wood, Hook,
- Blackbushe Business Park,
- Eversley Haulage Yard,
- Eversley Storage,
- Finn's Business Park, Church Crookham,
- Grove Farm Barn, Crookham Village,
- Lodge Farm, North Warnborough,
- Murrell Green Business Park,
- Potters Industrial Park, Church Crookham,
- Redfields Business Park, Church Crookham,
- Optrex Business Park, Rotherwick, and
- Beacon Hill Road, Church Crookham.

The district's retail centres are also defined in the Hart Local Plan. Fleet is the main town centre. Blackwater, Hook and Yateley are the district centres. Hartley Wintney and Odiham are the local centres.

1.2 Hart district LCWIP Boundary

The red boundary outlined in this map shows the extent of the Hart district LCWIP. This boundary is consistent with the Hart District Council administrative area.



1.3 Methodology

Sustrans was commissioned by Hart District Council and Hampshire County Council in September 2022 to support the development of a Local Cycling and Walking Infrastructure Plan (LCWIP) for Hart district.

In line with the government's LCWIP guidance, the scope of the work was limited to utility trips such as those to work, education and shopping

The approach was to look at opportunities to create walking and cycling networks. Existing facilities and routes were considered, along with known improvement proposals.

During the course of this LCWIP there were two rounds of stakeholder and public engagement. In the first round of engagement local stakeholders helped to identify where new routes and improvements were needed. The potential routes were then surveyed on foot and bicycle.

In the second round of engagement the public commented on the proposed cycle network, core walking and its recommendations. The outcome from this engagement contributed to shape the final cycle network and core walkign zones improvements.

The adopted methodology was informed by the LCWIP Technical Guidance (2017) and Local Transport Note 1/20 (LTN 1/20). LTN 1/20 provided the principal design guidance when developing potential options for the primary cycle routes.

LCWIP Technical Guidance

Under the guidance, the key outputs of LCWIPs are:

- a network plan for walking and cycling which identifies preferred routes and core zones for further development;
- a prioritised programme of infrastructure improvements for future investment;
- a report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

The LCWIP process has six stages:

1. Determining Scope

Establish the geographical extent of the LCWIP, and arrangements for governing and preparing the plan.

2. Gathering Information

Identify existing patterns of walking and cycling and potential new journeys. Review existing conditions and identify barriers to cycling and walking. Review related transport and land use policies and programmes.

3. Network Planning for Cycling

Identify origin and destination points and cycle flows. Convert flows into a network of routes and determine the type of improvements required.

4. Network Planning for Walking

Identify key trip generators, core walking zones and routes, audit existing provision and determine

the type of improvements required.

5. Prioritising Improvements

Prioritise improvements to develop a phased programme for future investment.

6. Integration and Application

Integrate outputs into local planning and transport policies, strategies, and delivery plans.

Hart District Council and Hampshire County Council determined Stage 1, setting the study area boundary as Hart district. Sustrans developed Stages 2,3 and 4. Stages 5 and 6 were jointly developed between Sustrans, Hampshire County Council and Hart District Council.

1.4 Implementation

The inclusion of walking and cycling routes in the network plan is no guarantee that it will be implemented. While efforts have been made to ensure that the proposals are practical, it should be recognised that there are competing demands for highway space, including cars, parking, buses, taxis that need to be balanced.

Some sections of proposed routes may be on private land and discussions with landowners will be required. Proposed road space reallocation for walking and cycling will need to carefully consider implications across all modes, although the ultimate aim must be to reduce the dominance of motor vehicles, and ease congestion.

This report is not a feasibility study, but a high level assessment. All proposals will be subject to further feasibility work and detailed design work will be necessary. In some cases, this may mean that a route is moved to an alternative parallel alignment.

If schemes are to be progressed, they will need to be prioritised for inclusion in the scheme development programme with the scheme being subject to the appropriate level of business case development.

The LCWIP will also be used to inform developers of the level of ambition for the walking and cycling network and prompt their involvement.

Hampshire's first LCWIP focus is on the routes and zones that have the greatest potential to convert car trips to walking and cycling trips. This

means that in some instances they tend to have a more urban focus, where trips are often shorter, and where more people live, work and visit.

Hampshire County Council recognises this and will seek to address the balance for more rural areas, walking zones and tertiary cycle routes, in future versions of LCWIPs. Partnership working with Hart District Council is also important in helping to plan, design, attract funding and deliver improvements across the walking and cycling network and in identifying tertiary routes.

1.5 Funding and next steps

How will schemes be funded?

The pace at which progress is made in delivering the LCWIP route priorities will depend entirely upon the level of funding secured.

To date government funding for active travel has been awarded to local authorities based upon competitive bids, such as the Levelling Up fund, Capability fund and Active Travel fund, in addition to the annual Local Transport Plan allocations made by Government to local transport authorities. In the future other Government funding may be announced. Most bids for government funding need a local financial contribution.

Other funding sources include developer contributions and locally derived funds, such as local authority and community resources. It is likely that some local funding may be required to help boost bids for any Hampshire County Council government funding received in the future. It is expected that developers contribute to the development of the LCWIP network to ensure their developments are accessible by sustainable modes and to mitigate the transport impacts of their developments.

It is important that the limited local resources that are available are used to best effect; in securing large amounts of Government funding but also in meeting local priorities, for example where a modest intervention is able to unlock local access

within a community. It is also the case that local priorities may be able to provide a slightly broader focus, for example by improving health and wellbeing outcomes for local residents, where this is a priority and investing in rural communities where it might prove difficult to meet value for money criteria based upon the numbers of people to benefit.

It is important to note that the evidence base for the Hart LCWIP has been the existing pattern of development and committed development in the local plan but does not take into account demand from future unplanned development, e.g. unallocated sites with no current planning permission.

It will be necessary for developers, in bringing forward their proposals to ensure that the new communities or employment proposed can be fully connected into the wider community with high quality walking and cycling routes for people to access local facilities. Equally, existing residents should be able to access local facilities provided within new development such as jobs and education opportunities.

All potential options identified in this LCWIP are based on concept design only and therefore all costings are high level and approximate based on similar schemes elsewhere. Schemes prioritised for implementation will be subject to a full design process.

What schemes are already happening in Hart District?

- Cycleway/footway improvement Scheme at Reading Road North Roundabout and Elvetham Road Roundabout (Spring 2023)
- Continued development of the Fleet Pond Path, linking Fleet railway station with Hartland Park Village and onwards to Rushmoor.
- Hares Hill (Grove Farm) redesign of scheme to focus on walking and cycling - 15 minute neighbourhood - link to Fleet Road.

Hart and Hampshire are exploring a number of priorities where further feasibility work is underway or is planned to understand what is possible to deliver high quality schemes.

1.6 Hampshire County Council walking and cycling principles

Together with movements in national policy and guidance Hampshire County Council has developed new draft principles for walking and cycling.

These new principles have been designed to:

- enable more people to walk, cycle or use public transport in scale with the **Climate Emergency**;
- deliver better environments to match our **2050 Vision**, both in towns and in the countryside;
- deliver better transport for all;
- play the part in addressing the factors that contribute to public health including social disparities; and
- reduce social inequalities and exclusion by improving the ability for everyone to access destinations including work, education, visiting friends and family, shopping, and leisure, without reliance on private cars.

Hampshire County Council has developed **10 walking and cycling principles**, reviewing best practice, and giving consideration to: aspirations, movement, place, maintenance and engagement.

These principles have all been established via County Council Member and Officer steering groups and consulted widely through these groups.

They were presented at Hampshire County Council's Active Places Summit (October 2020) to engage with a wide range of people who use the streets, high streets, walking and cycle routes on a day-to-day basis.

The principles sit under three headings:

- 1. Overarching principles;**
- 2. Planning;**
- 3. Design and implementation.**

1. Overarching principles

- Prioritise walking and cycling for healthier people, healthier transport, and a healthier planet.
- Have an integrated approach to all aspects of planning, development, design, and operation.
- Ensure planning is network based, shaped by evidence, and monitored.

2. Planning

- Engage a wide range of users, and potential users, in the design process.
- Reframe the potential for walking, cycling and public transport to work together for longer distance journeys.
- Trial new things, and if they do not work, we'll change them.

3. Design and implementation

- Focus street design on people.
- Incorporate national design principles into every transport scheme. The designs will be:
 - safe;
 - coherent;
 - direct;
 - comfortable;
 - attractive;
 - adaptable and;
 - accessible to all.
- Deliver walking and cycling environments that feel comfortable and provide inclusive access for everyone regardless of confidence, age and disability.
- Design the right scheme for each location.

These principles, when applied, will help reinforce Hampshire County Council's goals in delivering a healthy, sustainable, and active county, well into the future.

1.7 Government vision for walking and cycling

In 2020, the government published “Gear Change: A bold vision for cycling and walking.” The Plan recognises the need for significant changes to active travel infrastructure in the coming years, whilst acknowledging the associated challenges. It recognises that there is a unique opportunity to transform the role cycling and walking can play in the transport system. It states that:

‘England will be a great walking and cycling nation. Places will be truly walkable. A travel revolution in our streets, towns and communities will have made cycling a mass form of transit. Cycling and walking will be the natural first choice for many journeys with half of all journeys in towns and cities being cycled or walked by 2030.’

It also states that investment in active travel is key to providing inclusive access and delivering economic and health benefits to a wider segment of the population:

***‘Safer streets: Nobody is afraid to cycle; every child is confident and safe walking or cycling to school; all road users treat each other with mutual respect’; and
‘Convenient and accessible travel: Cycling and walking are recognised as the most convenient, desirable and affordable way to travel in our local areas; more women and disadvantaged groups enjoy walking and cycling as part of their daily journeys; everybody has opportunities to take up walking and cycling’.***

Gear Change: A Bold Vision for Cycling and Walking also identified the health and well-being benefits and aims to achieve:

‘Healthier, happier and greener communities: Peoples’ health and quality of life is improved by more people walking and cycling; the number of short journeys made by car is vastly reduced, meaning people from all parts of our communities around the country can enjoy the benefits of cleaner, healthier, safer and quieter streets’.

The government’s Decarbonising Transport (2021) document states that ***‘we will deliver a world class cycling and walking network in England by 2040,’*** and the Net Zero Strategy (2021) adds that ***‘this will include comprehensive cycling and walking networks in all large towns and cities.’***

To help deliver this vision, the government:

- has developed new guidance on cycle design (Local Transport Note 1/20 – see below);
- recently established Active Travel England to act as an inspectorate and funding body, and to support local authorities to deliver the vision;
- will be publishing new guidance on walking (and update to Manual for Streets).

The key principles that underpin LTN 1/20 are:

- cyclists must be separated from volume traffic,

both at junctions and on the stretches of road between them;

- cyclists must be separated from pedestrians;
- cyclists must be treated as vehicles, not pedestrians;
- routes must join together; isolated stretches of good provision are of little value;
- routes must be direct, logical and be intuitively understandable by all road users;
- routes and schemes must take account of how users actually behave;
- purely cosmetic alterations should be avoided;
- barriers, such as chicane barriers and dismount signs, should be avoided; and
- routes should be designed only by those who have experienced the road on a cycle.

Summary taken from DfT’s Gear Change. A bold vision for cycling and walking.

For the full information on these documents please see:

- [DfT’s Gear change: a bold vision for cycling and walking: Cycling and walking plan for England](#)

- [DfT’s Cycle infrastructure design \(LTN 1/20\) guidance](#)

The publication of the LTN 1/20 in July 2020 followed the Government’s announcement for new investment provided towards cycle improvements, across the country. Local Authorities and developers are now expected to use LTN 1/20 in the design of their schemes.

When reading this LCWIP, keep in mind that a number of recommendations following LTN1/20 may require installation of crossings for quality of service requirements on a route even where it would not meet the current Hampshire County Council’s current policy as it relates to pedestrian, vehicle ratios (PV2).

This issue will require further investigation and either decisions on a case-by-case basis or review of Hampshire County Council’s policy to update it in the light of LTN 1/20.

Wayfinding

Wayfinding refers to information systems that guide people through a physical environment and enhance their understanding and experience of the space.

Wayfinding is particularly important in complex built environments such as urban centres, long distance trails, and transportation facilities.

As environments become more complicated, people need visual cues such as maps, directions, and symbols to help guide them to their destinations. In these often high-stress environments, effective wayfinding systems contribute to a sense of well-being, safety, and security.

LTN 1/20 states that:

There is a balance to be struck between providing enough signs for people to be able to understand and follow cycle infrastructure and ensuring that the signs themselves do not create confusion or street clutter. Routes on other rights of way not on the highway can use customised waymarking.

Hampshire County Council would include wayfinding as part of network planning in all schemes, in line with LTN1/20. Hart District Council are currently piloting wayfinding on the Green Grid route between Hartland Park and Fleet Railway Station. This wayfinding could be used across the Hart district.

Secure 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.

Secure cycle parking would be considered as part of relevant schemes and is something that is also being considered as part of Hampshire's Local Transport Plan 4 (LTP4) and Hart's Supplementary Planning Document on Parking Standards.

1.8 Liveable neighbourhoods

Liveable neighbourhoods are designed to make communities healthier, safer, more sustainable and more attractive places to live. At the heart of a liveable neighbourhood lies the idea that streets should be more than just thoroughfares for vehicles; they should be vibrant spaces that people are proud of, where people can come together, socialise, and enjoy their surroundings.

Through-traffic or rat-running can have a serious impact on the health and quality of life of the people living on a street, and impact disproportionately on more deprived communities. Noise and air pollution, and speed and volume of traffic are often sighted as issues that effects peoples' enjoyment of spending time on their own streets.

Liveable neighbourhoods can create an improved environment, get neighbours talking, and even see a return of children playing in the street. Quieter and safer-feeling streets can support a switch to more healthy, active ways of travelling around, particularly for shorter journeys to local amenities.

They aren't about preventing people driving, residents, visitors, or delivery drivers needing to reach anywhere within the liveable neighbourhood would still be able to do so by car – though they might have to approach from a different direction. The aim is to rebalance residential streets so they are less car dominated and more people orientated.

In a recent case study, liveable neighbourhoods

resulted in an increase in children playing outside, lower air pollution, together with making walking and cycling more of a natural choice for everyday local journeys.

Liveable neighbourhoods can be delivered by using modal filters. These can take the form of many things from planters to bollards or even cycle stands, that can also act as handy cycle parking. They can also include one-way streets, allowing footways to be widened, creating seating areas outside local businesses or allowing new planting.

Research into 46 liveable neighbourhood schemes found they 'typically resulted in a substantial relative reduction in motor traffic inside the scheme area...On boundary roads, by contrast, we found little change.' (Thomas and Aldred, 2023)

In 2018, Hampshire County Council officers attended a guided visit to the flagship Walthamstow Village project which created a liveable neighbourhood in the London Borough of Waltham Forest.

'Recent research showed that more people in Waltham Forest are cycling. In our 2016 resident insight survey, 17% (approx. 46,100 people) said they cycle, compared to 12% (approx. 32,500 people) the year before – and two-thirds (73%) said they cycle at least once a week, up from 62% in 2015.' (London Borough of Waltham Forest)

Hampshire's approach to liveable neighbourhoods

There are many existing liveable neighbourhoods in Hampshire. These mainly take the form of housing estates with many pedestrian and cycle connections to neighbouring areas, but no cut through for motorised vehicles.

Creating new liveable neighbourhoods in existing areas requires careful planning and involvement of the local community but have proved popular and effective in many areas. We are open to hearing from local communities who might like to develop or trial a liveable neighbourhood in their area.

Further detail on the approach of these sorts of measure will be incorporated into Hampshire County Council's Local Transport Plan 4.

Section Two - Evidence base

Section Two contents

2.1 Introduction	19
2.2 Gathering information and network planning	20
2.3 Existing transport network	22
2.4 Trip generators	23
2.5 Propensity to cycle tool data	24
2.6 Collisions	34
2.7 Stakeholder engagement	36

2.1 Introduction

Section two of this document provides information on the technical evidence that was gathered in the preparation of this LCWIP.

Gathering Information

Comprehensive information and data sources were provided by Hampshire County Council and Hart District Council which was augmented by publicly available datasets from the 2011 and 2021 Census (e.g. population and employment), DfT Traffic Counts, Road Traffic Collisions, schools, public amenities and previous consultation plans exploring existing and new networks.

Review and analysis of the data was undertaken using ArcGIS. GIS is a system that creates, manages, analyses and maps all types of data. GIS connects data to a map, linking location data with descriptive information.

The main trip generators were identified and an initial network mapped out to link residential areas with these locations. Two stakeholder workshops were held in December 2022, to test assumptions and to gather useful information from local stakeholder groups. Attendees were asked to identify barriers to walking and cycling, as well as potential cycle routes and walking zones. Attendees responses were recorded on Sustrans' ArcGIS Online mapping platform.

The following maps and supporting commentary outline the data gathering process. The maps presented build the evidence base for the identification of desire lines, which inputs directly into Stage 3, network planning for cycling.

- Existing transport network
- Trip attractors and generators
- Collisions involving pedestrians and cyclists
- Propensity to Cycle tool analysis

2.2 Gathering information and network planning

Network Planning for Cycling

There is a wealth of information to consider when planning a cycle network for Hart District as described above. The approach was to work through all the data, switching datasets on and off within GIS to test the emerging network.

Origins and Destinations

The identification of demand for a planned network started by mapping the main origin and destination points across the study area.

These include the following:

- Resident population (2011 Census)
- Workplace population (2011 Census)
- Schools
- Shops and amenities
- Transport hubs
- Major development sites/allocations within the adopted local plan

Mapping of Desire Lines

Further to the initial mapping exercise, the origin and destination points within close proximity to each other have been clustered to simplify the analysis. Once the key clusters were identified, direct desire lines were drawn connecting the clusters to identify the principal links to be provided by the cycle network.

Propensity to Cycle Tool (PCT)

In addition to the clustering exercise, the PCT has been used to identify which routes within the study area have the greatest potential for an increase in the number of commuters cycling to work and the number of children cycling to school.

Route Identification

The desire lines identified by the above analysis were mapped to the existing highway network, and in some places the existing public rights of way (PRoW) network. In this way, the network seeks to connect the key origins and destinations within the study area, including centres of population, employment locations, schools, leisure destinations and various amenities such as shops and health services.

Converting these desire lines into routes was an iterative process. In some cases, particularly in rural locations, there is a clear preferred cycle route which is usually the most direct. However, in some cases there may be more than one potential route between origin and destination points or a reason why the most direct route would be less suitable for cycling.

At this stage, the network was mapped out based on the data analysis undertaken above and with reference to the Propensity to Cycle Tool (PCT) which shows which routes have the highest potential for an increase in cycling under various scenarios for change, and with reference to the outputs from the stakeholder workshops and collision data involving cyclists.

Desktop Review

In addition, previous cycling strategies and feasibility studies were reviewed in the preparation of the LCWIP, as referenced in the Introduction.

Primary and Secondary Routes

Once the network plan was complete, the network was split into primary and secondary routes.

The primary routes are judged to be the most popular and strategic routes, linking key trip attractors such as residential areas, with the key trip destinations. They form the main spine of the network to which the other routes will connect. Primary routes were selected based on routes that were expected to have high flows of cyclists along desire lines linking large residential areas or new development sites to each other as well as key links to adjoining local authorities and key trip attractors. Primary routes were also selected based on their feedback at the stakeholder workshops. These routes were then agreed with Harts District Council and Hampshire County Council.

Secondary routes can be locally important but are less strategic as they fill the gaps in the primary network. Some sections of secondary routes may have higher flows than parts of the primary routes. Secondary routes also play a key role in directly connecting residential developments and schools to primary routes.

The proposed network was visually tested against the Propensity to Cycle Tool data and the outputs of the stakeholder workshops as well as the Green Grid Survey undertaken in 2020. There is a high degree of correlation between the networks. Major employment sites and secondary schools are served by the proposed network. The proposed network also serves the main shopping areas, hospital, leisure and sports centres and development sites.

Once preferred primary routes were identified, they were assessed against the five core design outcomes for cycling: coherent, direct, safe, comfortable and attractive. An audit was then undertaken of the twelve primary cycle routes to identify what measures were required to improve them to meet the core design outcomes.

In instances where there was more than one viable option for a route section, each option was audited. Each option was assessed on its own merits and with reference to the criteria set out within the DfT's Route Selection Tool (RST).

Auditing the Cycle Routes

The cycle routes were audited in person and the potential options have been devised with reference to the guidance set out within LTN 1/20 wherever possible. Notwithstanding, there are some locations where an LTN 1/20 solution may not be achievable due to a number of factors such as width constraints and gradient.

Network Planning for Walking

There is not an equivalent dataset to the Propensity to Cycle Tool for walking, so there is no detailed mapping exercise as part of the background study. Walking Zones were selected based on walking trip attractors, to reflect the shorter distances that people are likely to walk.

The DfT's LCWIP guidance suggests that Core Walking Zones (CWZ) normally consist of a number of walking trip generators that are located close together - such as a town centre or business parks.

An approximate five minute walking distance of 400m can be used as a guide to the minimum extents of CWZs. Within CWZs, all of the pedestrian infrastructure should be deemed as important. Whilst this study has focussed on the CWZs, improvements on some of the key routes within close proximity to the CWZs have also been considered, such as the connections between the centres and their respective railway stations.

Auditing the Core Walking Zones

The CWZs have been considered using the categories from the Walking Route Audit Tool (WRAT) and the Healthy Streets Design Check (HSDC) tool.

The WRAT and HSDC are government supported tools for assessing walking and public realm environments.

The WRAT has not been used to calculate the existing condition of the Core Walking Zone as the calculations relate to auditing a route rather than a zone. As such, the categories from that and the Healthy Streets Check have been used instead, to provide an assessment. Additional information on the Healthy Streets Design Check can be found in the Design Principles section.

The core principles for consideration in the WRAT are:

- attractiveness
- comfort

- directness
- safety
- coherence

The core principles for consideration in the Healthy Streets Design Check are:

- Everyone feels welcome
- Easy to cross
- Shade and shelter
- Places to stop and rest
- Not too noisy
- People choose to walk and cycle
- People feel safe
- Things to see and do
- People feel relaxed
- Clean Air



Healthy Streets Indicators

Door-to-door journeys

In addition to planning for local trips on foot and by bike, it is important to ensure that longer distance journeys are made as easy as possible by integrating walking and cycling networks with public transport interchanges.

The concept of the “door-to-door” journey was introduced by the Campaign for Better Transport in 2011, leading to the publication of a government door-to-door strategy in 2013. The emphasis is on access to public transport interchanges at both ends of the journey – perhaps walking or cycling from home to the train station, then picking up a hire bike to the final destination.

The government strategy focuses on four areas:

- accurate, accessible and reliable information about the different transport options for their journey;
- convenient and affordable tickets, for an entire journey;
- regular and straightforward connections at all stages of the journey and between different modes of transport; and
- safe, comfortable transport facilities.

As most public transport journeys involve a mode change, interchange between these is very important. Users do not want to have to go out of their way to access the next mode. Signing also needs to be clear, passengers often have short connection times so need reassurance they will be able to locate their next connection within their time frame. Larger

interchanges, such as railway station to bus station, should also have facilities appropriate to usage. If there is shelter from the elements, a safe place to wait and possibly additional facilities, such as a coffee shop, then wait times can seem shorter than they actually are. It is also very useful to provide real-time information at interchanges.

Where users are not taking a motorised form of transport to access or exit their next mode of transport then interchange is still as important. Cycling facilities need to be safe and secure and in an accessible place for changing modes quickly. This is the same for bike hire facilities. Walking and cycling routes need to be well signed giving distances and potentially times for key destinations.

Provision for taxis, good pedestrian access and, where appropriate car parking, also need to be made.

The following pages set out various layers of data that were used to build the cycle network and walking zones.

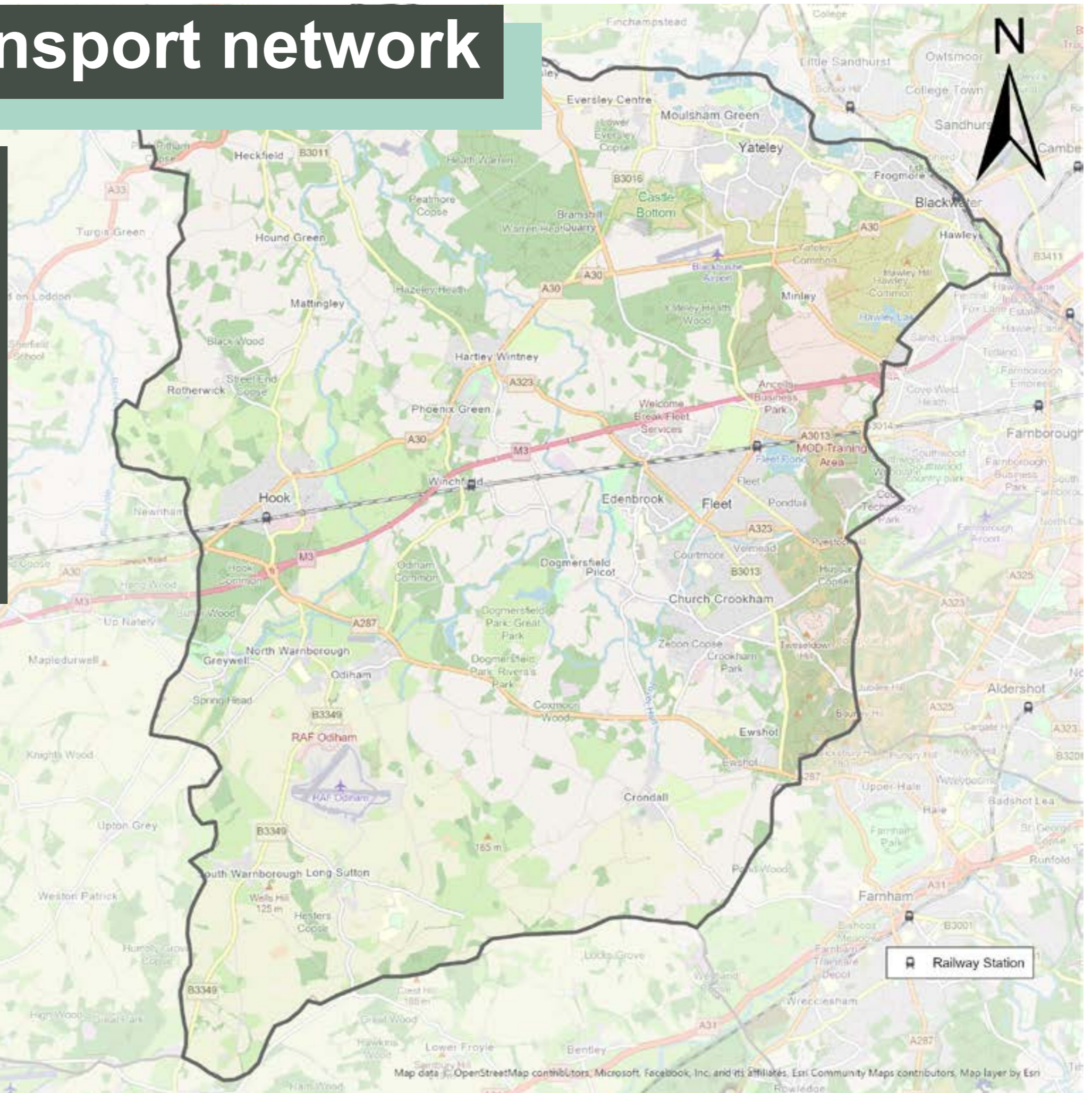
2.3 Existing transport network

Hart district has a comprehensive road network made up of a motorway, A roads, B roads and minor roads. In addition there is a robust east-west rail connection that covers the centre of the district. The northeast of the district is also well served by a north-south railway line.

The district is also served by a bus network linking settlements within Hart and providing onwards connections to Rushmoor and Basingstoke and Deane borough.

There is currently limited and fragmented cycle provision within the district. Elvetham Heath has a network of well-connected off-carriageway cycle routes, but beyond this area there is little joined-up cycle provision.

There is also an extensive Public Rights of Way (PROW) network spanning throughout the district, allowing for pedestrian, cyclists, and equestrian use. Besides promoting active travel in the area, the PROW provides helpful local links for movement between nearby communities.



2.4 Trip generators

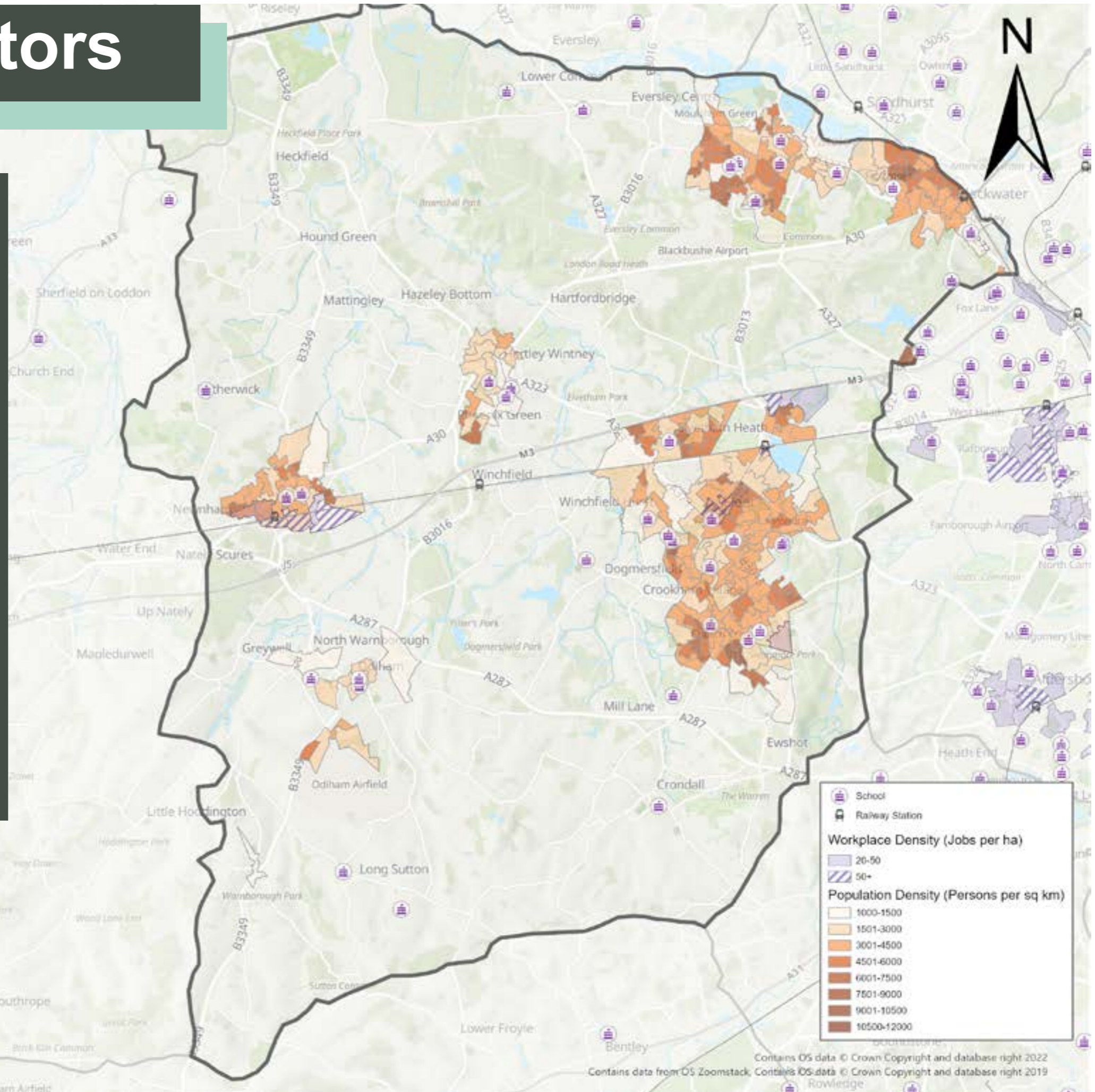
The main trip attractors and generators within the District are located within Fleet. Fleet town centre and the Ancells Farm area are employment hubs, as well as the Bartley Wood Business Park in Hook.

Schools, particularly larger institutions in Fleet, Yateley and Hook are also important trip generators.

There are around 35 settlements across the district. The Hart Local Plan 2032 categorises the settlements within the district by their size and the services and facilities they offer, using criteria on employment opportunities, schools, health services, recreation and leisure opportunities, shops, accessibility and population.

Fleet, including Church Crookham and Elvetham Heath, is the main urban area. Blackwater, Hook and Yateley are the primary local service centres, Hartley Wintney, Odiham and North Warnborough are the secondary local service centres.

The proposed cycle network provides connections between the main urban area and the primary and secondary local service centres.



2.5 Propensity to cycle tool data

The Propensity to Cycle Tool (PCT) was designed to assist transport planners and policy makers to prioritise investments and interventions to promote cycling. It is a modelling tool which shows different visions of the future under various scenarios of change.

The PCT answers the question: *‘where is cycling currently common and where does cycling have the greatest potential to grow?’*

The following presents a brief description of each scenario that has been modelled, along with their corresponding maps from the PCT outputs for the Hart District area.

Census 2011: Baseline data. The 2011 Census is the baseline data for this LCWIP as it was the most complete set of data at time of writing. Although some of the data from the 2021 Census is now available, full data is not fully available and has not been incorporated into the PCT yet.

The 2021 Census was undertaken during a national lockdown and therefore the data collected as part of it will require further investigation. The data in relation to home/work patterns and mode of travel to work will have been affected by the lockdown and therefore, more analysis of this data will be necessary before using it as a baseline and drawing conclusions from it. We will review this methodology in line with national guidance.

Government target (equality):

Corresponding to the proposed target in the DfT’s Walking and Cycling Investment Strategy, to double cycling in England by 2025.

Go Dutch:

What would happen if areas had investment bringing the same infrastructure and cycling culture as the Netherlands.

E-bike:

Models the additional increase in cycling that would be achieved through the widespread uptake of electric cycles/’ebikes.’

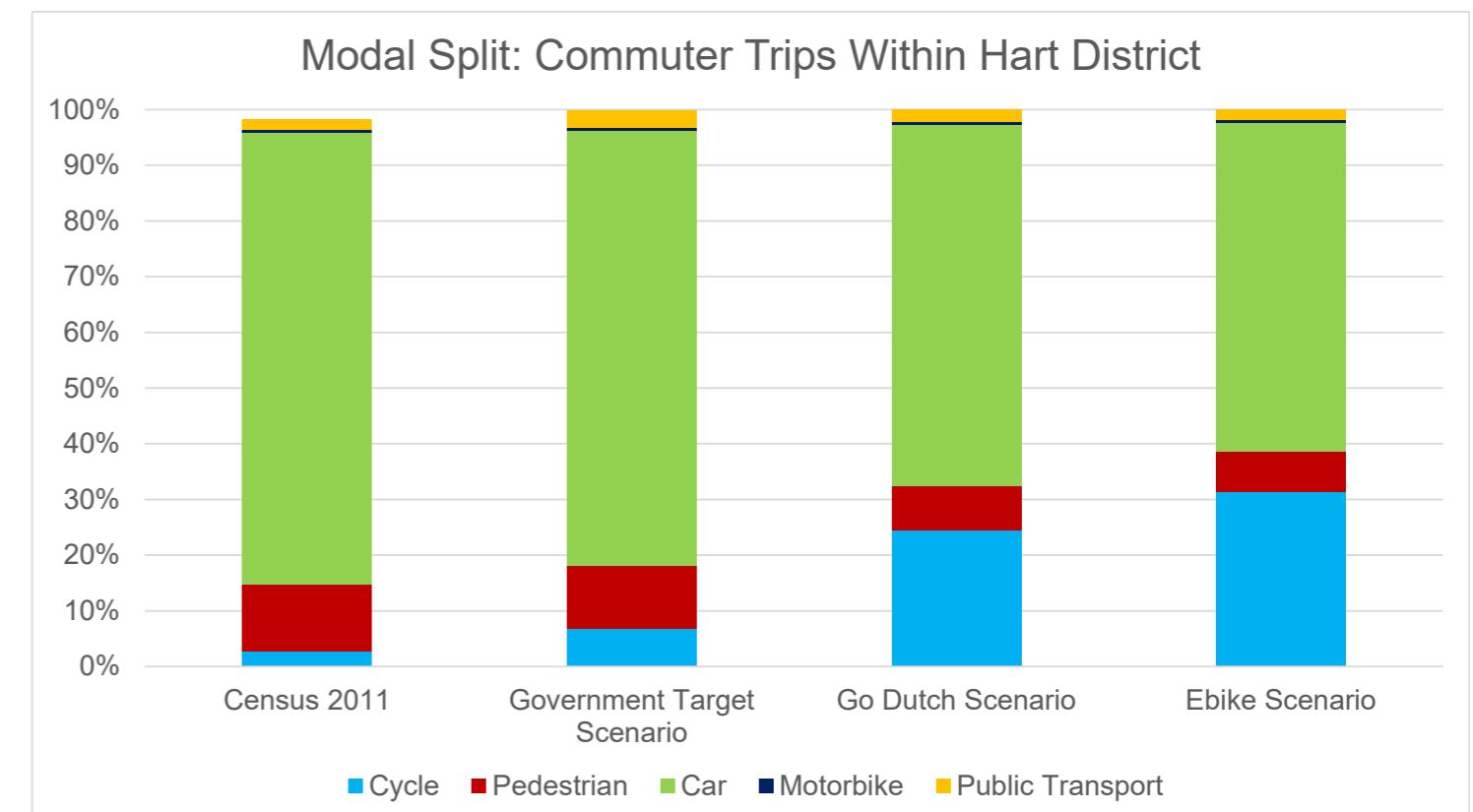
Whilst this model is a useful tool, there are a number of limitations which should be considered especially when making decisions based on the patterns shown. Firstly, the data only shows travel to work and school trips, only 27% of all journeys. Secondly, the data also misses out minor stages of multi-stage commuter trips so cycle journeys to railway stations and bus stops are not represented. Lastly the distribution of journeys is a prediction of the likely route taken based on the Cycle Streets routing algorithm and not the actual route being used.

It is worth noting that whilst the model builds an assessment of cycling propensity, it does not segment potential users, or provide any insight into people on foot.

Although this model does provide planners with

an overview to identify areas for appropriate investment for cycling trips to work, it does not provide further information on those potential cyclists and their personal attributes and behaviours to help design the most effective interventions.

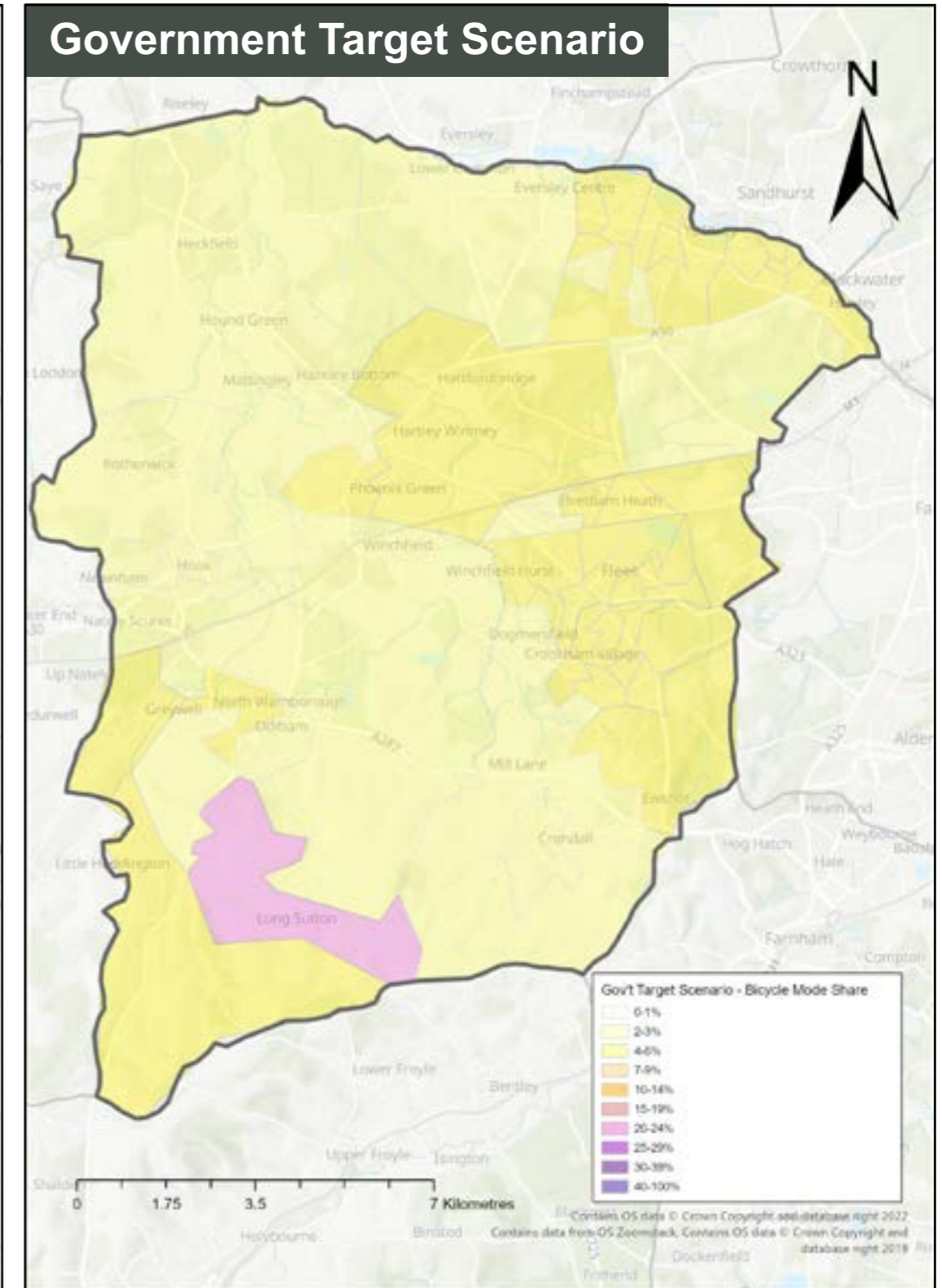
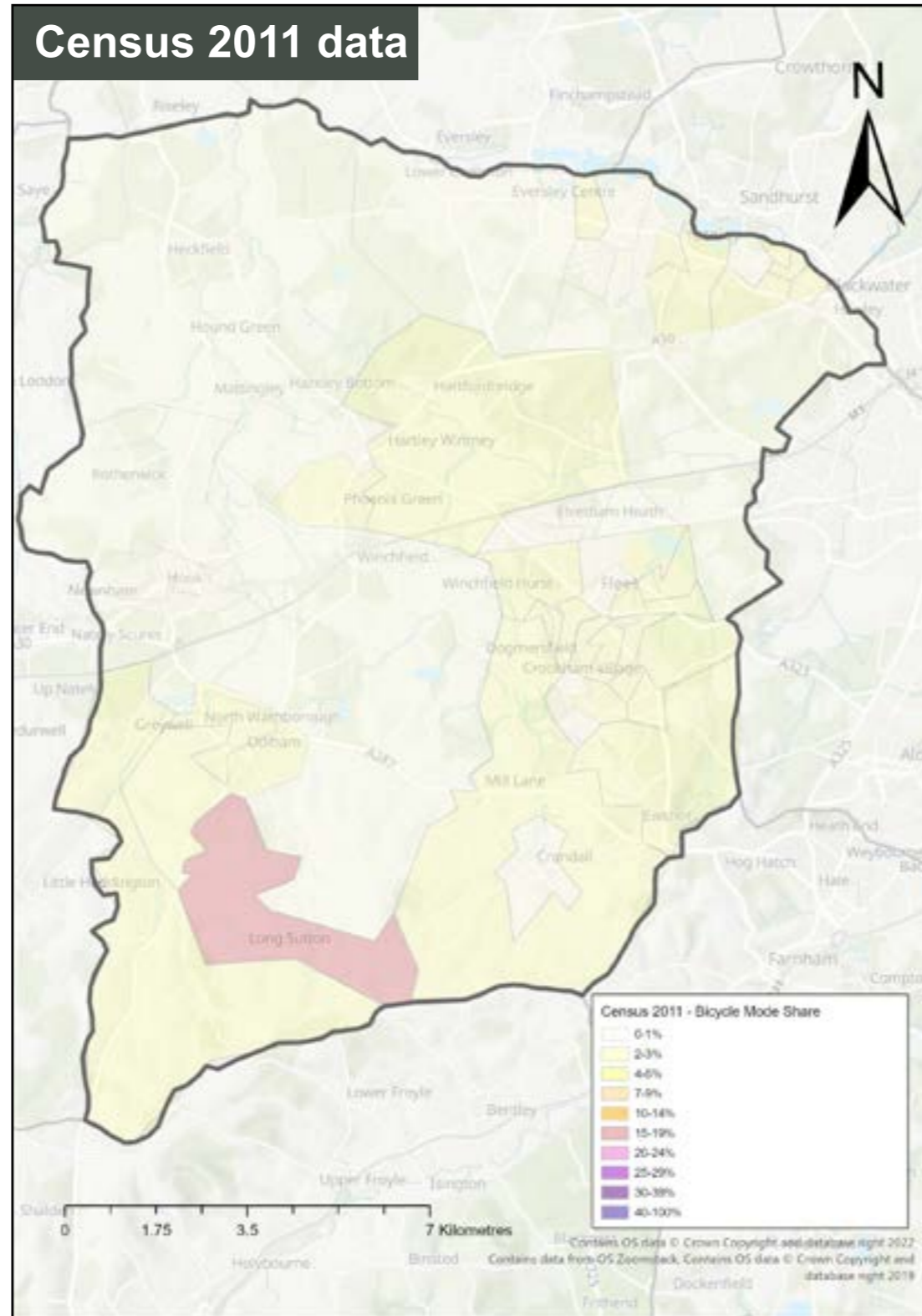
In Hart district, there is huge potential for increasing cycle trips to work. The Government target scenario would see a 141% increase in trips, while the Go Dutch scenario suggests that cycling could increase more than eightfold. In the E-bike scenario, cycling to work trips could see an eleven fold increase.



PCT commute data

According to Census 2011 commute data, there were no areas in Hart district with levels of cycle commuting above 1 to 3% of mode share, with the exception of the area including RAF Odiham and Long Sutton. Overall, levels of cycling in England for adults was 1.3%, with Hampshire reaching 1.5%.

In the Government Target scenario, there would be an increased cycle to work mode share, with most built up areas seeing 4 to 6% of trips to work taken by cycle.

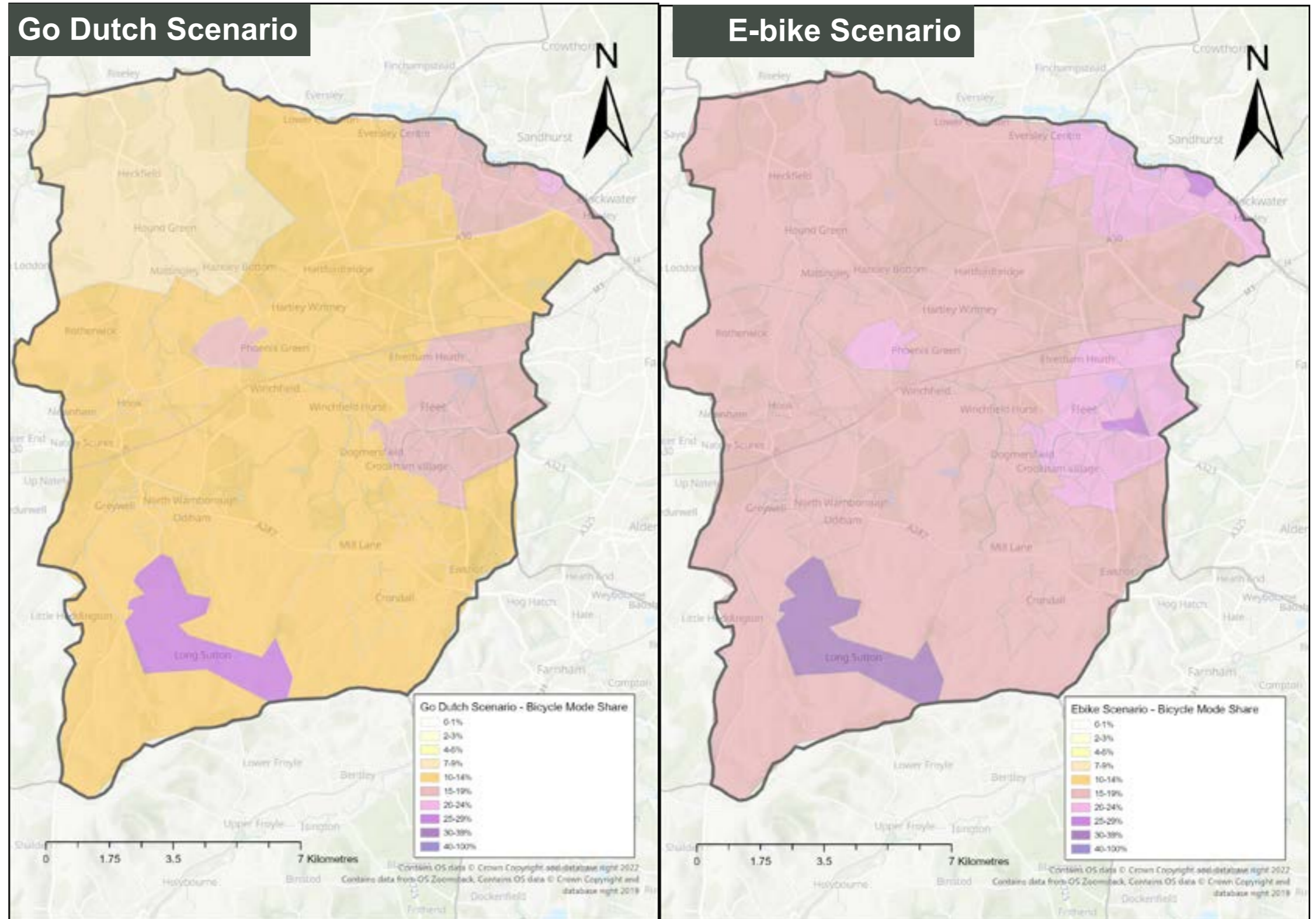


PCT commute data

In the Go Dutch scenario, most of Hart district would see a cycle to work mode share of greater than 10%. Fleet, Church Crookham, Elvetham Heath, Yateley, Blackwater and Hartley Wintney would see cycle to work trips comprise 20-24% of mode share.

In the E-bike scenario, there would be a further uplift in cycle to work trips, with areas in Fleet, Blackwater and near RAF Odiham seeing 30 to 40% of trips to work taken by cycle.

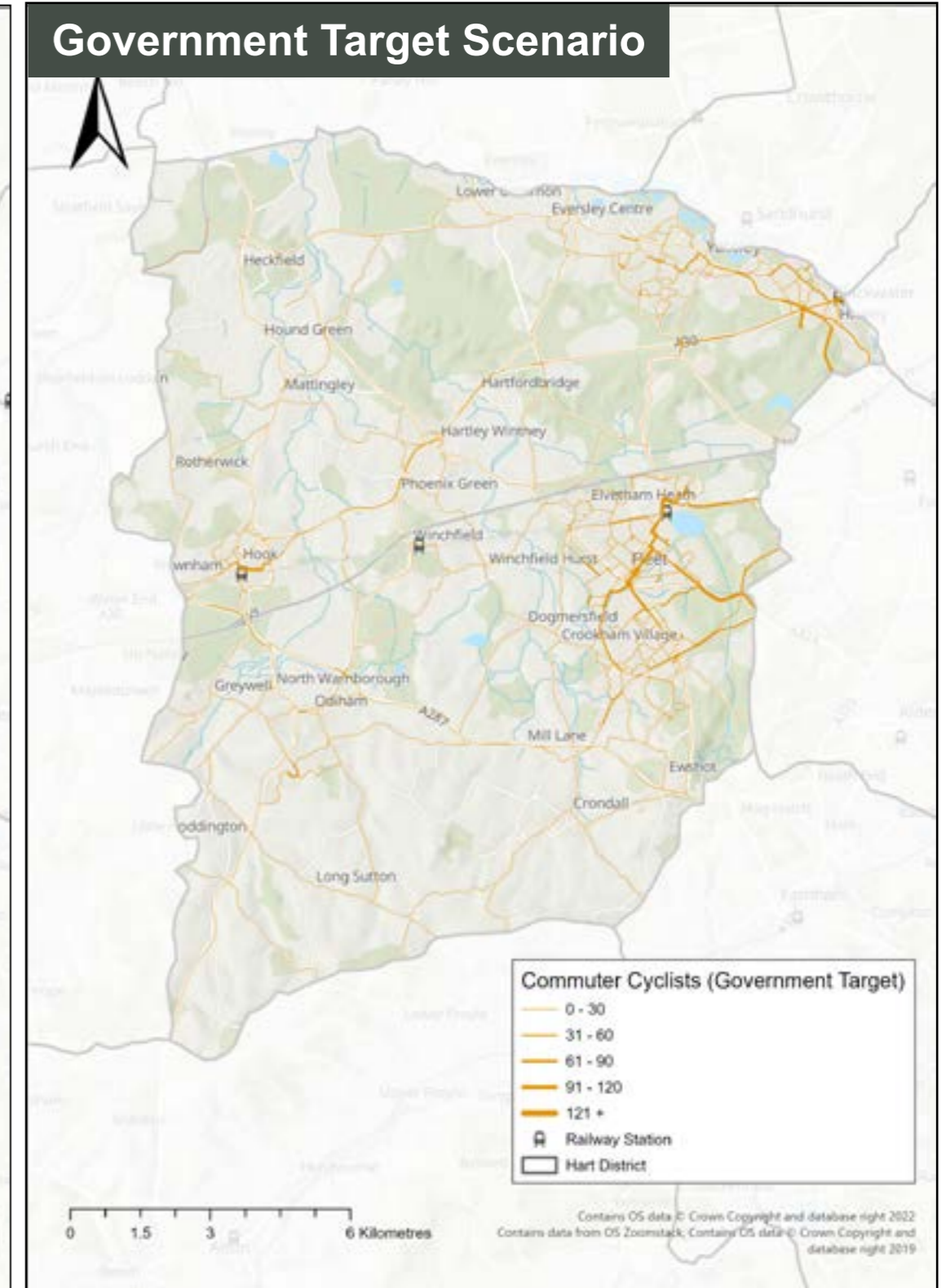
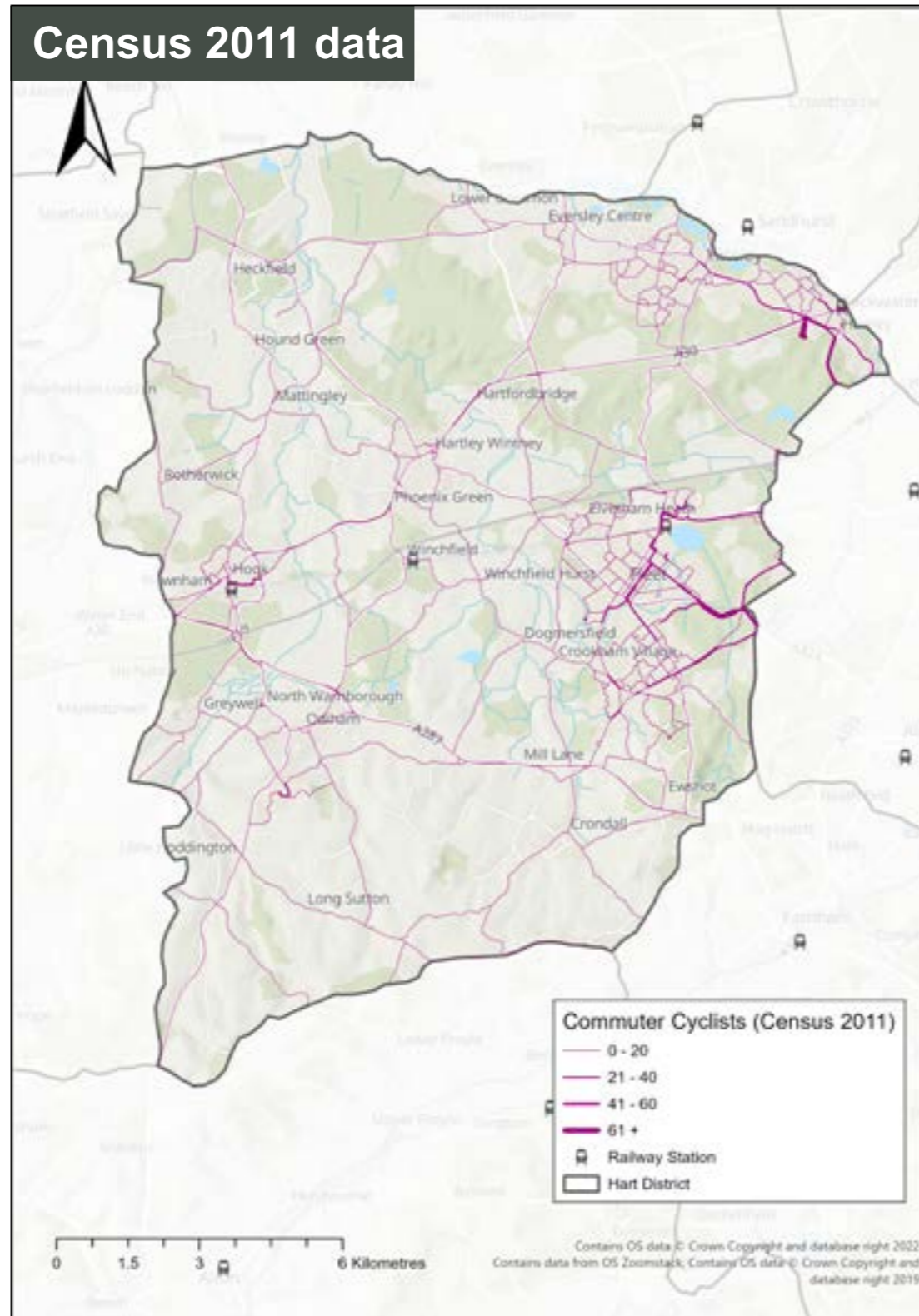
This uplift in both the Go Dutch and E-bike scenarios shows that there is a high propensity to cycle of high-quality cycle provision were implemented in Hart district.



PCT commute data applied to the highway network

According to Census 2011 commute data, there were relatively few routes within Hart district with high levels of cycle commuting. Bloomsbury Way within Blackwater and Norris Hill Road/A327 in Fleet and connections to the town centre had the highest levels of cycle commuting.

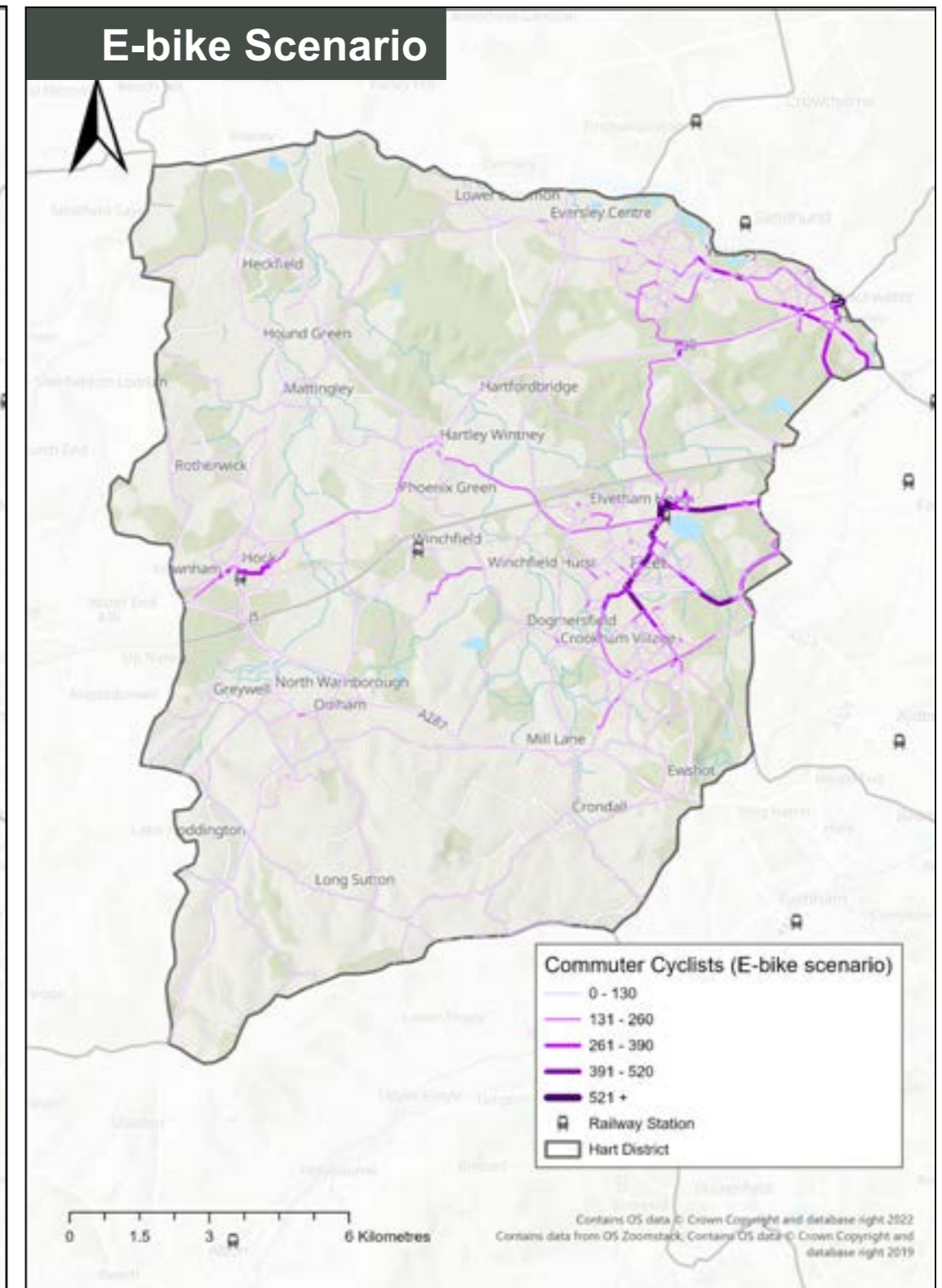
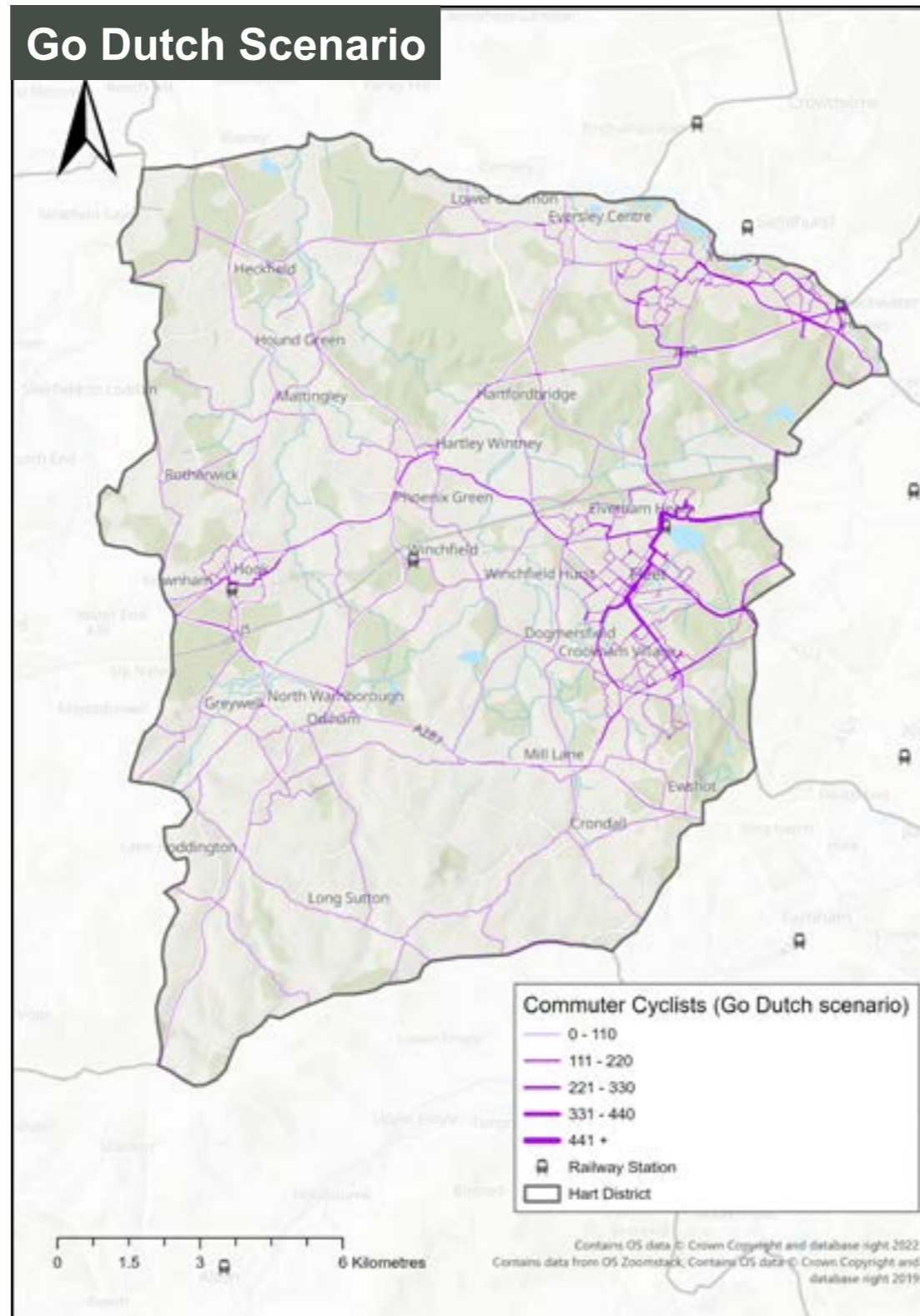
The Government target scenario would see a modest increase in cycle commuting across the district.



PCT commute data applied to the highway network

In the Go Dutch Scenario, there would be a substantial uplift in cycling, with the most popular routes in the Census 2011 Scenario seeing more than five times the number of potential commuter cyclists, particularly along the A3013/Fleet Road between Cove Road and Elvetham Road and other connections to the town centre had the highest potential for an uplift in cycle commuting.

E-bike provision combined with Dutch style cycling infrastructure and cycle propensity would lead to an uplift in cycling on a variety of routes throughout Hart district. Most routes from the Census 2011 scenario would see more than eight times the number of commuter cyclists per day. The highest existing network use is in Fleet town centre and north along the A3013/Fleet Road. According to census 2011, there were 46 commuter cyclists per day, in the E-bike scenario, this segment is projected to have 617 commuters.



PCT school data

The maps of cycling to school are derived from School Census 2010/11 data, so do not reflect any recent changes in school sites or catchment areas. If the local priority is enabling more students to cycle to school, then these travel patterns are a useful guide to routes where investment is needed. However, it must be remembered that education and escort to education makes up only 13% of all trips.

2011 School Census:

Baseline data

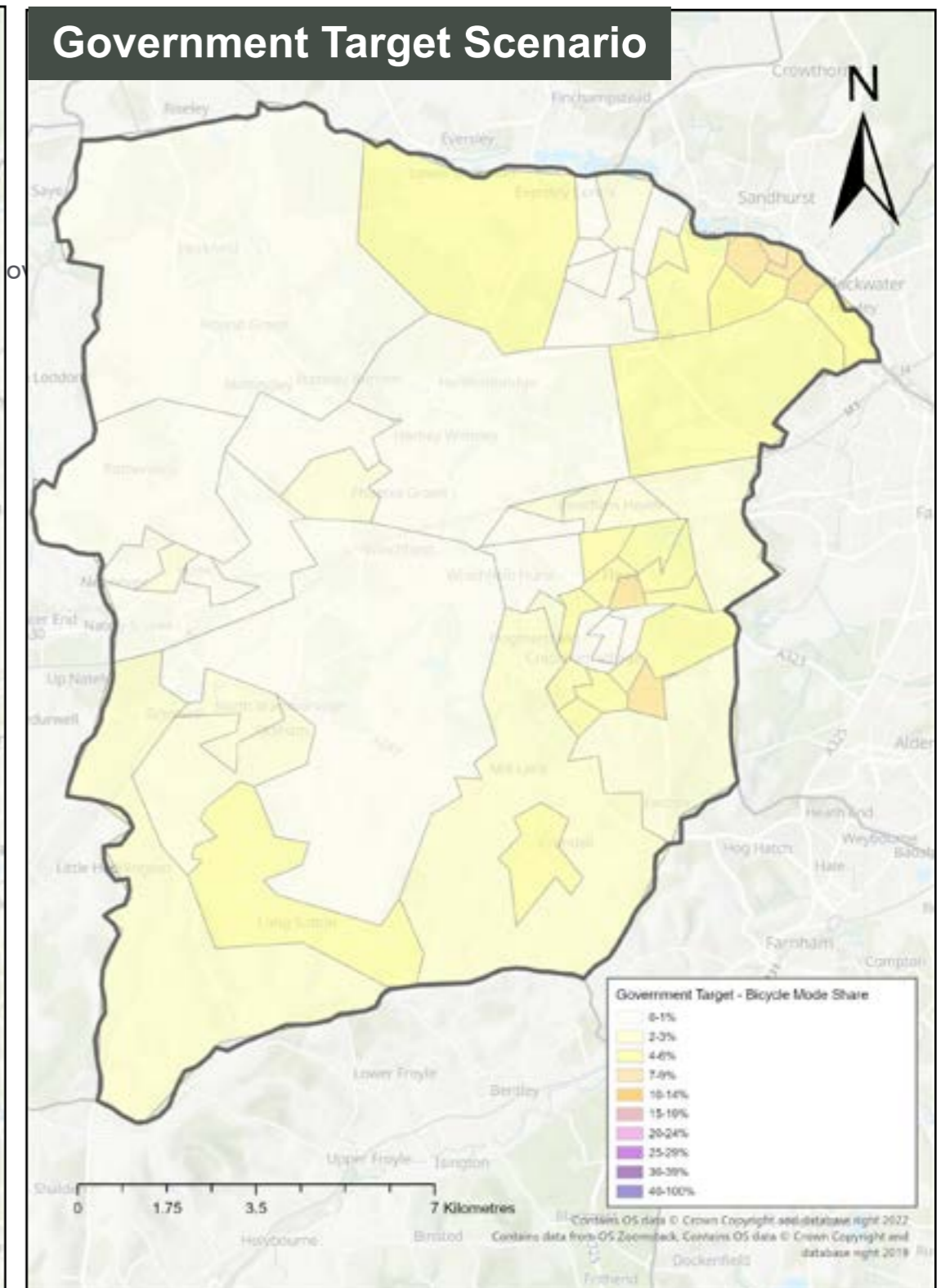
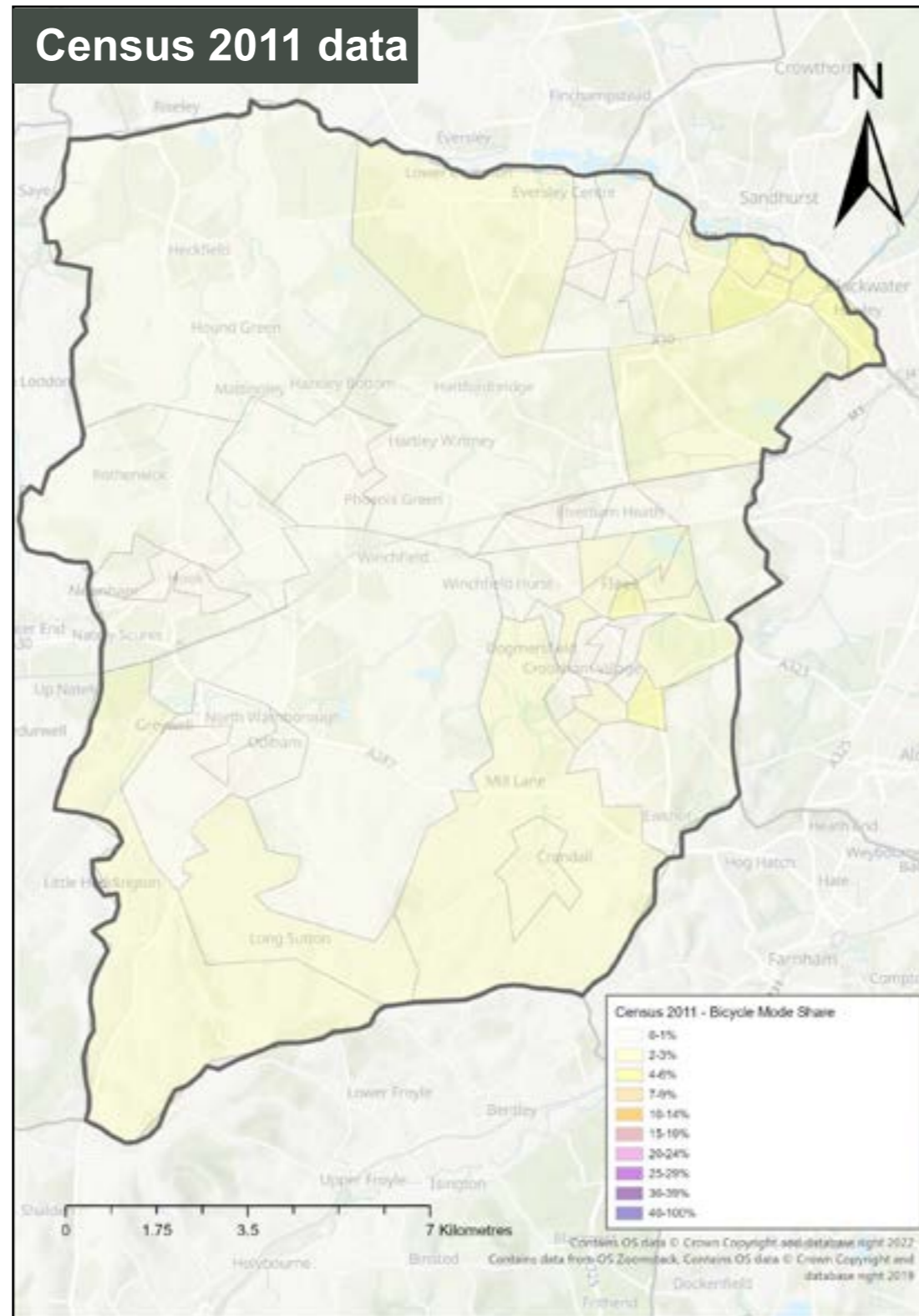
Government target:

Models a doubling of cycling nationally, corresponding to the proposed target in the UK government's draft Cycling Delivery Plan to double cycling between 2013 to 2025.

Go Dutch:

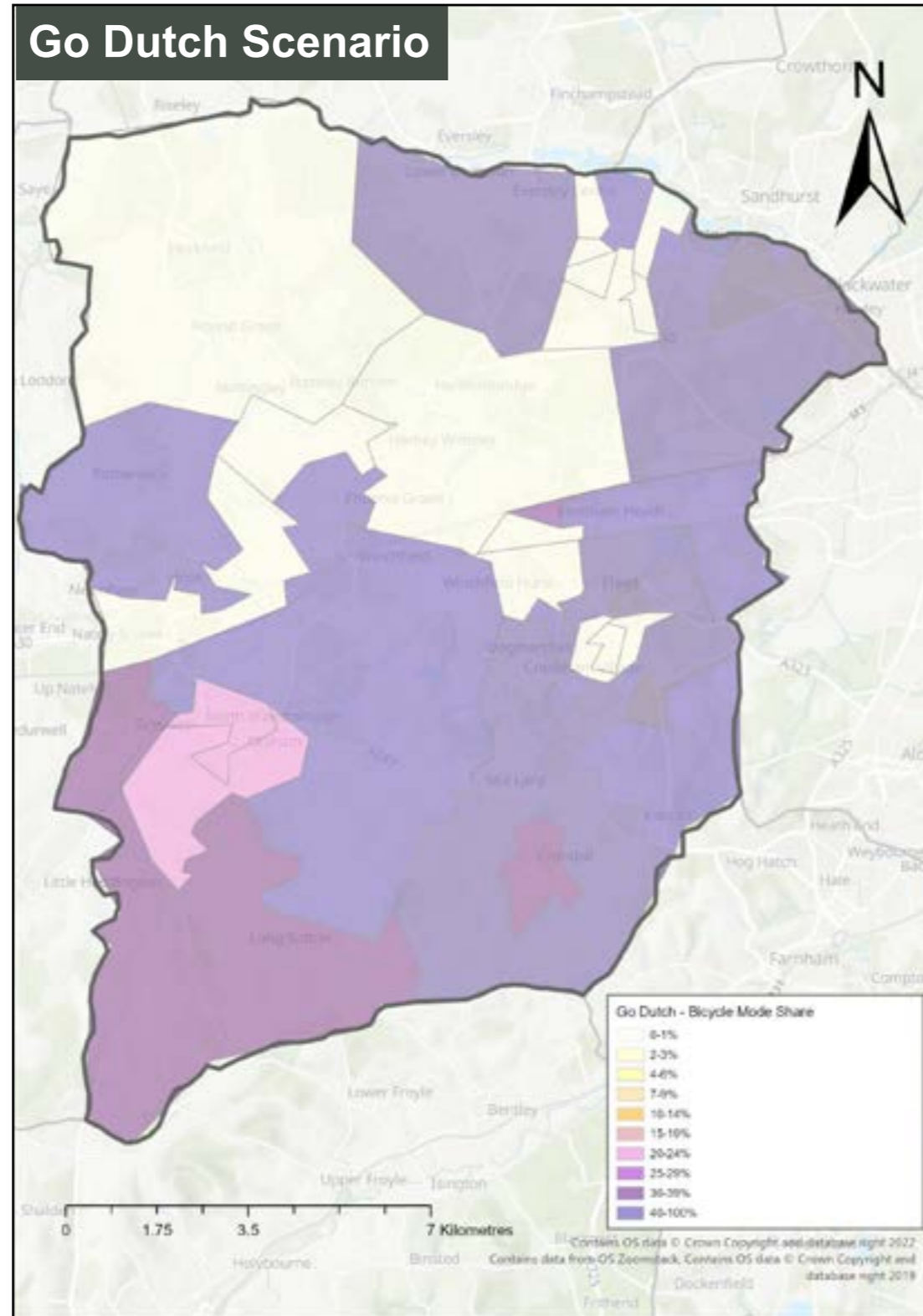
Models the level of cycling expected if English school children cycled to school as much as children in Netherlands, taking into account differences in the distribution of hilliness and trip distances

The data shows that in the 2011 School Census scenario, cycling made up a small share of school trips, with higher levels in Yateley, Blackwater and Fleet. In the government target scenario, cycling would marginally increase in most areas across the district.



PCT school data

In the Go Dutch scenario, all built up areas of the district achieve at least 20% bicycle mode share for school trips.



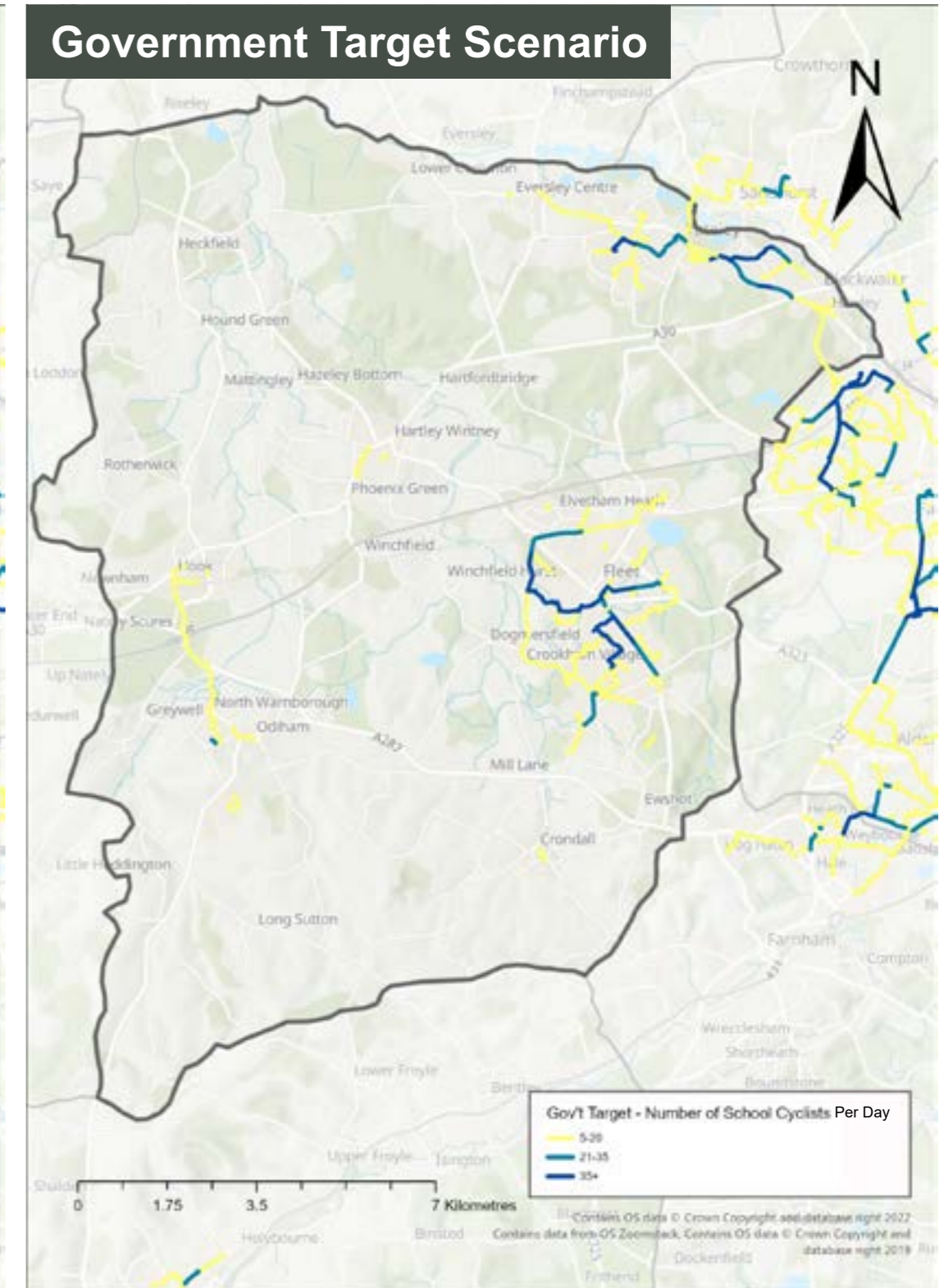
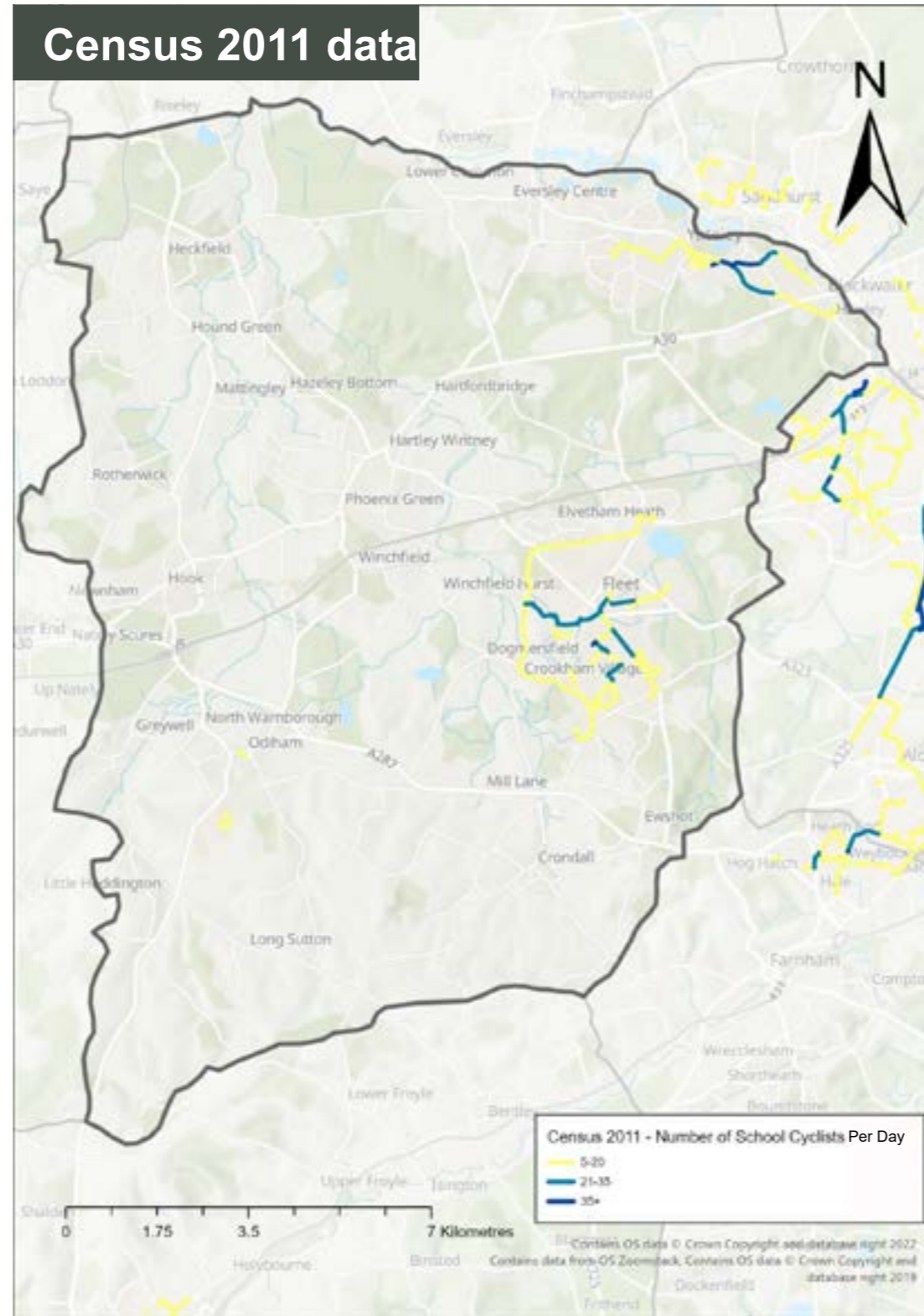
PCT Schools data applied to the highway network

These maps of cycling routes to school are derived from School Census 2010/11 data, so do not reflect any recent changes in school sites or catchment areas. If the local priority is enabling more students to cycle to school, then these travel patterns are a useful guide to routes where investment is needed. However, it must be remembered that education and escort to education makes up only 13% of all trips.

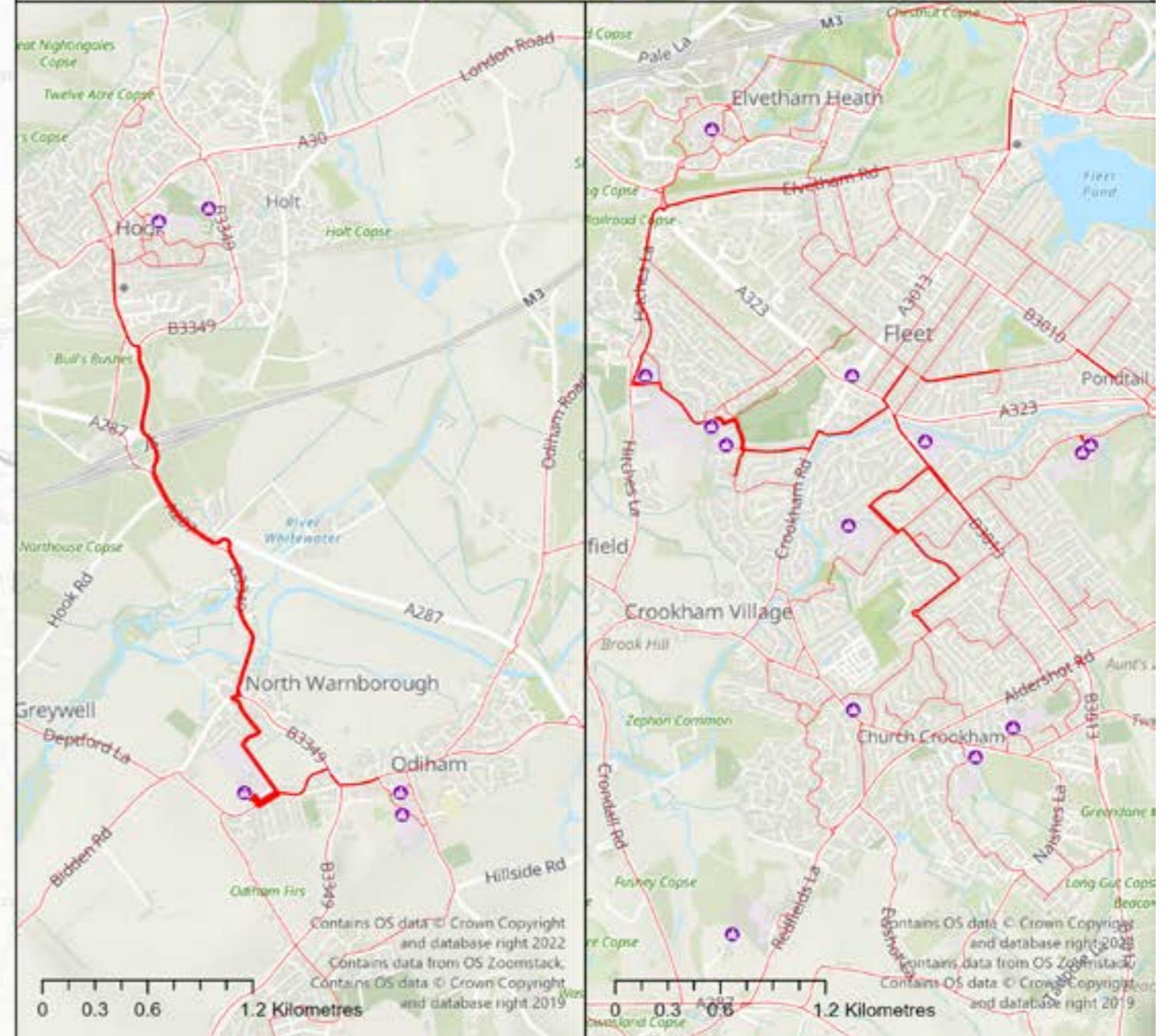
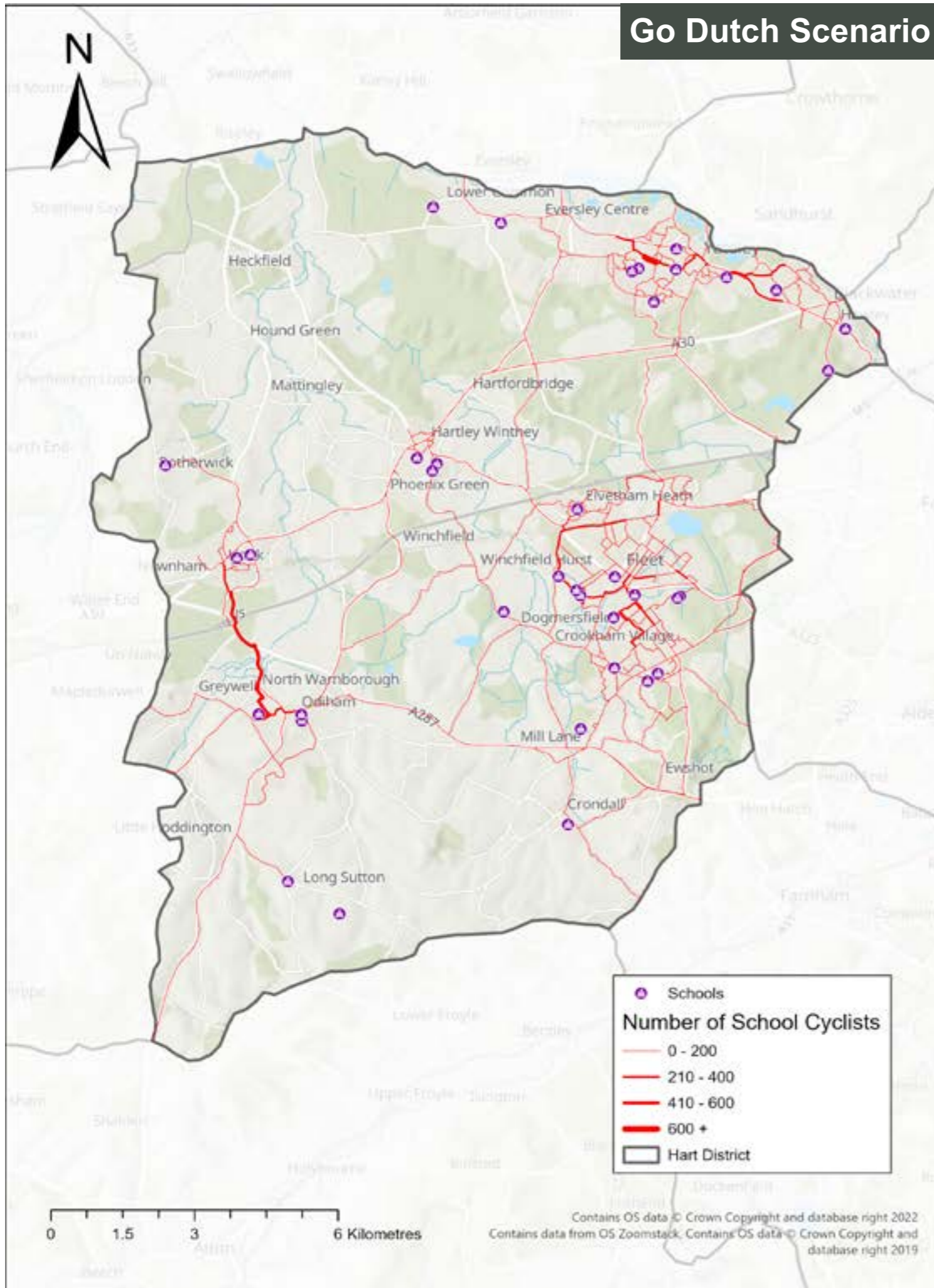
2011 School Census Route Network:
Baseline data

Government Target Route Network scenario shows the greatest projected increase in school cycling in the Fleet area along Elvetham Road and Hitches Lane and in Yatley in Firgrove Road.

The Go Dutch Route Network scenario on the following page shows the greatest projected increase in school cycling along the B3349 Griffin Way South connecting Hook to the Robert May's Secondary School in Warnborough, Firgrove Road and Cranford Park Drive within Yatley, and Fleet town centre.



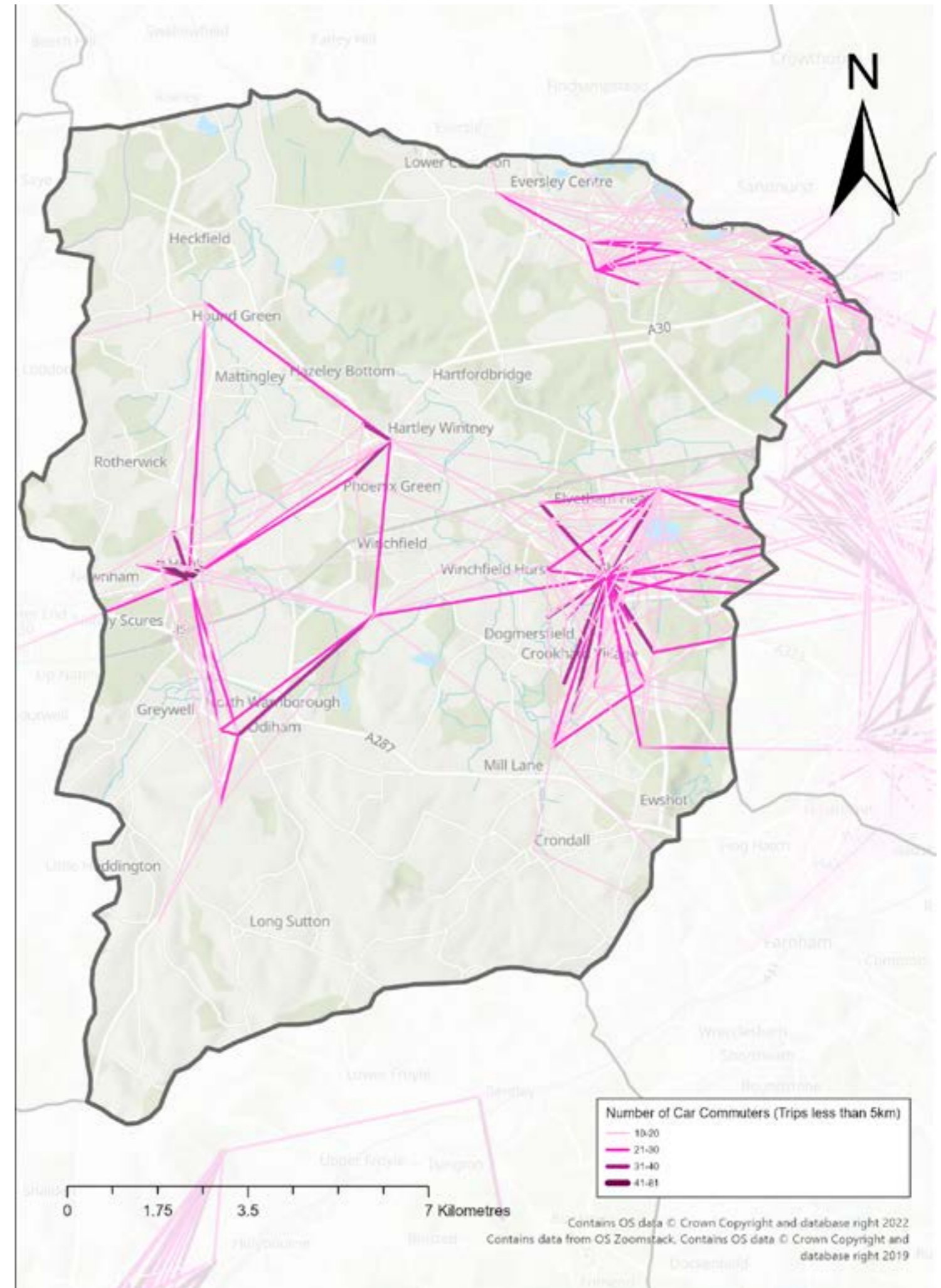
Go Dutch Scenario



PCT short car trips

One weakness of the PCT cycle commute model is that it is based on existing trips by bike and will tend to emphasise those routes that are already being used. A key target market for new cycle trips is people currently driving short distances to work. This map shows the car trips under 5km from the Census 2011 travel to work data, with straight lines showing trips between Lower Layer Super Output Areas (LSOA).

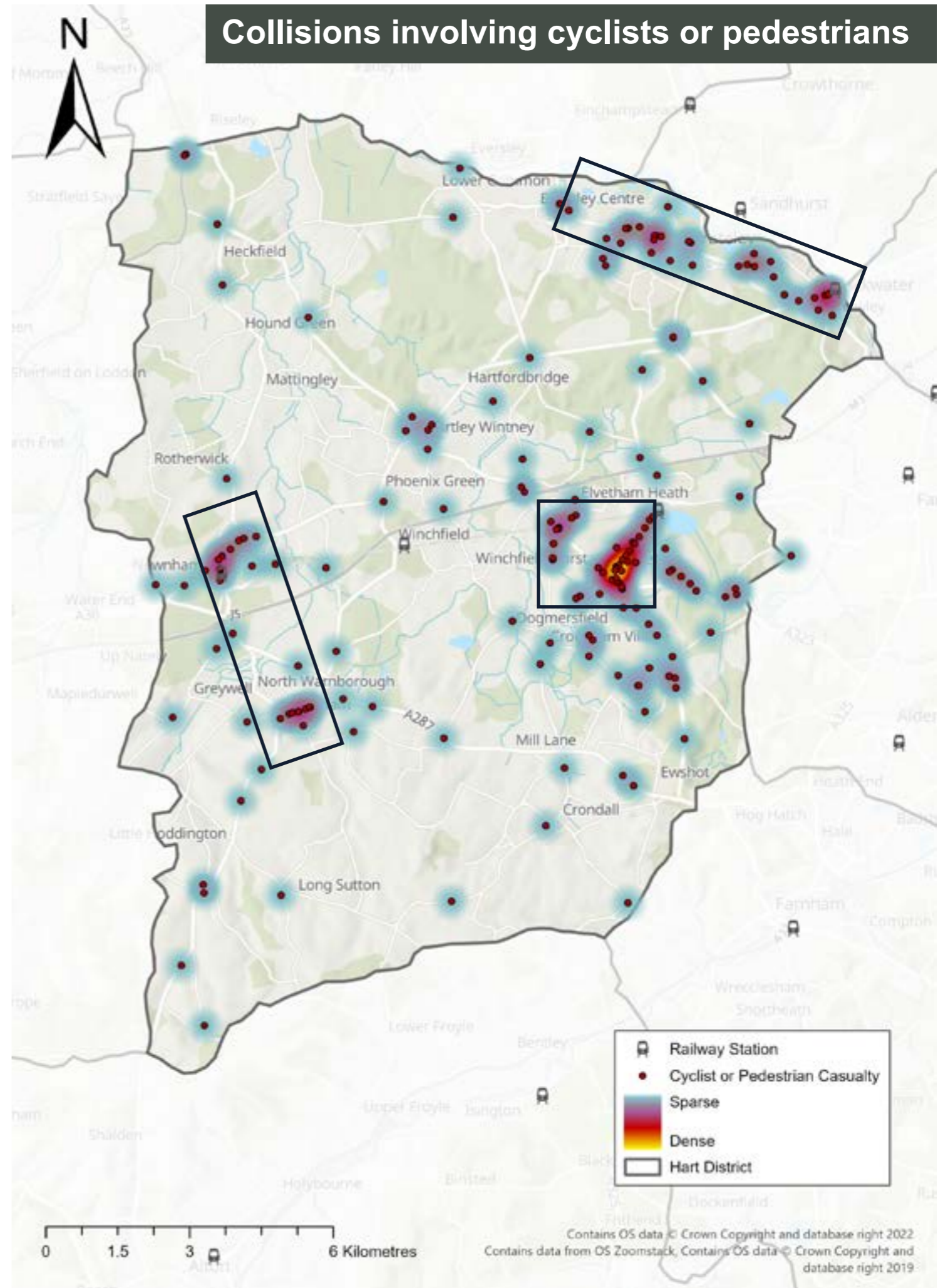
Unsurprisingly, many of the same corridors are indicated for car trips as they are for cycle trips.



2.6 Collisions

This map shows collisions involving a cyclist or pedestrian casualty from 2017 to 2021 in the study area. Collisions hotspots within Hart District -shown in red- were concentrated in the built up areas of the District.

Examining areas with high collision rates is essential for determining where safety improvements are needed for pedestrians and cyclists. This analysis helps inform recommendations to enhance their safety.



Collision hotspots

Yateley:

- B3272 intersection with West Green
- B3272 intersection with Hall Lane (roundabout)
- Along the B3272, near intersection with Manor Park Drive

Blackwater

- Along the A30 near the Blackwater train station

Hook

- Along the A30
- Along Station Road near Hook train station

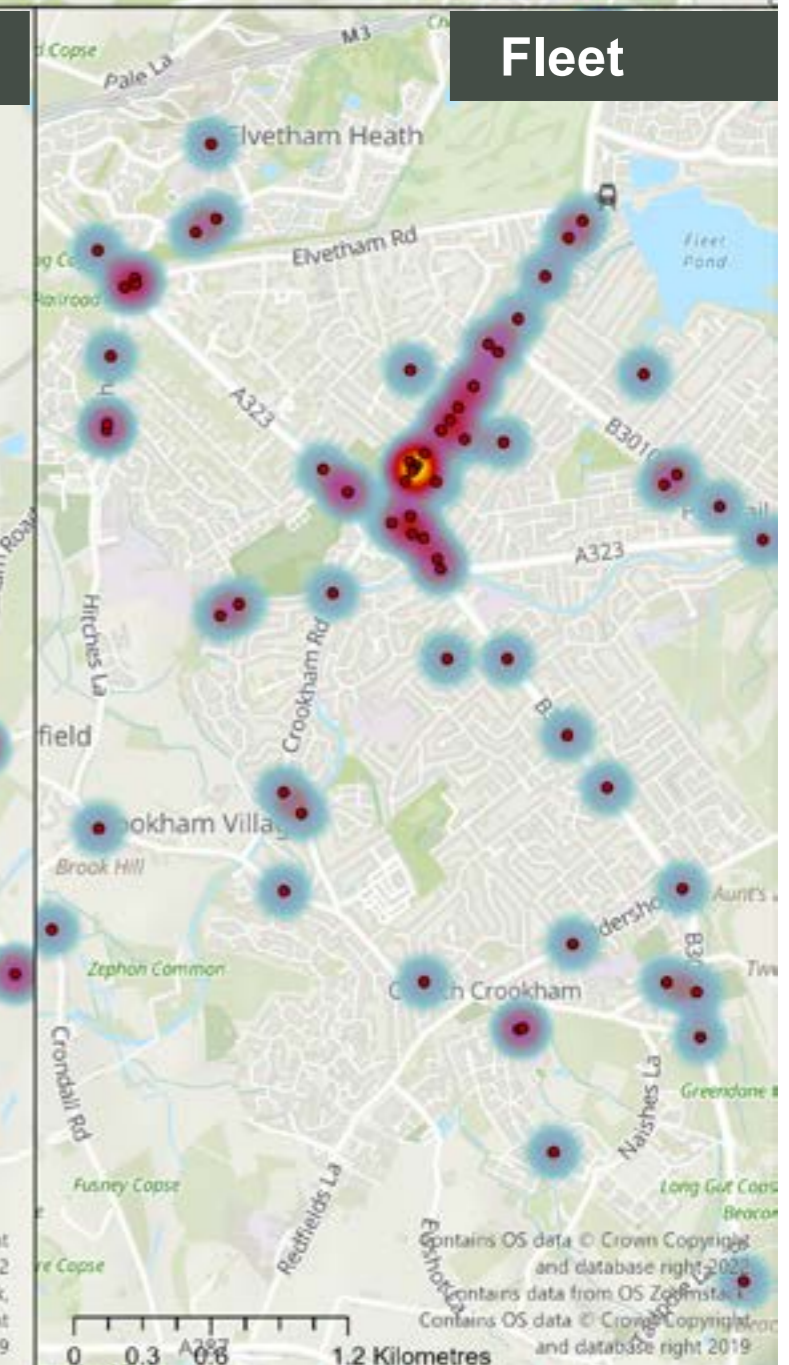
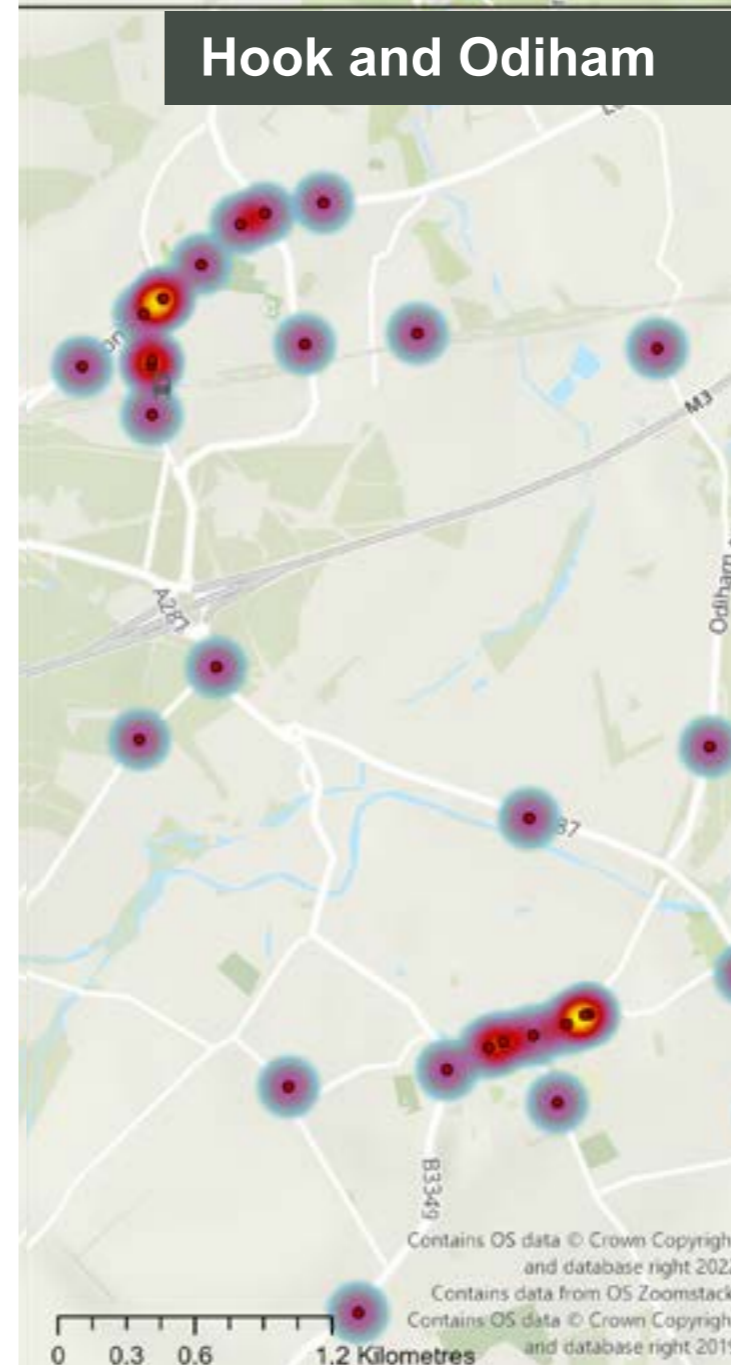
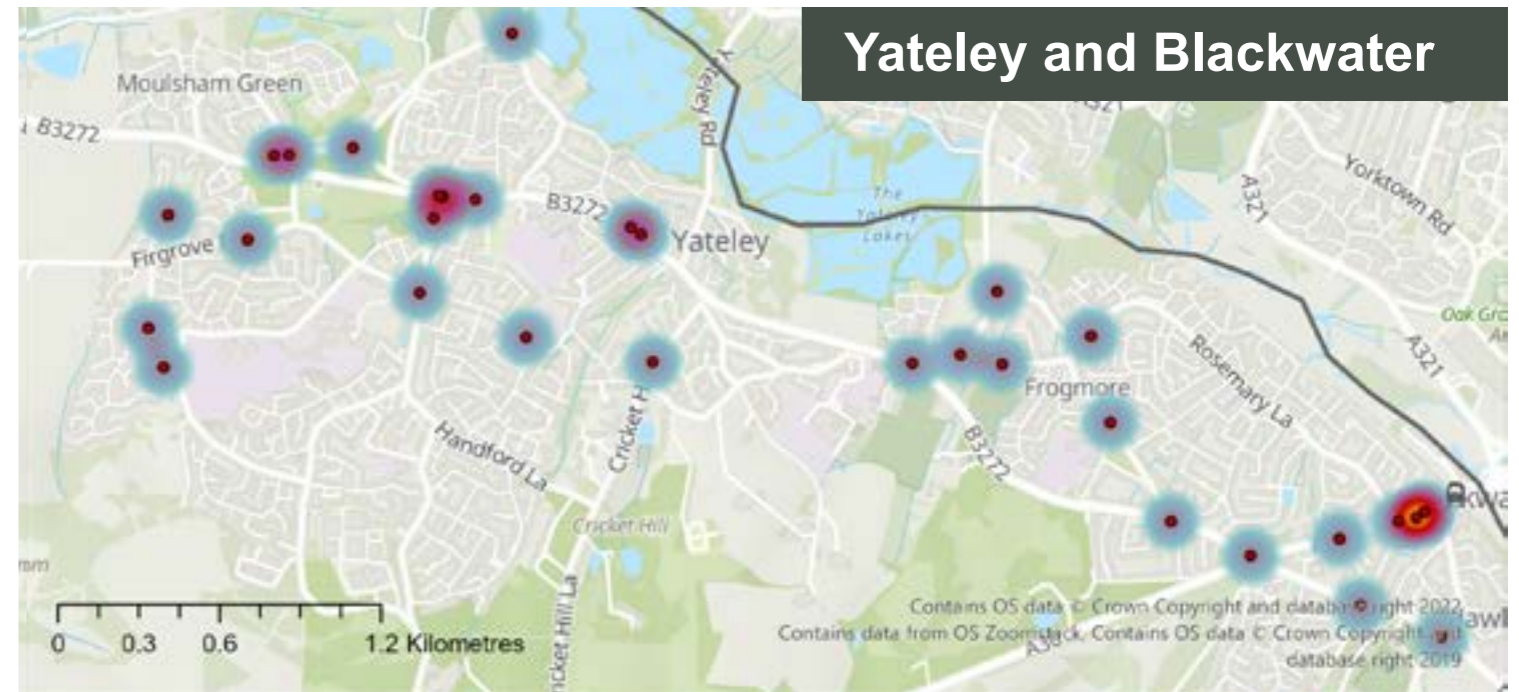
Odiham

- Along High Street
- Along Farham Road

Fleet

- Along A3013 Fleet Road
- Along Reading Road South
- A323 intersection with Elvetham Road and Hitches Lane (roundabout)

The A3013 Fleet Road section through Fleet is the most significant collision hotspot and so this area would benefit from walking and cycling infrastructure improvements. A high level of collisions in this location may be due to a speed limit of 30 mph and limited walking and cycling provision.



2.7 Stakeholder engagement

During the course of this LCWIP there were two rounds of stakeholder engagement.

The first round was during the information gathering phase and consisted of two workshops, one virtual on December the 13th and one hybrid (in-person/online) on December 14th 2022, to gather feedback from councillors and stakeholders on constraints and opportunities related to active travel in Hart district. Approximately 40 attendees contributed to these workshops. Feedback from these initial sessions was then used to shape the focus of the LCWIP and form the basis of its development moving to the next stage.

The second round of engagement was with the wider public and was held in the summer of 2023. This engagement consisted of a 10-week consultation period, to ensure the available time to respond was in line with other similar consultations. Consideration was also given that it would cover both term time and the holiday period to ensure a wide range of respondents would be available.

This 10-week public consultation consisted of both online survey and online mapping tools that could be used to respond to the proposals that had been developed in stages one to four of the LCWIP process as described in the Technical Guidance for Local Cycling and Walking Infrastructure Plans published by the Department for Transport. The responses from both the online surveys and the input into the mapping tool was reviewed and then considered against the emerging LCWIP document ahead of the prioritising section being prepared.

Blackwater

- London Road, near the Vicarage Road junction

The unsafety of this area was a common theme, and one user pointed out the need for better crossing facilities especially for children walking along this area to get to school. Comments related to seeing better traffic management and improved crossing facilities.

- Hawley Road

There were a series of comments along the Hawley Road (B3272) which related to the road being used for rat running, as well as the road having high speeds and traffic levels. Specifically, there was need for safer crossing points to enter Hawley Farm Open Space, and the issues revolving around cars parking in this area.

- London Road and Woodside roundabout

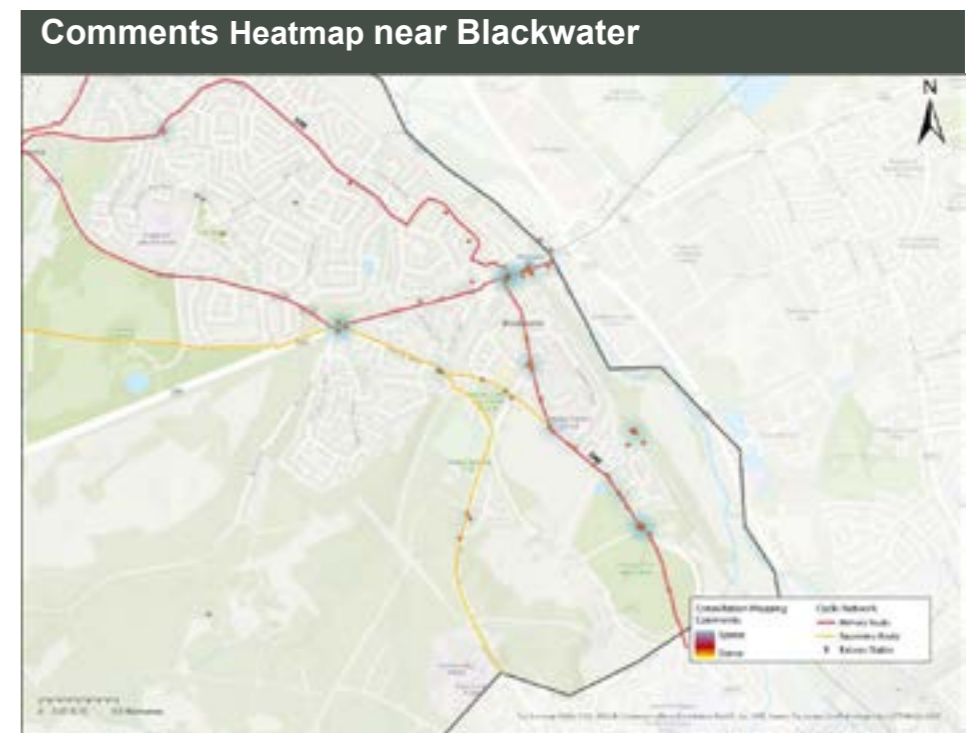
General sentiments in this area were rated as 'unhappy' or 'very unhappy' mostly due to difficulties with crossing across roads such as the A30 and the B3272.

- Adjacent to the railway line, west of Hawley Meadows

There were comments in this area relating to the need for a railway crossing so people can access Hawley Meadows.

- Fernhill and Vicarage Road junction

There were numerous comments at this junction relating to overgrown trees/bushes. This area has been deemed unfriendly for cyclist and pedestrians, as it is extremely narrow, making it hard for those in particularly in wheelchairs or children on bicycles, to use. Regular maintenance has been suggested and the need to improvement the pavement.



First round of engagement

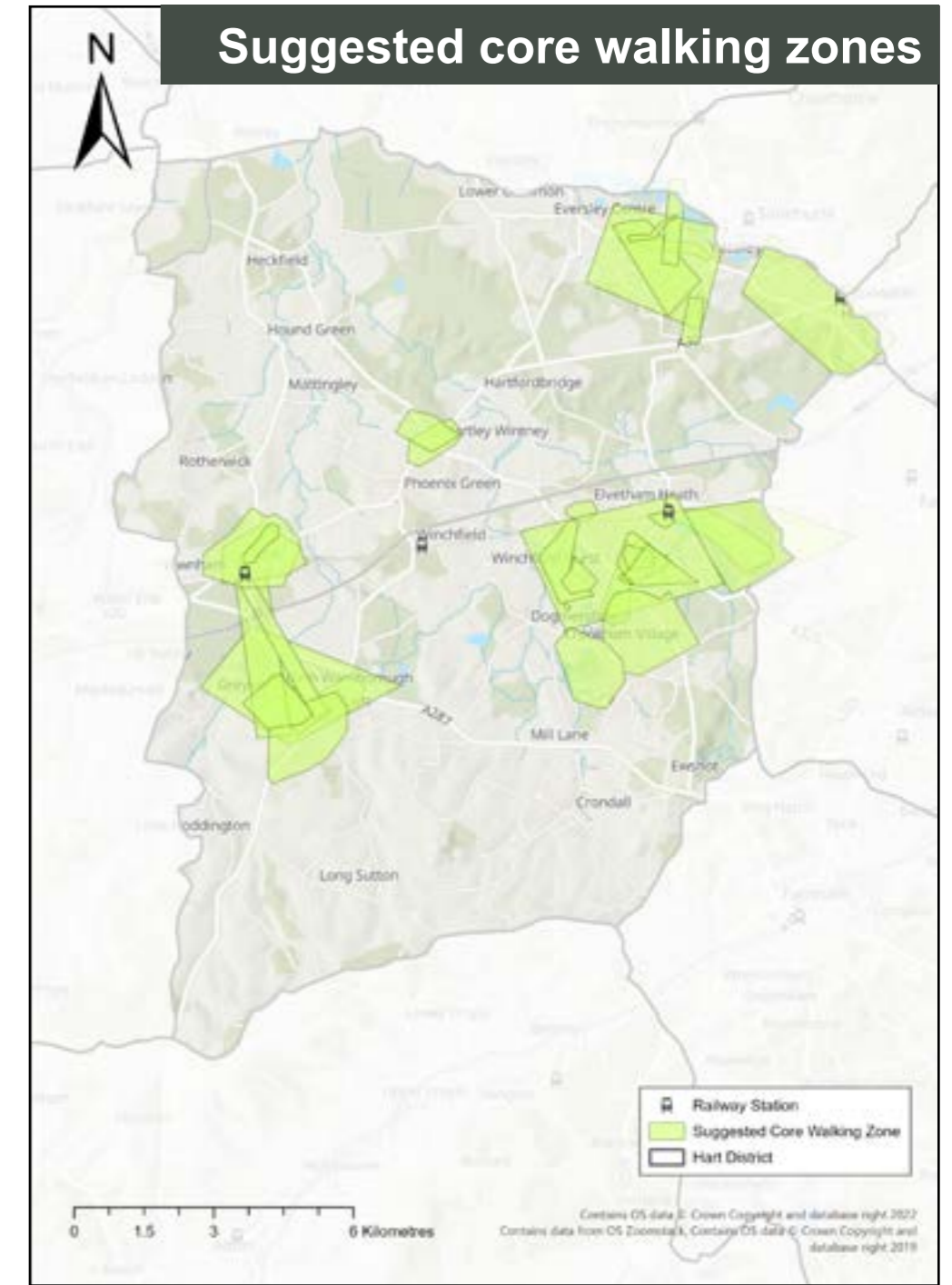
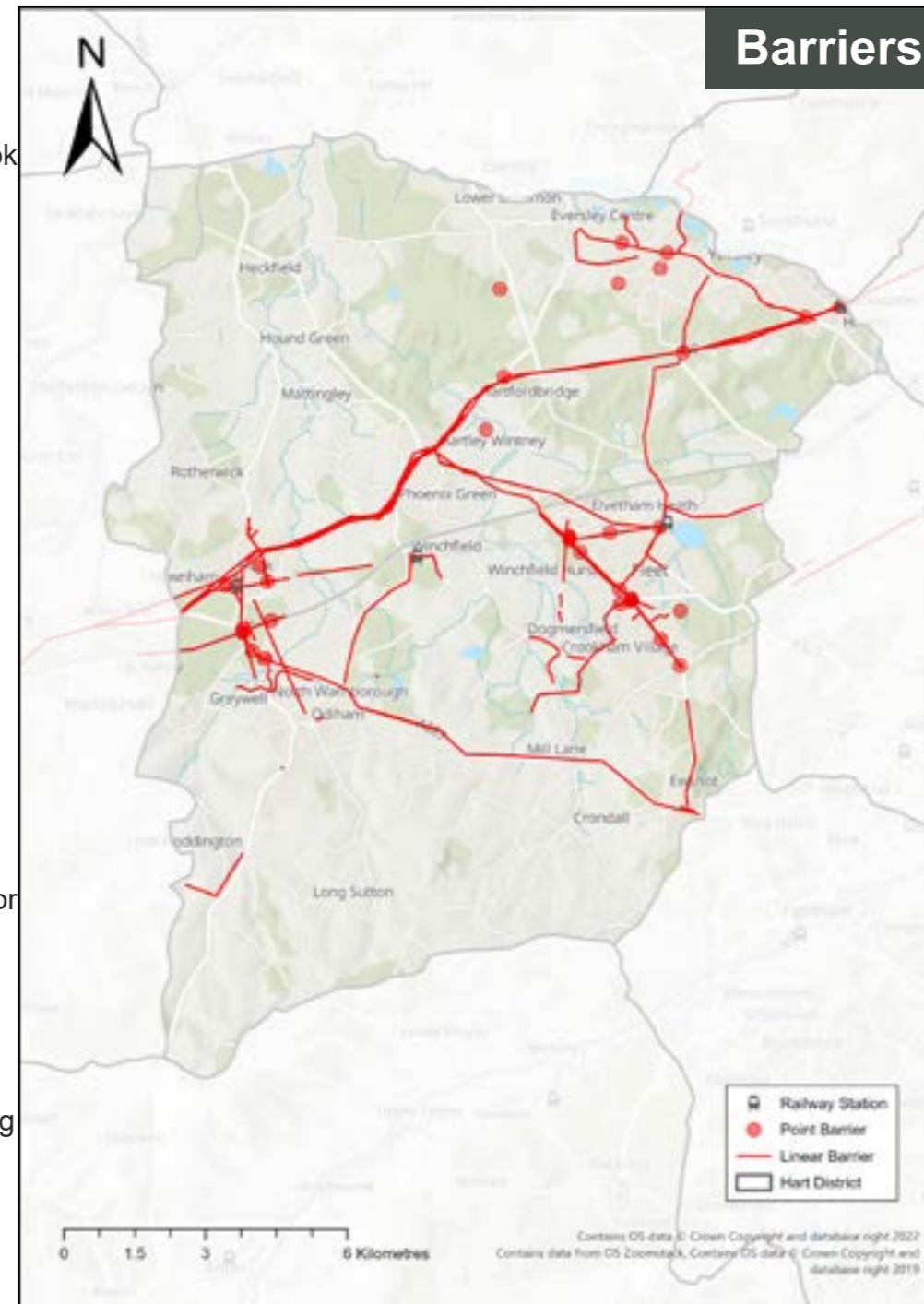
The following maps summarise feedback received from these workshops, as well as from the Green Grid consultation which took place in 2020.

Barriers

Red dots and lines indicate barriers to active travel within the settlements and on the routes connecting settlements within Hart district. The A30/London Road, A287, and A323 corridors were frequently identified as significant linear barriers. The comments provided at the A287 roundabout, on the A323 near Elvetham Heath, and at the A323 and B3013 junction in Fleet town centre indicated these places are challenging areas for walking and cycling safely.

Suggested Core Walking Zones

Green polygons show proposed Core Walking Zones (CWZ), or simply areas of high pedestrian and cycling activities. Most of the built-up areas in Hart are highlighted in green, showing that walking is popular within district centres. The B3349/A287 corridor connecting Hook and Odiham was highlighted as an area that lacks a safe pedestrian route but is much needed for students in Hook travelling to Odiham. In addition, significant stretches of the B3272 corridor have been highlighted as a potential core walking zones due to the concentration of local services and schools along the corridor. These suggestions were fed into the identification process for the seven Core Walking Zones.



Suggested cycle routes

Community feedback was integral to the development of the proposed cycle network. Suggestions were provided for potential cycle routes throughout the District.

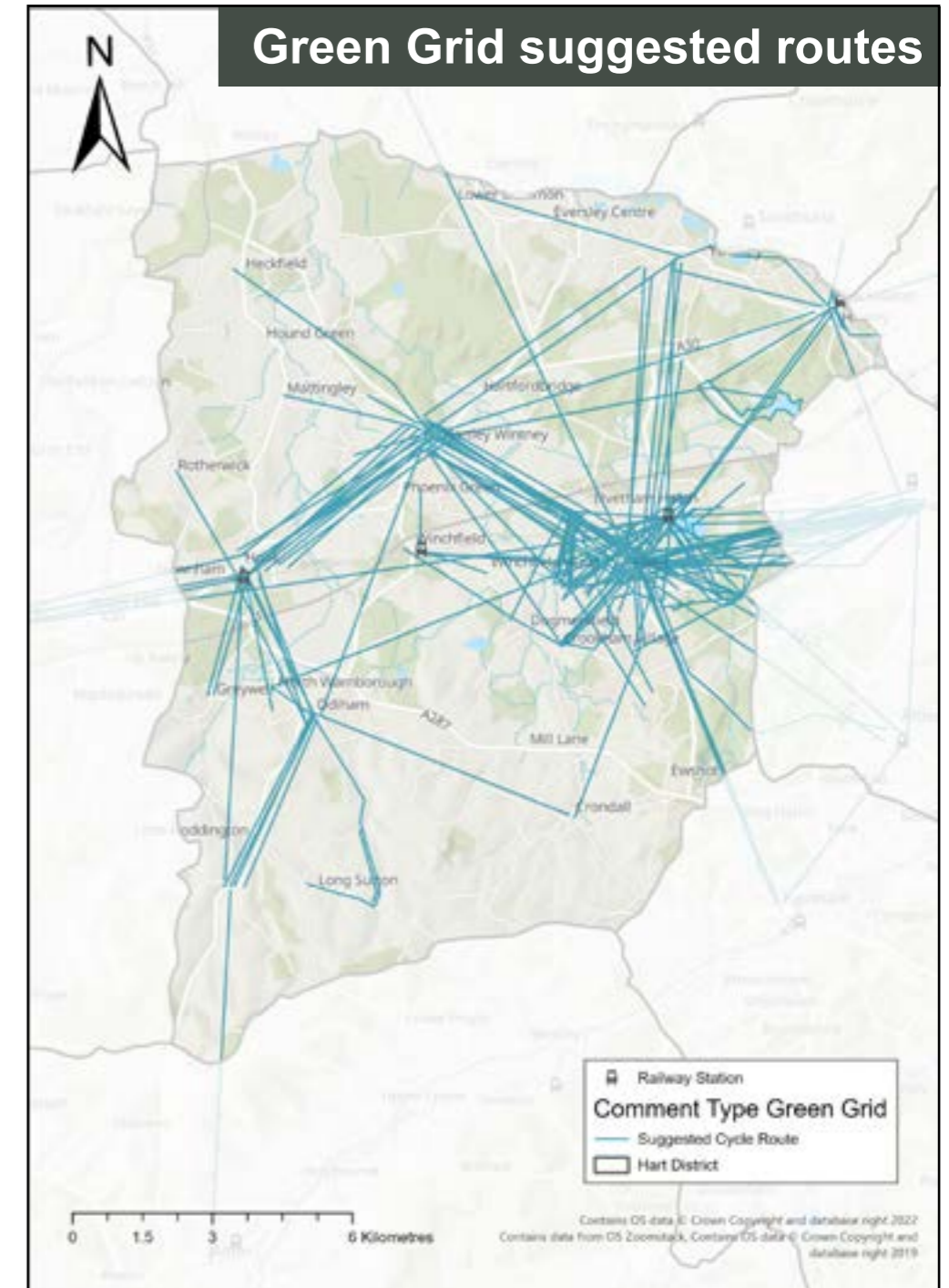
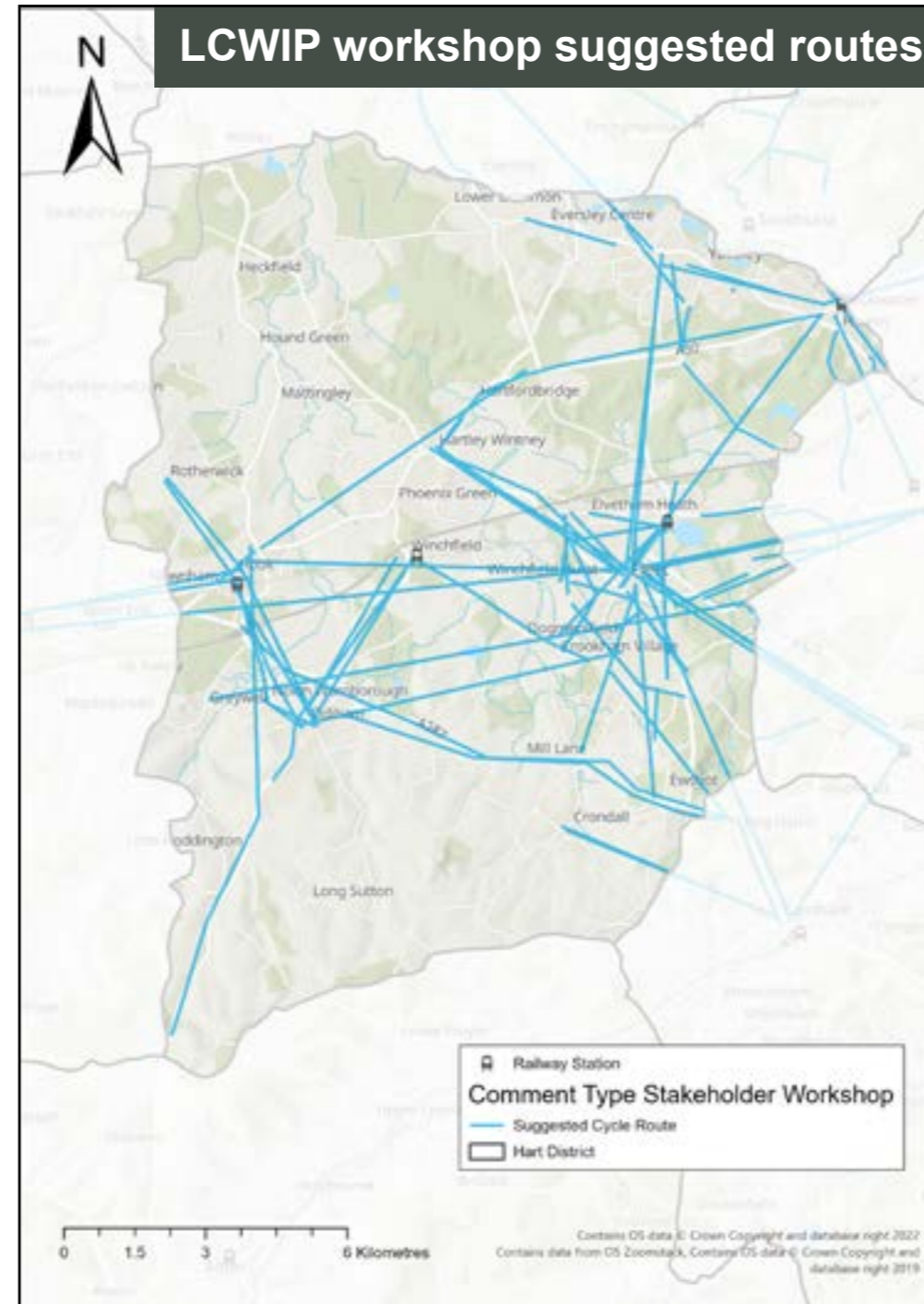
The map on the left shows suggestions provided at the two stakeholder workshops in December 2022.

In general, route suggestions were clustered within Fleet, connecting to the neighbouring settlements of Yateley, Hartley Wintney, Blackwater, and Hook. Cross-boundary connections to Farnborough, Aldershot and Farnham were also popular suggestions. A routes from Hook town centre to North Warnborough and Odiham, was another frequently suggested route. There is a strong desire to connect the settlements and their respective railway stations through a comprehensive network of cycle routes.

This dataset was used to support the background data analysis in the development of the route network. The LCWIP's proposed route network includes the key corridors highlighted on this map.

Green Grid cycle route suggestions

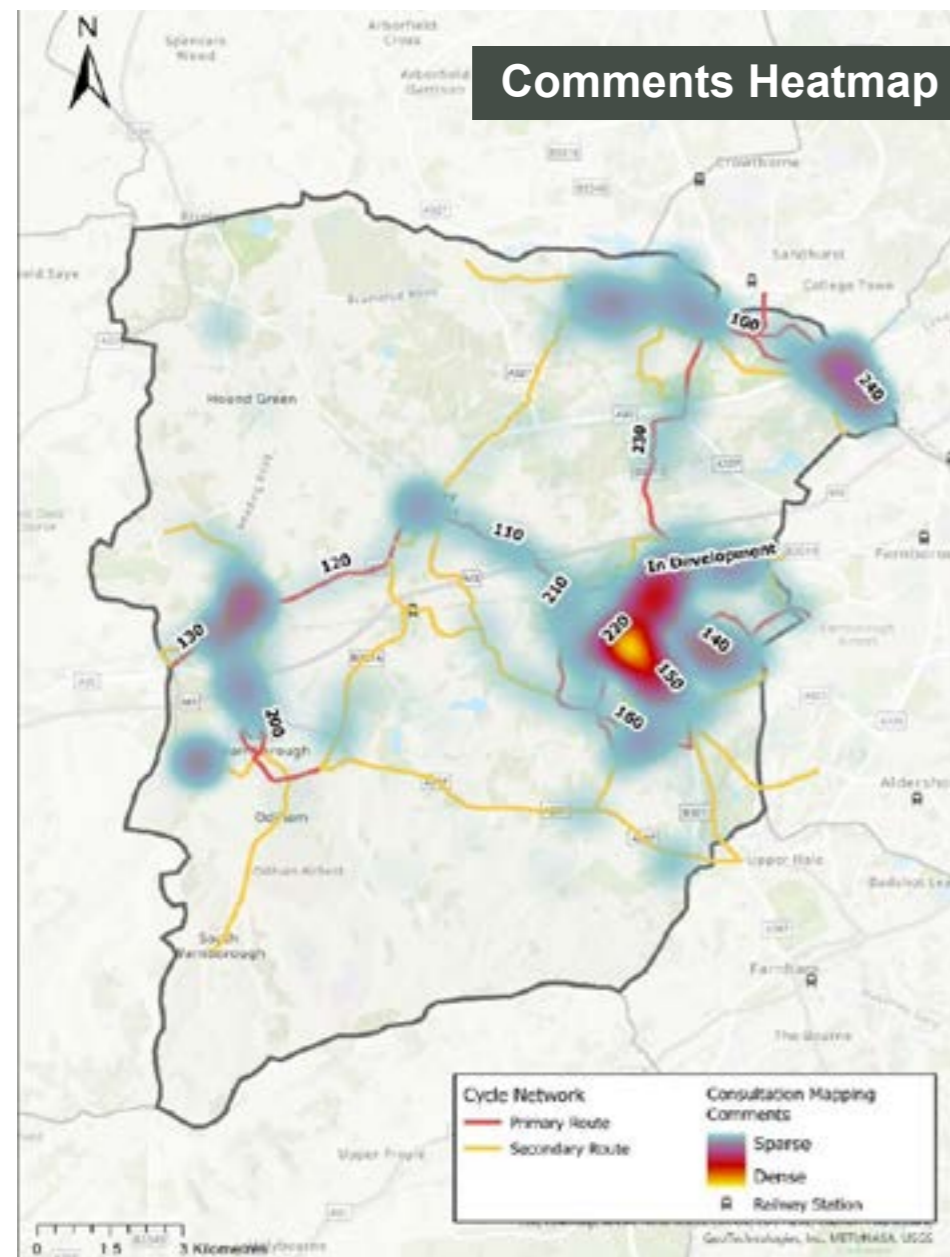
The map on the right depicts comments received from the 2020 Green Grid consultation. In general, route suggestions were clustered in the centre of Fleet, Hook, and Hartley Wintney. The route connecting Fleet to Hartley Wintney along the A3013 corridor received the most suggestions. Additionally, there are desire lines for the routes connecting Hook with Hartley Wintney and Odiham.



Second round of engagement

The following maps summarise feedback received from the online mapping tool which was online during the summer of 2023.

In total, 793 comments were received via the online mapping tool hosted by Hart District Council. When looking at the entire district, most of the comments were in relation to areas in Fleet. Other areas of high density include Church Crookham, Hook, Greywell, and Blackwater

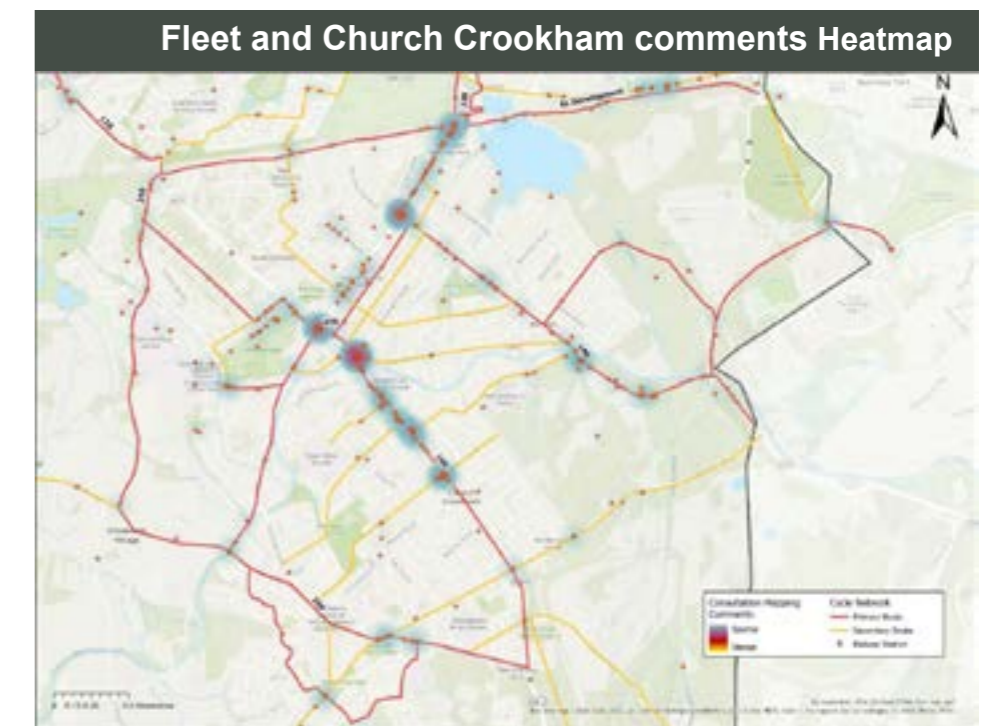


Fleet and Church Crookham

The highest density of comments in this area were in relation to the following:

- Crookham Road and Reading Road South (A323)**
 Comments were about the lack of proper crossing facilities, particularly for pedestrians. Ranks here were listed as ‘unhappy’ and ‘very unhappy.’
- Aldershot Road and A323 junction**
 Comments were about the lack of proper crossing facilities, with reasons listed as ‘not pedestrian friendly’ and ‘dangerous crossing point.’
- Basingbourne Road and Florence Road junction; Velmead Road and B3013 junction; Greenways and B3013 junction**
 Comments were about the need for cycle lanes, reduced or slower traffic, and the need for better pedestrian and cyclist crossing points.
- Fleet Road**
 Comments relating to the need for improved crossing facilities, reduced traffic and better cycle lanes. There was also a cluster comments on a stretch of Fleet Road (from the Kings Road to Crookham Road junction) which relate to reducing traffic and lowering traffic speeds.
- Kings Road to Aldershot**
 A cluster of comments were found at the southern end of Kings Road, which would take users to Aldershot. Most comments related to the traffic speeds and traffic volume of this road. There was feedback relating to potentially upgrading and using the Basingstoke Canal path as a better route to get from Fleet to Aldershot.

- Velmead Road and A323 junction**
 Comments at this junction related to the area being unfriendly for cyclists and pedestrians. Suggestions for improvement included better cycle lanes, and also the installation of a roundabout at the junction to help ease the traffic.
- Elvetham Road, including the Elvetham Road and Fleet Road junction**
 Comments near Elvetham Road related to the need for better maintenance of the verge, and wider footways. Additionally, there is poor visibility as it meets Fleet Road, making it a dangerous crossing point for pedestrians.
- Aldershot Road and Sandy Lane junction**
 Comments in this area related to the insufficient crossing facilities and traffic levels on the road. It was suggested that due to dangerous walking and cycling conditions, from Sandy Lane to Galley Hill Road, most people would choose to drive. Improvements suggested included lowered traffic levels, reducing speed limits, increasing footway widths, installing bus gates, and faster call times for pedestrians at the crossing points.



Hook

The highest density of comments in this area were in relation to the following:

- Station Road

When asked, “What would you like to see here?”, Most comments along this road were in relation to reducing traffic and lowering traffic speed. In particular, one user said that this should be a 20mph zone. Although some comments indicated that this was a pedestrian friendly area, majority of the feedback suggested otherwise.

- A30

When asked, “What would you like to see here?”, comments related to the need for better cycle lanes and lowered speed limits as feedback suggested that this road was neither cycle nor pedestrian friendly.

- Deptford Lane and Greywell Street junction

Feedback suggests that Deptford Lane is very narrow and that there isn't enough space for pedestrians to comfortably and safely use the road. At the junction with Greywell Street, this area becomes unfriendly for both pedestrians and cyclists. Suggested interventions via the survey include reducing traffic and lowering speed limits.

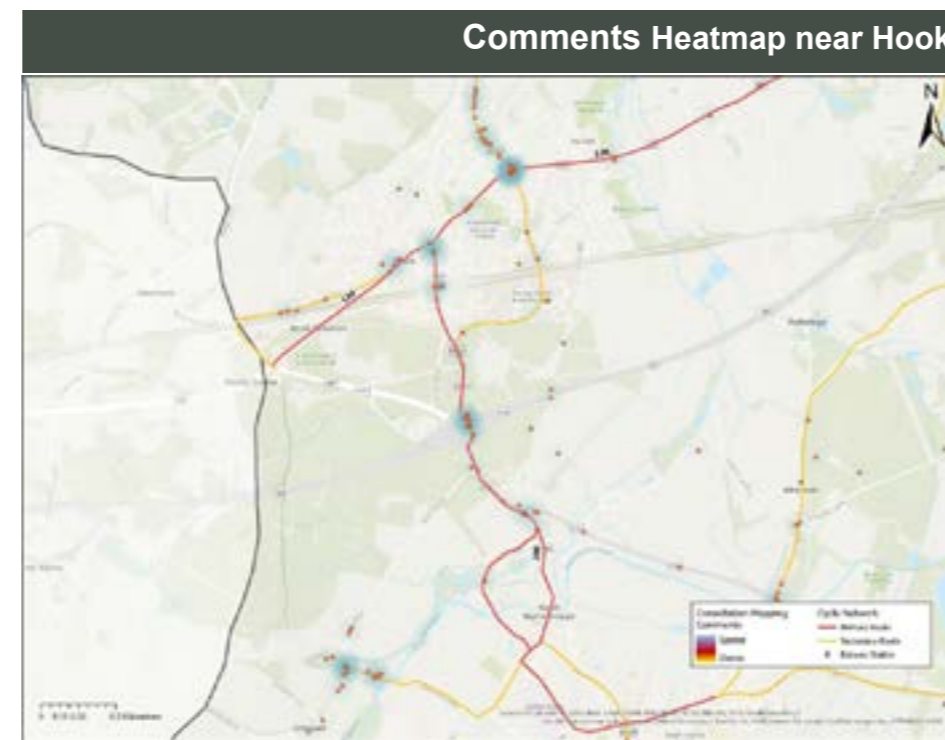
- M3 roundabout

Feedback for this area included the answers, ‘Not a pedestrian friendly area’, ‘Dangerous crossing point’, and ‘Not a cycle friendly area.’ When asked what interventions they'd like to see here, answered included lowering speed limits, better cycle lanes and better crossing points.

- B3349 road including the A30/B3349 junction

Feedback suggested dangerous crossing points at the A30/B3349 junction. There was also a trail of comments on the northern side

of this roundabout, which suggested that this road was neither pedestrian nor cycle friendly. When asked what they would like to see here, comments included reduced traffic, seating facilities, and lowered speed.



Hartley Wintney

- A30 and B3011 roundabout

Comments suggests that this area of the road is frequently flooded, and there is need for safer crossing facilities.

- A2323

There were a number of comments located along the A323. Numerous users voted ‘unhappy’ or ‘very unhappy’ for this stretch of road, with feedback suggesting better cycle lanes. Some users also gave brief explanations saying that there are currently no safe footpaths between Hartley Wintney and Fleet or Hook, and that buses do not run regularly.



Section Three - The network

Section Three contents

3.1 Proposed Hart district network overview	43
3.2 Core Walking Zones	47
3.3 Prioritisation	48

3.1 Proposed Hart district network overview

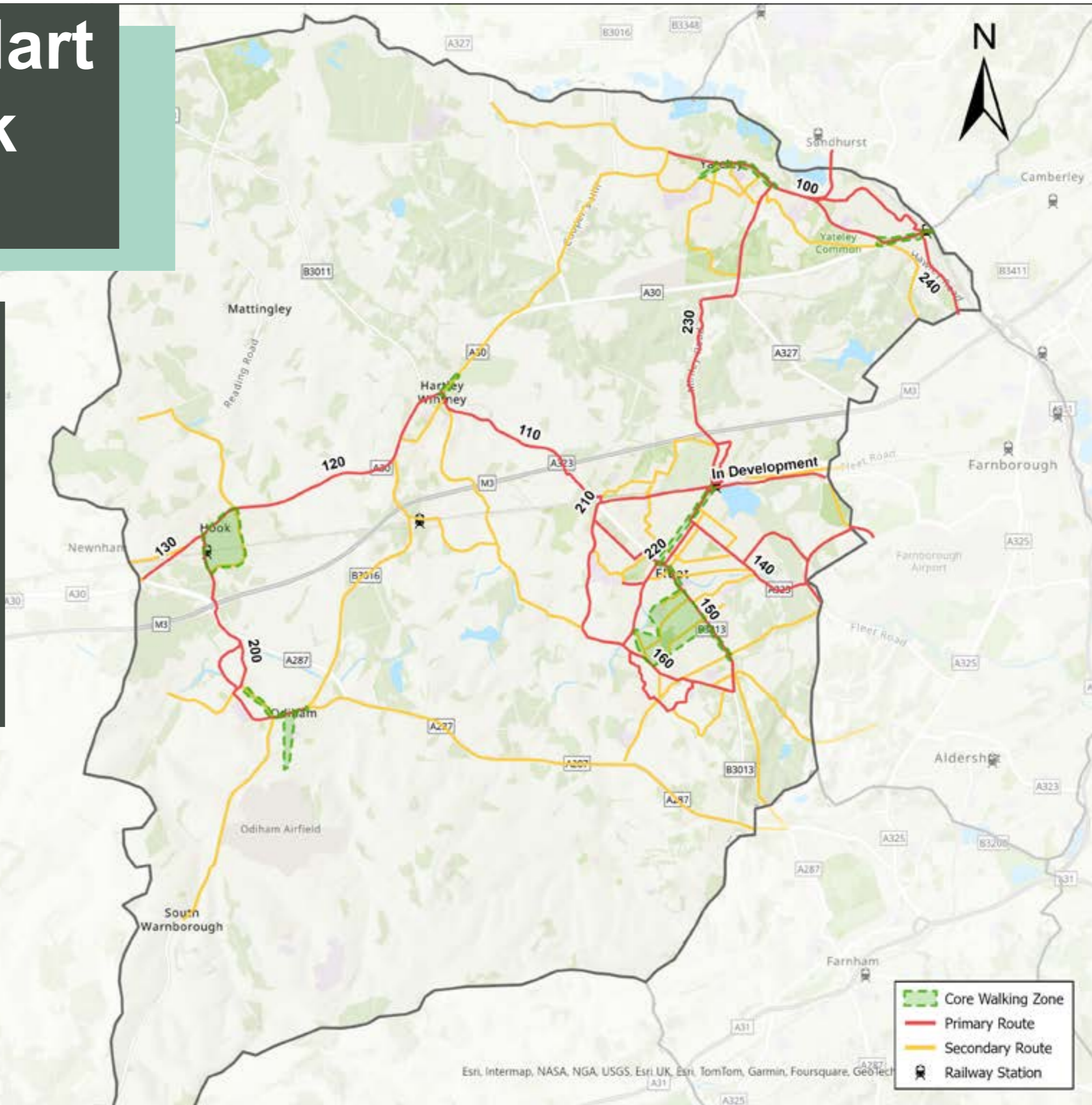
This section of the report presents an overview of the proposed core walking zones and cycle network in Hart district.

The map on this page shows an overview of the whole district, with the following three maps showing large scale maps focussing on different areas of the district.

The walking zones were identified based on clusters of pedestrian trip generators and attractors, including district and service centres.

Each cycle route has been assigned a three-digit reference number and divided up into two categories of routes - 'primary' which represent busy, direct, and main routes and 'secondary' which represent medium usage routes through local areas, feeding into the primary routes.

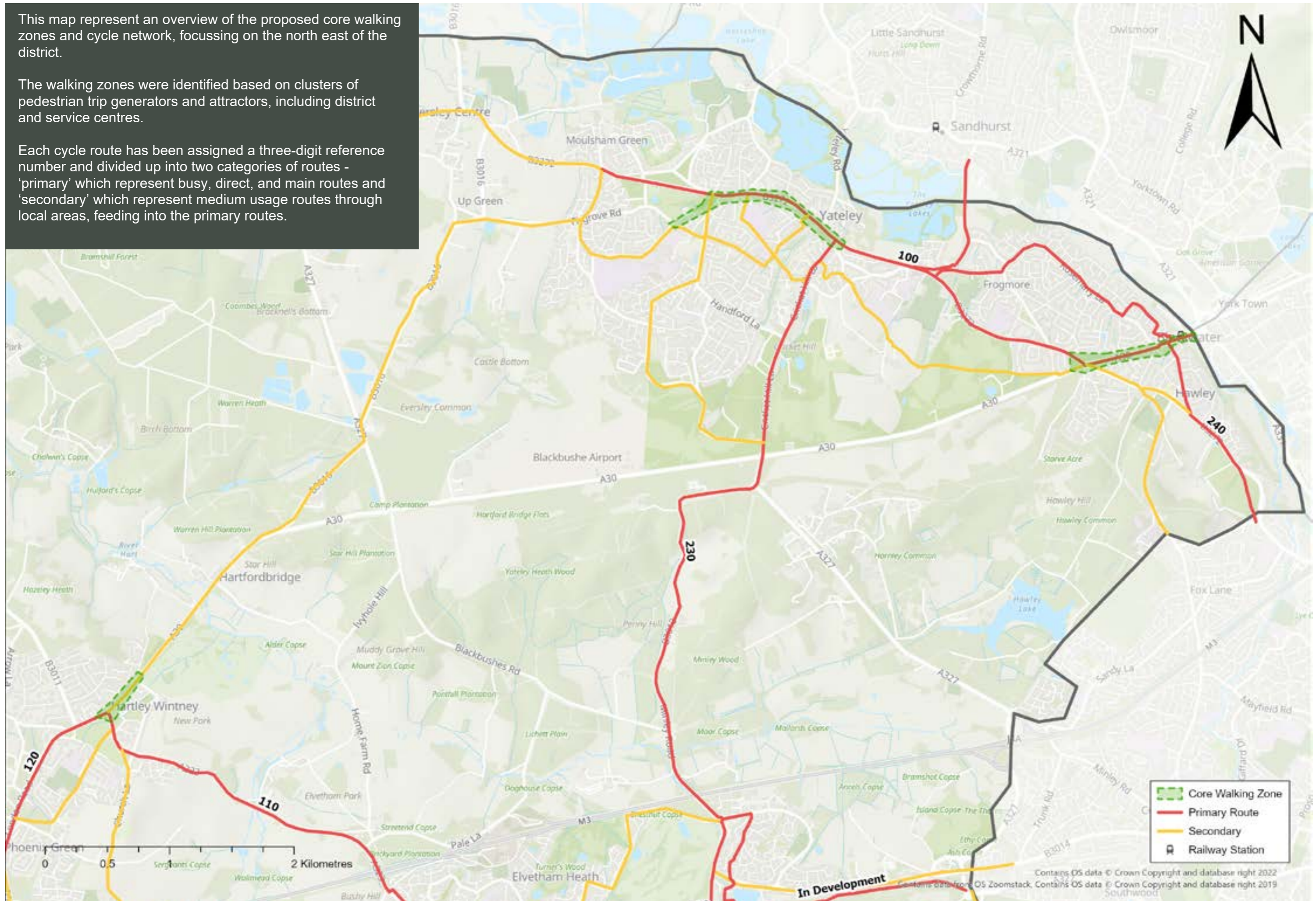
The method by which core walking zones and cycle routes have been identified and developed has been presented in detail in Section Two.



This map represent an overview of the proposed core walking zones and cycle network, focussing on the north east of the district.

The walking zones were identified based on clusters of pedestrian trip generators and attractors, including district and service centres.

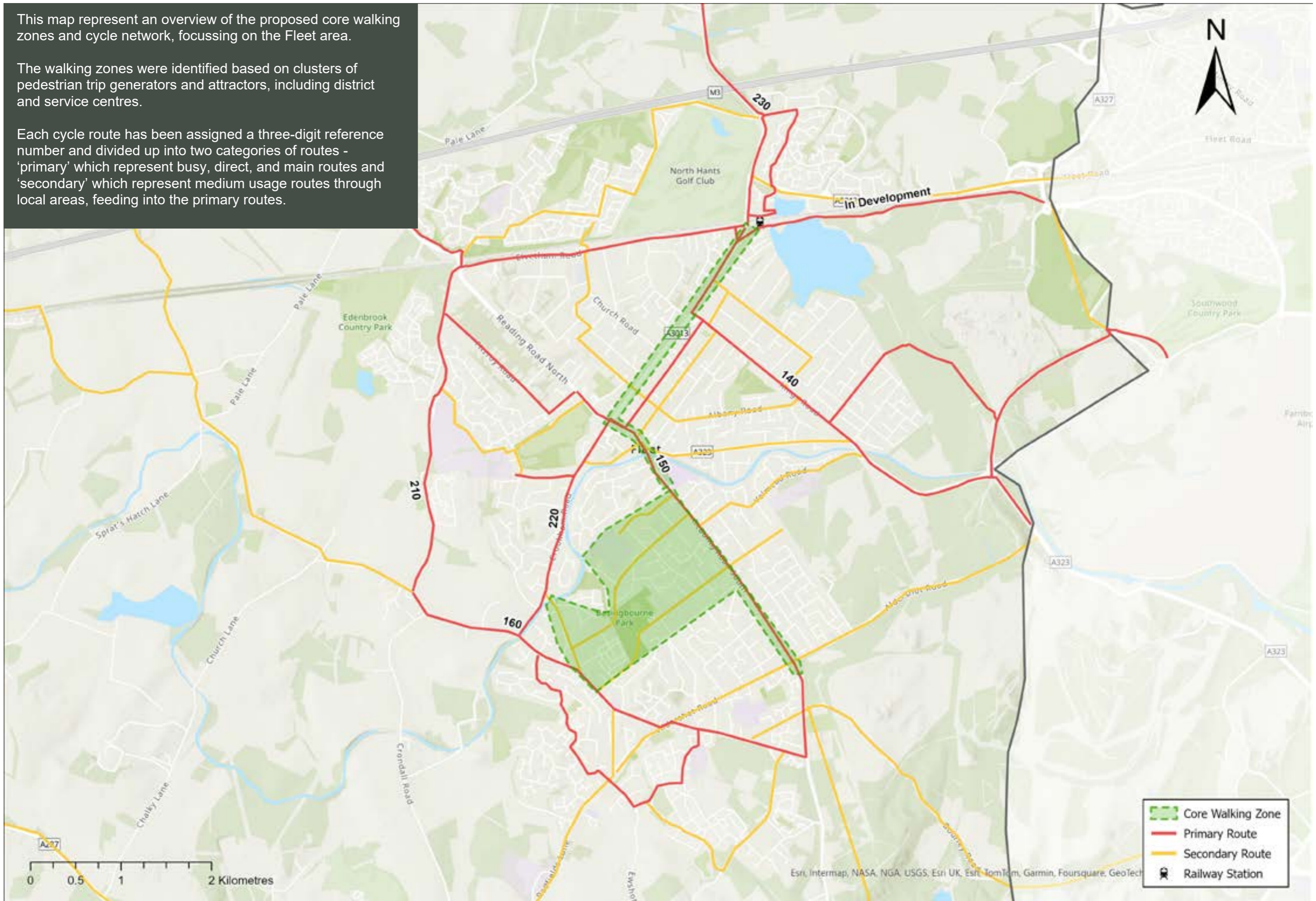
Each cycle route has been assigned a three-digit reference number and divided up into two categories of routes - 'primary' which represent busy, direct, and main routes and 'secondary' which represent medium usage routes through local areas, feeding into the primary routes.



This map represent an overview of the proposed core walking zones and cycle network, focussing on the Fleet area.

The walking zones were identified based on clusters of pedestrian trip generators and attractors, including district and service centres.

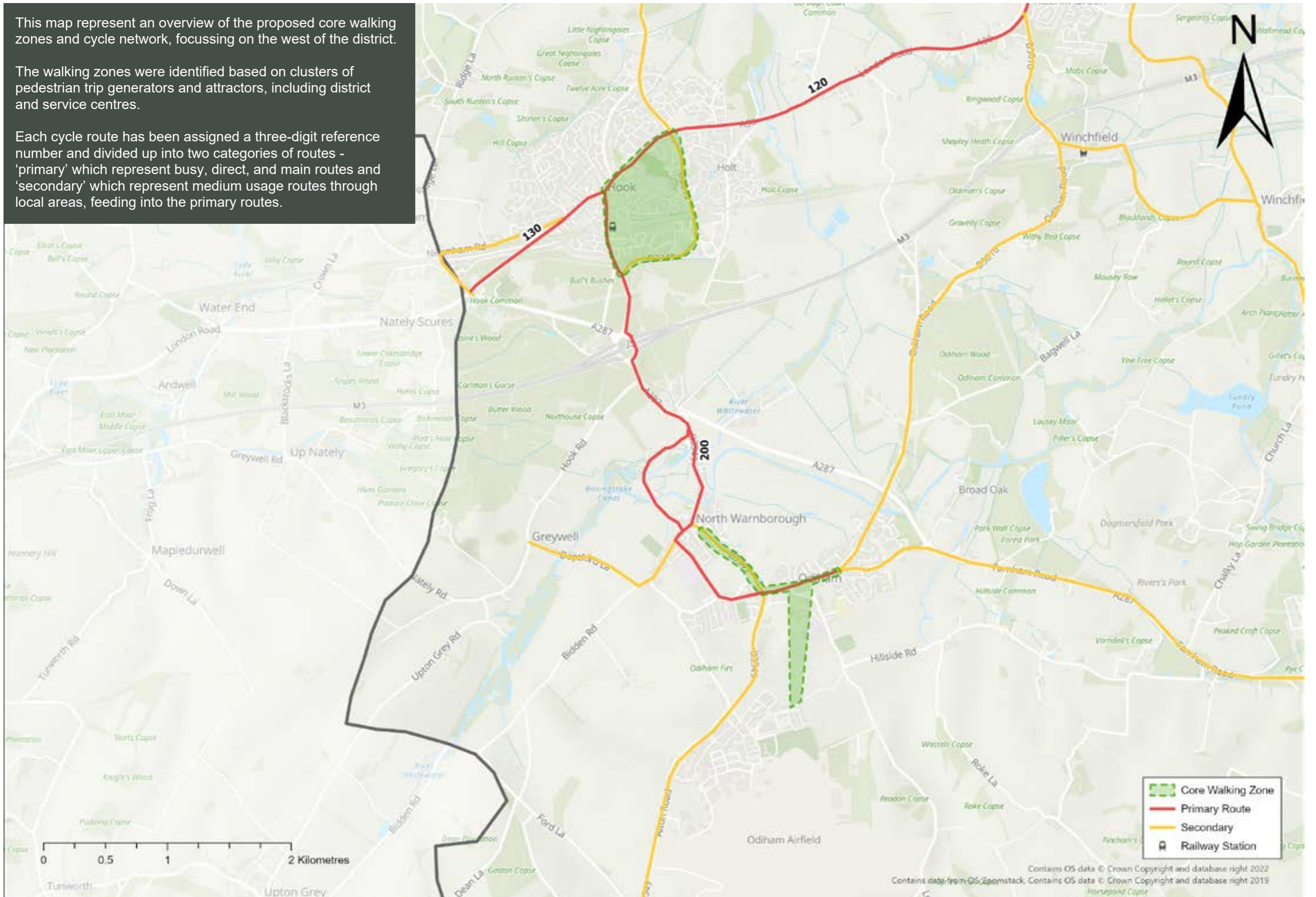
Each cycle route has been assigned a three-digit reference number and divided up into two categories of routes - 'primary' which represent busy, direct, and main routes and 'secondary' which represent medium usage routes through local areas, feeding into the primary routes.



This map represent an overview of the proposed core walking zones and cycle network, focussing on the west of the district.

The walking zones were identified based on clusters of pedestrian trip generators and attractors, including district and service centres.

Each cycle route has been assigned a three-digit reference number and divided up into two categories of routes - 'primary' which represent busy, direct, and main routes and 'secondary' which represent medium usage routes through local areas, feeding into the primary routes.



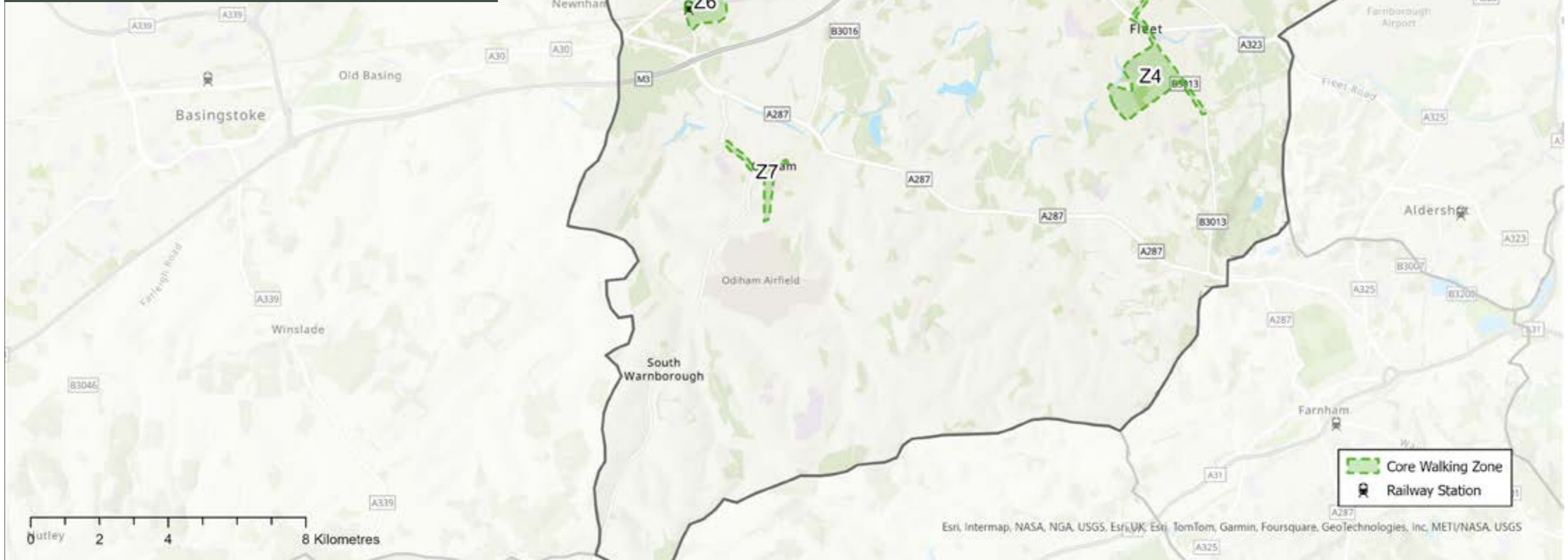
3.2 Core Walking Zones

Seven core walking zones were identified in Hart district, based on clusters of pedestrian trip generators and attractors, including district and service centres.

Core Walking Zones:

- Z1: Yateley
- Z2: Blackwater
- Z3: Fleet town centre
- Z4: Church Crookham
- Z5: Hartley Wintney
- Z6: Hook
- Z7: Odiham

Common themes across all areas include: narrow footways, large junctions and roundabouts with limited or no pedestrian crossing provision, and lack of pedestrian priority at side roads.



3.3 Prioritisation

Core Walking Zones (CWZ) and cycle route prioritisation aims to identify the routes and zones 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%

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

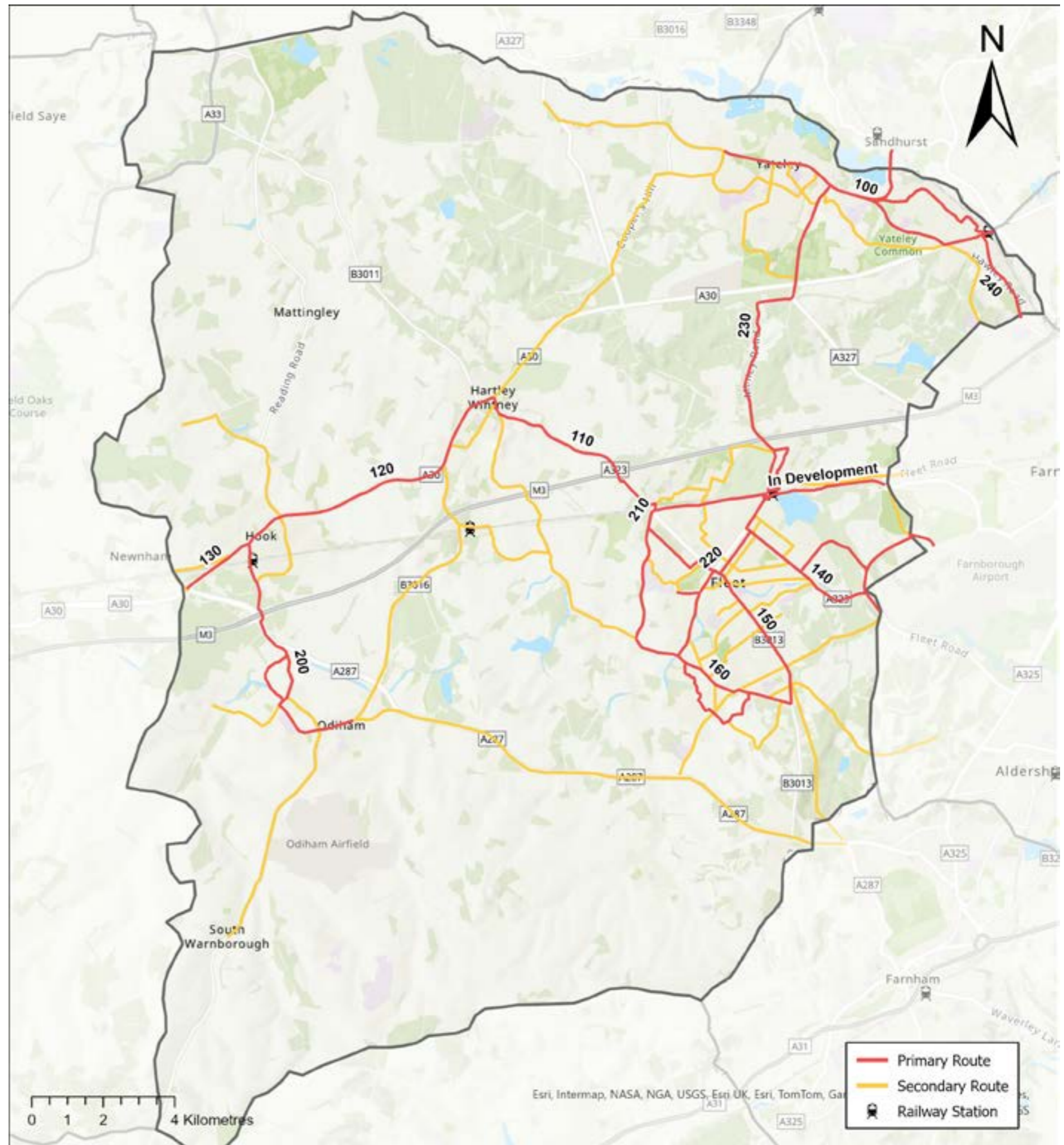
Prioritisation of Cycling Routes

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.



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.

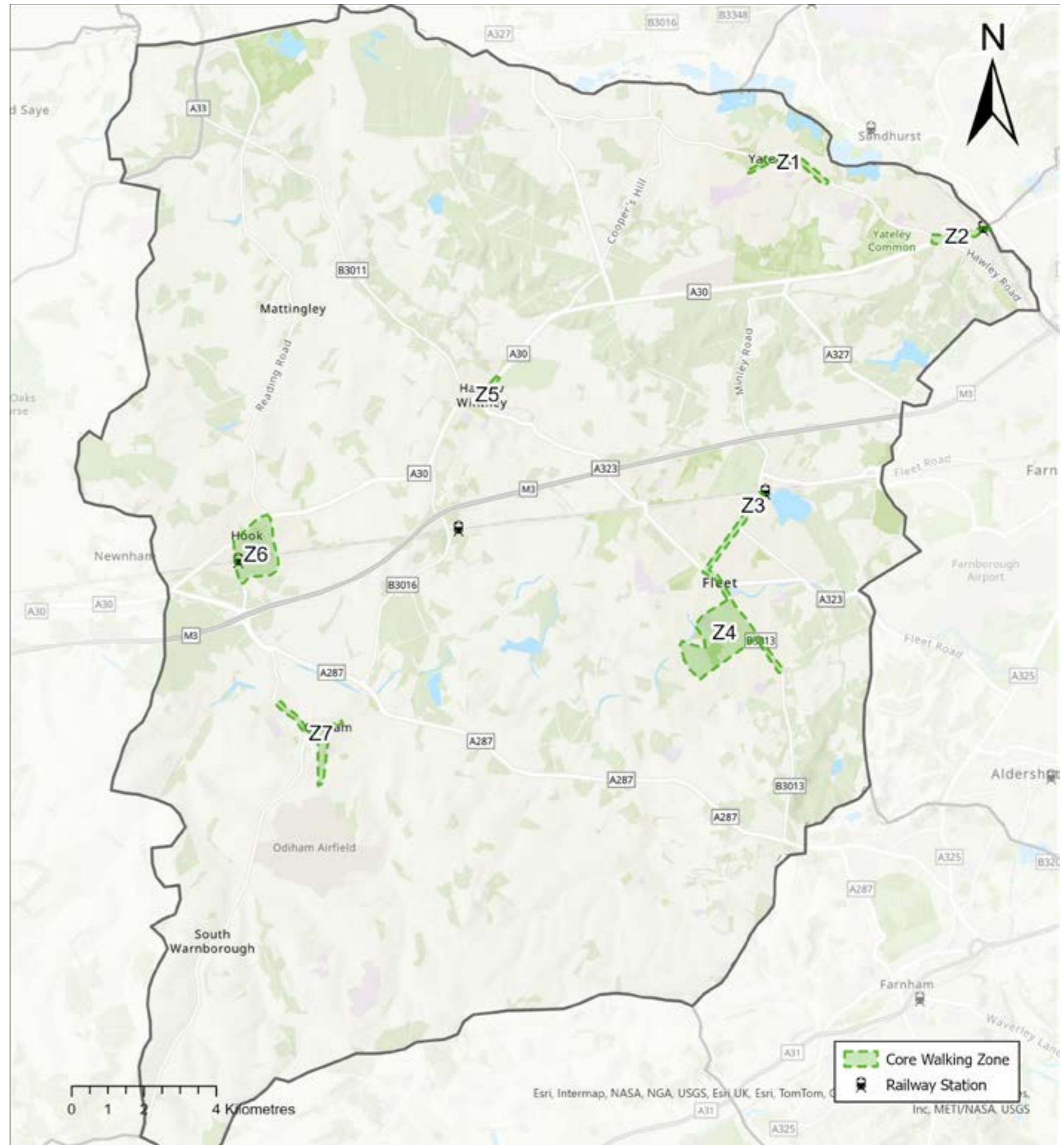
Core Walking Zone	Normalised Priority Scores			Overall Score	Ranking
	Effectiveness	Policy	Economics		
	33%	33%	33%		
Core Walking Zone Z6	67%	63%	83%	71.1%	1
Core Walking Zone Z3	73%	50%	83%	68.9%	2
Core Walking Zone Z4	67%	57%	83%	68.9%	2
Core Walking Zone Z1	53%	50%	67%	56.7%	3
Core Walking Zone Z7	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

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).



Section Four - Route/Zone Audits

Section Four contents

4.1 Introduction	53
4.2 Walking Audits - Core Walking Zones	54
Z1. Yateley core walking zone	57
Z2. Blackwater core walking zone	60
Z3. Fleet core walking zone	63
Z4. Church Crookham core walking zone	66
Z5. Hartley Wintney core walking zone	68
Z6. Hook core walking zone	70
Z7. Odiham core walking zone	74
4.3 Cycling Audits - Proposed Cycle Network	76
Route 100: Yateley to Blackwater	79
Route 110: Hartley Wintney to Elvetham Heath	83
Route 120: Hook to Hartley Wintney	86
Route 130: A30 to Hook	92
Route 140: Fleet to Farnborough	95
Route 150: Fleet to Church Crookham	99
Route 160: Crookham Village and Sandy Lane	104
Route 200: Hook to Odiham	109
Route 210: Fleet to Crookham Village	114
Route 220: Fleet station to Crookham Village	119
Route 230: Yateley to Fleet railway station	123
Route 240: Blackwater to Hawley	127
4.4 Next Steps	130

4.1 Introduction

Once the network of proposed cycling routes and walking zones was established, each route and zone was audited by an experienced member of the project team. Recommendations are made up of interventions which could bring those routes and zones up to the standard required to enable more walking and cycling in the local area. The recommendations for each are set out in the following section of this report. These were included in the consultation draft LCWIP and reviewed and amended as appropriate based on consultation feedback.

Issues are identified at specific locations on routes and in zones, with recommendations proposed by the auditor which respond to the identified issues. These recommendations give an indication of the type of measure likely to be required to bring a route or zone up to the desired standard rather than as a prescriptive list of measures that will be included when a scheme is brought forward. This helps understand the scale of change needed and provides a starting point for development of new schemes. Significant further community engagement and feasibility assessment will form part of the development of each route/zone as they are brought forward and changes may be made to route alignments and the package of specific interventions included based on this later more in-depth analysis work.

Any of the interventions identified in the core walking zones or cycle routes could be implemented in part, in full or not at all depending on the availability of different funding streams.

4.2 Walking Audits - Core Walking Zones

Core Walking Zones

Seven core walking zones were identified in Hart district, based on clusters of pedestrian trip generators and attractors, including district and service centres.

Core Walking Zones:

- Z1: Yateley
- Z2: Blackwater
- Z3: Fleet town centre
- Z4: Church Crookham
- Z5: Hartley Wintney
- Z6: Hook
- Z7: Odiham

Common themes across all areas include: narrow footways, large junctions and roundabouts with limited or no pedestrian crossing provision, and lack of pedestrian priority at side roads.

Recommended interventions are outlined on the following pages, incorporating infrastructure improvements described in the 'Walking Interventions Toolkit' on the following page. The recommendations are indicative, subject to detailed feasibility and design work and stakeholder engagement.



Walking interventions toolkit

All images provided by Sustrans unless otherwise noted.



Dropped kerbs with tactile paving

Necessary to create inclusive, accessible crossing points for pedestrians.

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.



Continuous footway

Continuous footways extend across side roads at the same level and use paving consistent with footway, pedestrians have priority over motor vehicles.



Signalised crossing

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



Raised table

Raised tables at junctions reduce speeds of turning vehicles at side roads or across the entire junction.



20mph speed zones

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



Tighten junction radii

Tightening the turning radii at side roads reduces vehicle turning speeds and makes it easier and shorter for people to cross on foot.



Wayfinding

Providing signage with key destinations helps improve the legibility of the pedestrian network.



Public realm improvements

Adding green infrastructure such as planters, rest areas, secure cycle parking and other placemaking interventions creates a more welcoming environment for pedestrians.



Traffic calming

Measures to create slower speed environments can include build-outs, road humps, chicanes and planters.



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.

Z1. Yateley core walking zone

Zone description

Yateley is a primary local service centre, and is a district retail centre. The Yateley core walking zone (CWZ) is defined by the area encompassing Reading Road/B3272 and eastern side of Yateley Green which extends from the junction of Firgrove Road and School Lane (Southern side of Yateley Green) to beyond the point that Cricket Hill Lane meets Reading Road/B3272.

It encompasses Yateley Green space, residential areas and a series of shopping parades extending east to Cricket Hill Lane. The zone offers grocery shops, pubs, car parks and local shops such as estate agents.

Yateley CWZ links with cycle routes 100 and 230.

Existing conditions

Reviewing interventions to improve pedestrian priority and to enable a reduction in vehicle dominance along the B3272 will enhance the experience offered to visitors and residents of Yateley.

Footways of adequate width are mostly provided through the Yateley CWZ. There is a general need for improved pedestrian crossing facilities and pedestrian priority at side roads.

Barriers to walking

- Wide junction mouths at side roads make it hard for people on foot to cross as it allows high vehicle turning speeds and longer crossing distances.
- Lack of safe crossing facilities at key junctions, e.g. roundabout at east end of zone
- Lack of safe crossing facilities along Reading Road
- Lack of rest points

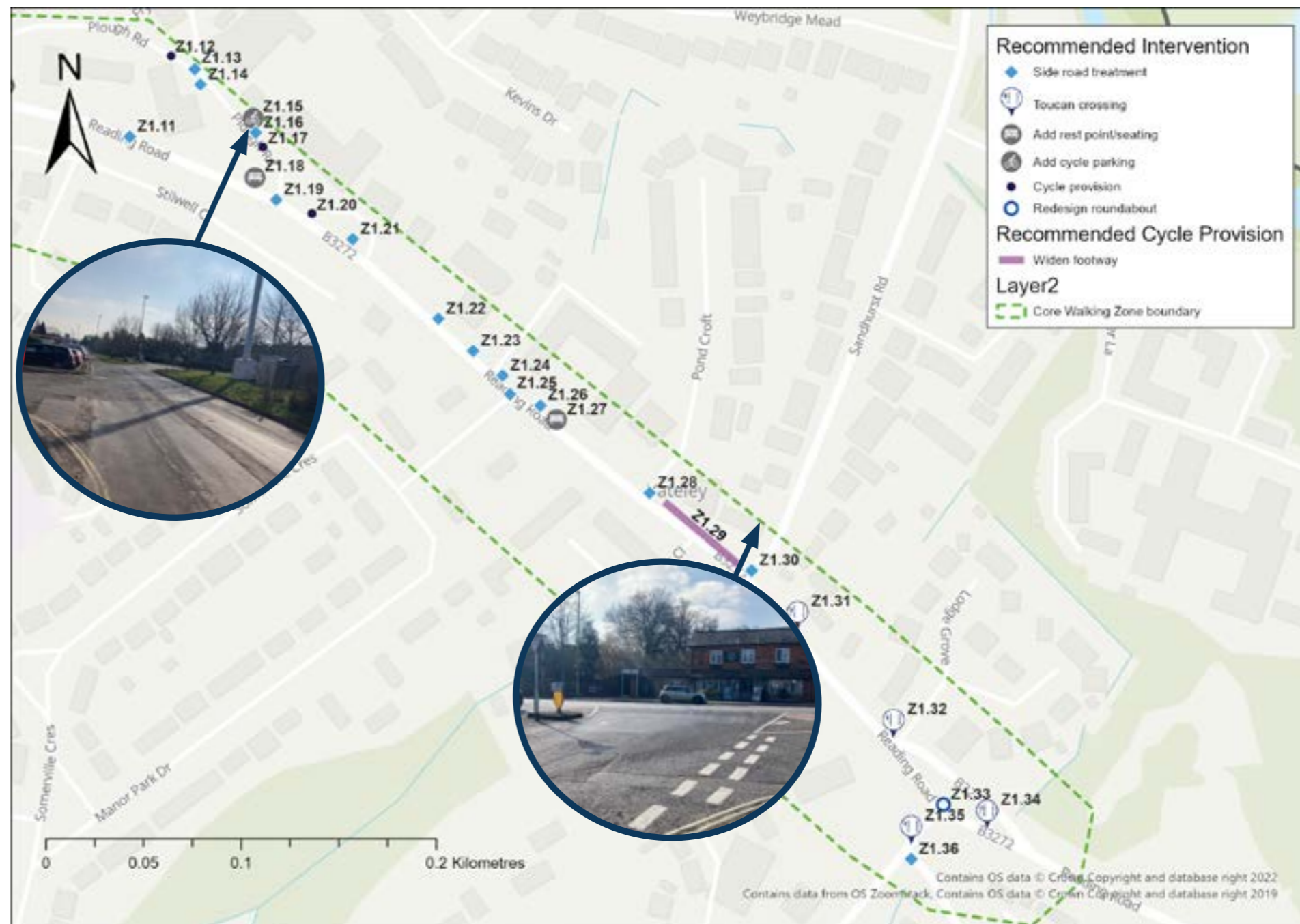


Intervention Number	Issue	Recommendation
Z1.1	Wide junction mouth at side road	Whilst this junction already has a raised table, it could be improved by tightening the kerb radii on School Lane to help reduce vehicle speeds.
Z1.2	Lack of rest points; Opportunity to improve the public realm	Opportunity to add seating and greenery at Firgrove Road/School Lane junction.
Z1.3	Street clutter	Consider removing existing guardrail at Firgrove Road/School Lane junction.
Z1.4	Barrier restricts legitimate access	Consider removing or redesigning barriers to improve accessibility.
Z1.5	Poor/no crossing facilities at junction	Investigate feasibility of installing Zebra crossing on eastern arm of roundabout, subject to safety checks.
Z1.6	Poor/no crossing	Conduct study to determine if controlled crossing warranted - to connect PROW with Mill Lane.
Z1.7	Wide junction mouth at side road	Tighten kerb radii significantly at Mill Lane.
Z1.8	Inadequate footway width	Investigate opportunities to widen footway - may require reallocating space from carriageway.
Z1.9	Poor/no crossing; Lack of pedestrian priority across junction mouth	Add signalised pedestrian crossing to cross Reading Road. Additionally tighten kerb radii on Plough Road and consider a continuous footway as part of a side road treatment to promote user accessibility
Z1.10	Lack of rest points	Consider adding seating and shelter at green space on north side of Reading Road

For recommendations Z1.1 - Z1.10 refer to map on previous page; for Z1.11 - Z1.26 refer to map on next page.

Intervention Number	Issue	Recommendation
Z1.11	Lack of pedestrian priority across junction mouth	Work with Texaco to improve crossing over their forecourt. Tighten kerb radii if possible - consider adding colour to paving to indicate pedestrian priority over turning vehicles.
Z1.12	Lack of footway	Add footway on southern side of Plough Road to fill gap to Texaco station.
Z1.13	Lack of pedestrian priority across junction mouth	Add continuous footway across Fry's Lane.
Z1.14	Lack of pedestrian priority across junction mouth	Improve pedestrian priority crossing across forecourt entrance.
Z1.15	Lack of secure destination cycle parking	Add secure cycle parking at Co-op to improve local access and rationalise street clutter
Z1.16	Lack of pedestrian priority across junction mouth	Ensure pedestrian priority over car park entrance - consider continuous footway.
Z1.17	Reduced footway width due to pavement parking	Investigate re-establishing footway with pavers or coloured painting. Consider eliminating pavement parking in this area.
Z1.18	Lack of rest points	Consider adding seating and shelter.
Z1.19	Wide junction mouth at side road	Tighten kerb radii significantly. If traffic volumes are low, consider adding continuous footway and/or a raised table.
Z1.20	Wide junction mouth at side road	Realign footway to desire line - reallocate carriageway space by tightening kerb radii as described in previous intervention point.
Z1.21	Wide junction mouth at side road	Tighten kerb radii and clarify carriageway/footway space - consider adding continuous footway or raised crossing.
Z1.22	Lack of pedestrian priority across junction mouth	Consider adding different surfacing or paving material to indicate pedestrian priority over forecourt entrance. Tighten kerb radii if possible.
Z1.23	Lack of pedestrian priority across junction mouth	Consider adding different surfacing or paving material to indicate pedestrian priority over forecourt entrance. Tighten kerb radii if possible.
Z1.24	Lack of pedestrian priority across junction mouth	Consider adding different surfacing or paving material to indicate pedestrian priority over car park entrance. Tighten kerb radii if possible.
Z1.25	Wide junction mouth at side road; Street clutter	Tighten kerb radii across Manor Park Drive and consider installing a continuous footway or raised table across the junction. Subject to further feasibility work, remove or reduce the length of guardrailing.
Z1.26	Wide junction mouth at side road	Tighten kerb radii - add pedestrian priority crossing or potentially continuous footway across shopping forecourt.

Intervention Number	Issue	Recommendation
Z1.27	Lack of rest points; Opportunity to improve the public realm	Consider adding seating or greenery along the footway in front of the shopping parade.
Z1.28	Wide junction mouth at side road	Significantly tighten kerb radii at Pond Croft. Investigate feasibility of adding continuous footway and/or raised table.
Z1.29	Opportunity to improve the public realm	Investigate feasibility of removing slip lane - convert excess carriageway space into green area with wider footways, planting, seating
Z1.30	Wide junction mouth at side road	Significantly tighten kerb radii to create shorter and safer crossing for pedestrians. If possible, add a raised table or continuous footway, in addition to a cycle priority crossing.
Z1.31	Poor/no crossing	Due to high traffic volumes, consider upgrading uncontrolled pedestrian crossing south of Sandhurst Road to a controlled crossing.
Z1.32	Poor/no crossing	Add a controlled pedestrian crossing at Lodge Grove. Following further feasibility work, it may be that only one of this and Z1.31 are required.
Z1.33	Poor/no crossing facilities at junction	Complete re-design of junction required to prioritise active travel. Close southern slip lane and repurpose to area for cycle track as well as widened footway.
Z1.34	Poor/no crossing	Add signalised pedestrian crossing.
Z1.35	Poor/no crossing	Add signalised pedestrian crossing.
Z1.36	Lack of pedestrian priority across junction mouth	Realign Potley Hill Road exit to remove slip lane.



Z2. Blackwater core walking zone

Zone description

Blackwater is a primary local service centre and a district retail centre. The Blackwater core walking zone (CWZ) is defined by the area encompassing London Road/A30 which are bordered to the west by the Reading Road and London Road junction to the east by the entry to Blackwater train station.

This zone includes supermarkets, car parks and shops on Kings Parade extending east to the train station. The Blackwater CWZ is a concentrated retail areas offering dining, shopping, entertainment, and various services focused on Green Lane junction.

Blackwater CWZ links to cycle routes 100 and 240.

Existing conditions

Reviewing interventions to enable a reduction in vehicle dominance along London Road will enhance the experience offered to visitors and residents of Blackwater Town. There is a general need for improved pedestrian crossing facilities and pedestrian priority at side roads.

Additionally, re-imagining the design of Kings Parade offers an opportunity to create an engaging and welcoming environment for people walking and cycling in Blackwater.

Barriers to walking

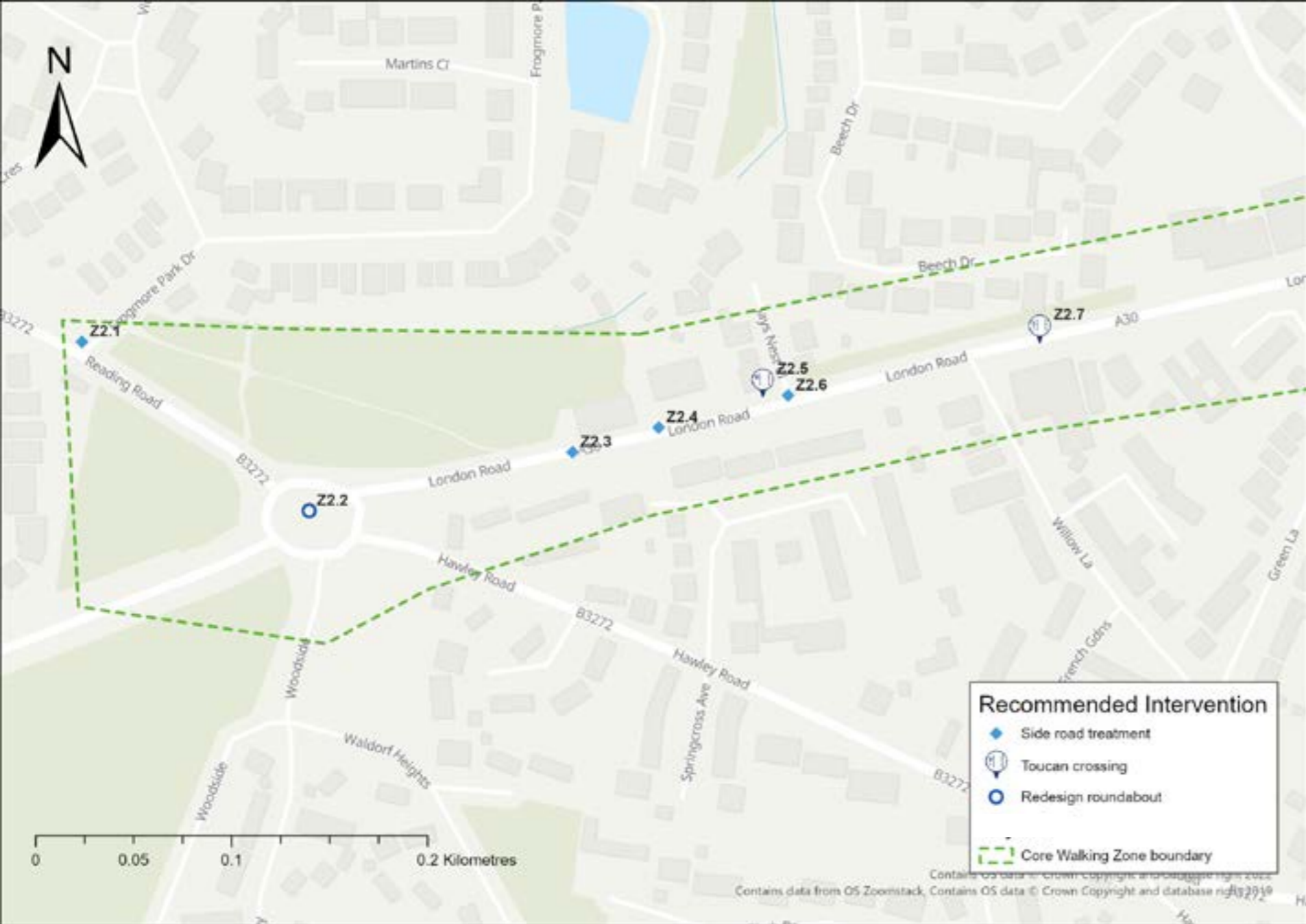
- Wide junction mouths at side roads make it hard for people on foot to cross as it allows high vehicle turning speeds and longer crossing distances.
- Lack of safe crossing facilities at key junctions, e.g. roundabout at west end of zone, Rosemary Lane / A30 crossroads
- Lack of safe crossings points of the A30



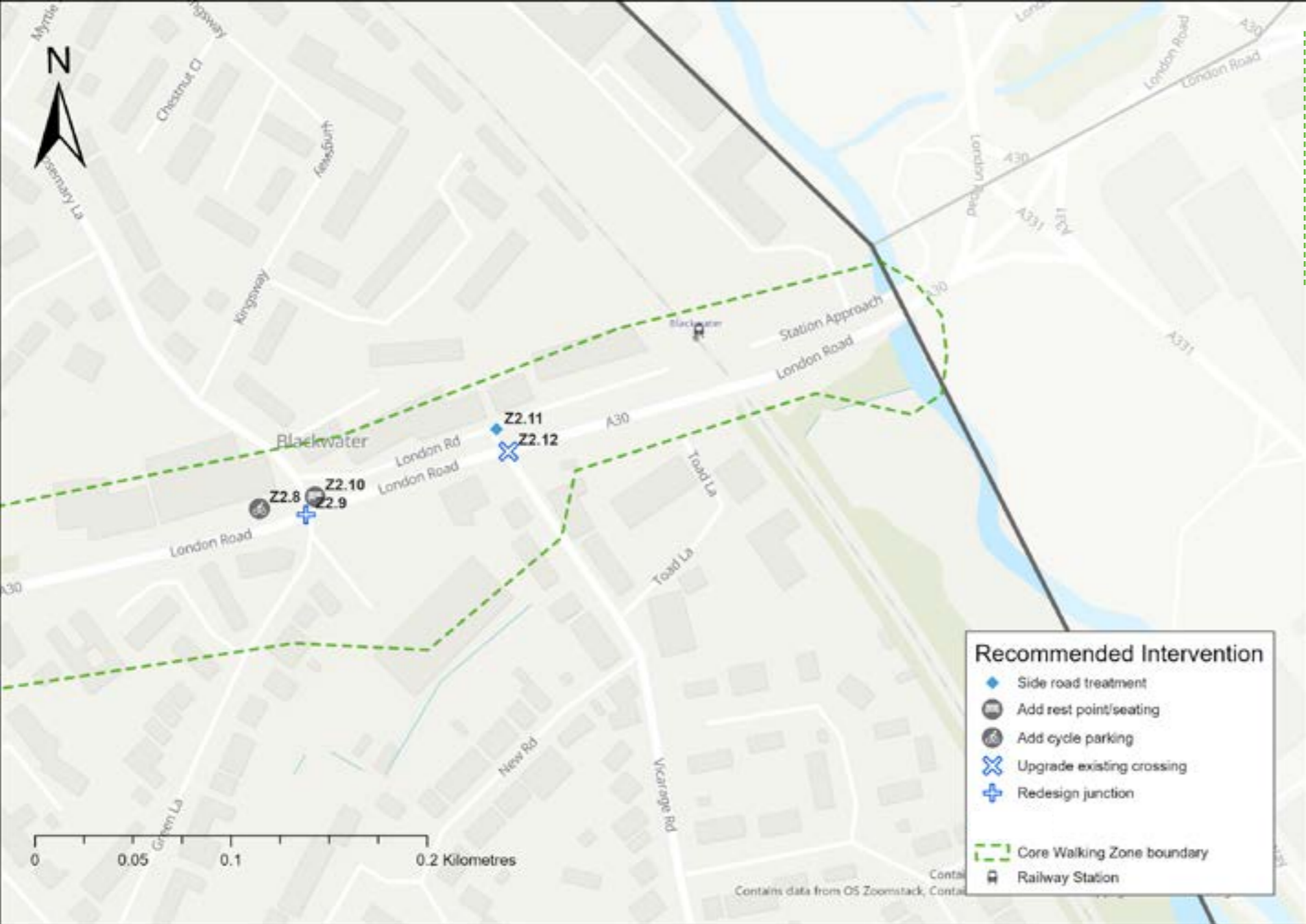
A30/Rosemary Lane junction



Car parking and some planters on Kings Parade



Intervention Number	Issue	Recommendation
Z2.1	Wide junction mouth at side road	Tighten kerb radii over Frogmore Park Drive. Investigate feasibility of adding continuous footway and/or raised table.
Z2.2	Poor/no crossing facilities at junction	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	Lack of pedestrian priority across junction mouth	Investigate feasibility of adding different surfacing or pavement to indicate pedestrian priority over station forecourt entrance.
Z2.4	Lack of pedestrian priority across junction mouth	Investigate adding different surfacing or pavement to indicate pedestrian priority across Tesco entrances.
Z2.5	Poor/no crossing	Due to high traffic volumes, consider upgrading existing uncontrolled crossing to signalised crossing.
Z2.6	Wide junction mouth at side road	Tighten kerb radii. Consider adding raised table/continuous footway across Jays Net Close
Z2.7	Poor/no crossing; Inadequate maintenance	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	Issue	Recommendation
Z2.8	Lack of secure destination cycle parking	Add secure cycle parking near supermarket.
Z2.9	Poor/no crossing facilities at junction; Street clutter	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	Opportunity to improve the public realm	Consider re-allocating parking on Kings Parade to create a pedestrian plaza. This location would benefit from additional greenery.
Z2.11	Wide junction mouth at side road	Significantly tighten kerb radii over White Hart Parade to reduce pedestrian crossing distance if possible.
Z2.12	Poor/no crossing facilities at junction	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

Zone description

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.

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

Existing conditions

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

Footways of adequate width are provided through the whole Fleet CWZ however maintenance of surface condition could be improved. There is a general need for improved pedestrian crossing facilities and pedestrian priority at side roads.

Barriers to walking

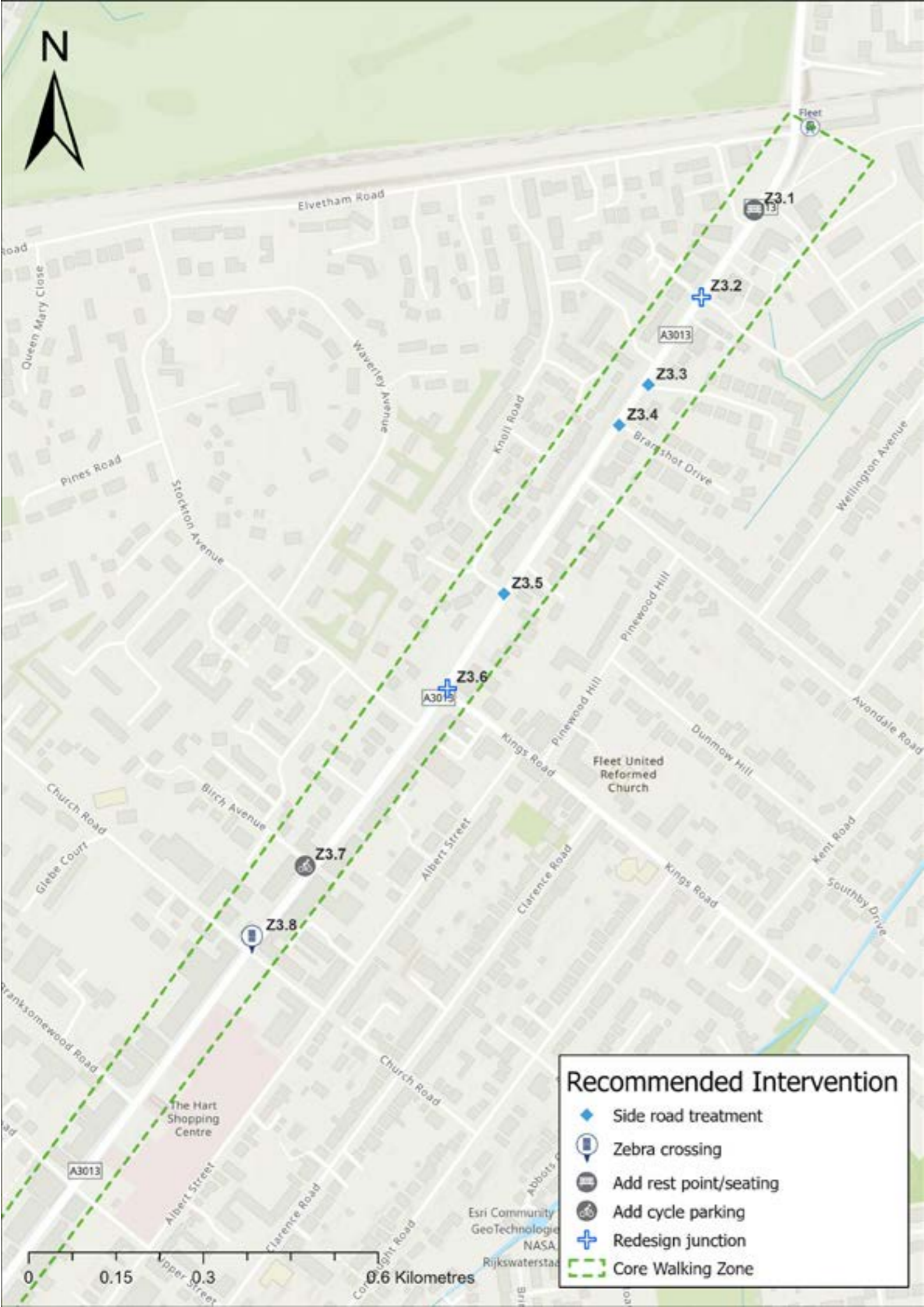
- Wide junction mouths at side roads make it hard for people on foot to cross as it allows high vehicle turning speeds and longer crossing distances.
- Lack of safe crossing facilities at key junctions, e.g. roundabout near Fleet train station
- Lack of safe crossing facilities along the length of Fleet Road
- Lack of rest points



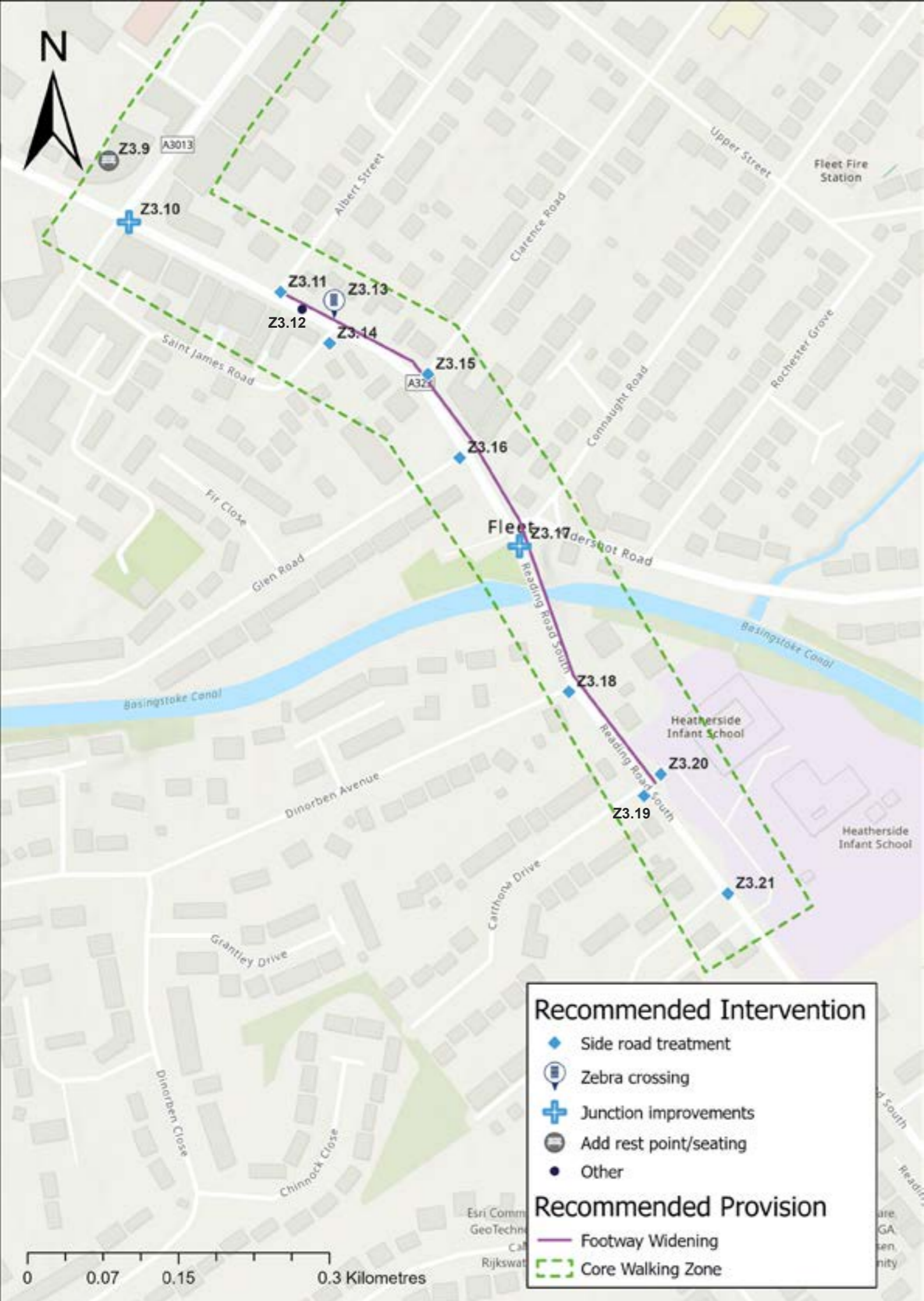
Pedestrians crossing the B3010 at Fleet Road



Fleet Road and Reading Road junction



Intervention Number	Issue	Recommendation
Z3.1	Poor/no crossing facilities at junction; Lack of rest points	Investigate the feasibility of re-designing the roundabout on Fleet Road to provide controlled crossing facilities on all arms for pedestrians and cyclists. Excess carriageway space provides an opportunity to widen footways, install seating and enhance greenery.
Z3.2	Poor/no crossing facilities at junction	Improve the Fleet Road and Bramshott Place junction, south of the Premier Inn, to include controlled pedestrian crossing facilities with pedestrian crossing buttons and countdown timers.
Z3.3	Wide junction mouth at side road	Tighten kerb radii where Darset Avenue meets Fleet Road.
Z3.4	Wide junction mouth at side road	Tighten kerb radii where Bramshot Drive meets Fleet Road.
Z3.5	Wide junction mouth at side road	Tighten kerb radii, at the junction where Knoll Road meets Fleet Road.
Z3.6	Poor/no crossing	Install pedestrian signals with countdown timers at all arms of the junction of Fleet Road/B3010.
Z3.7	Lack of secure destination cycle parking	Install secure cycle parking to enable access by sustainable transport.
Z3.8	Poor/no crossing	Consider adding controlled crossing over Church Road, near the junction with Fleet Road to improve access from this important walking route to and from Fleet town centre.



Intervention Number	Issue	Recommendation
Z3.9	Lack of rest points; Lack of wayfinding	Add a bench outside shops at the Fleet Road - Crookham Road junction. Also, add signs to improve wayfinding at junction.
Z3.10	Poor/no crossing facilities at junction	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.
Z3.11	Wide junction mouth at side road	Tighten kerb radii where Albert Street meets Reading Road South. Investigate the feasibility of installing a continuous footway over this side road.
Z3.12	Inadequate footway width	There are sections of narrow footway along Reading Road South, particularly at bus stops. Investigate the feasibility of widening the footways, ensuring a width of at least 2m, by cutting into the verge or by using carriageway space where possible. Note that there are areas along the road, such as near Heatherside School, where there are possible width constraints.
Z3.13	Poor/no crossing	Consider upgrading the current uncontrolled crossing near Albert Street to a controlled crossing, subject to analysis of traffic data.
Z3.14	Lack of pedestrian priority across junction mouth	Investigate the feasibility of installing a continuous footway over St James Road.
Z3.15	Lack of pedestrian priority across junction mouth	Investigate the feasibility of installing a continuous footway over Clarence Road.
Z3.16	Wide junction mouth at side road	Tighten the kerb radii where Glen Road meets Reading Road South. Consider bringing the existing raised table forward, closer to the junction with Reading Road South, to better cater to the crossing desire line.
Z3.17	Poor/no crossing facilities at junction	Investigate the feasibility of tightening the Aldershot Road and Reading Road South junction. Install crossing facilities with pedestrian and cyclist priority at all junction arms, and consider re-allocating excess carriageway space to widen the footways.
Z3.18	Wide junction mouth at side road	Tighten the kerb radii on Dinorben Avenue to reduce pedestrian crossing distance.
Z3.19	Wide junction mouth at side road	Tighten the kerb radii on Carthona Drive to reduce pedestrian crossing distance.
Z3.20	Lack of pedestrian priority across junction mouth	Consider tightening the kerb radii and installing a raised table or continuous footway over Heatherside Junior School driveway entrance.
Z3.21	Wide junction mouth at side road	Tighten the kerb radii on Lyndford Terrace, and consider moving the raised table closer to the junction with Reading Road South, to meet the crossing desire line.

Z4. Church Crookham core walking zone

Zone description

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.

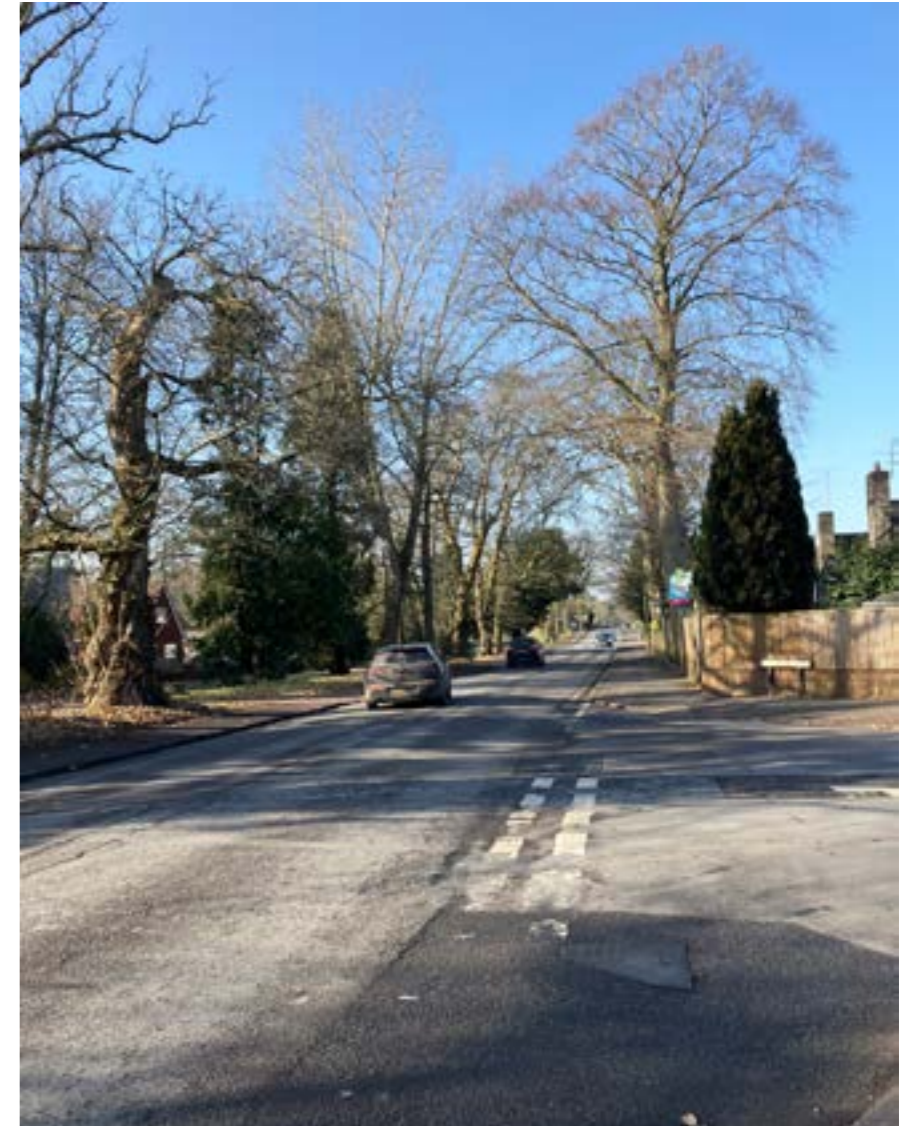
Existing conditions

Reviewing interventions to improve pedestrian priority and reduce traffic dominance at key locations in the zone will enhance the experience offered to visitors and residents of Church Crookham.

Footway width and condition is generally adequate across Church Crookham. There is a general need for improved pedestrian priority at side roads.

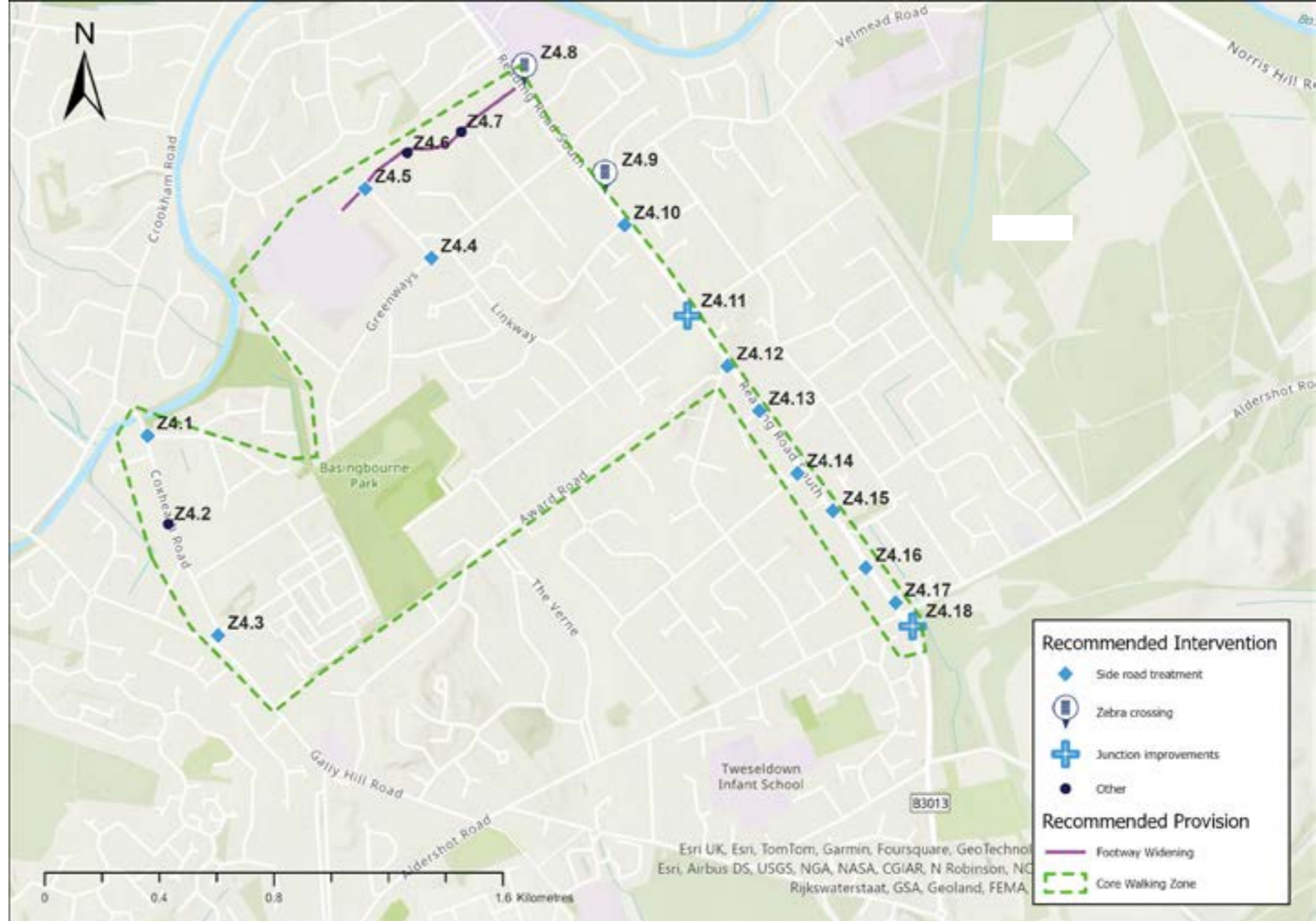
Barriers to walking

- Wide junction mouths at side roads make it hard for people on foot to cross as it allows high vehicle turning speeds and longer crossing distances.
- Lack of safe crossing facilities at key junction, e.g. roundabout in south east corner of CWZ
- Lack of footway in limited locations
- Pavement parking in certain locations



Reading Road South at Velmead Road

Z4.1	Wide junction mouth at side road	Tighten turning radii over Wickham Road. Consider installing raised table or continuous footway if possible.
Z4.2	Lack of footway	Missing footway on western side of Coxheath Road from Copse 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	Wide junction mouth at side road	Tighten turning radii at Coxheath Road at Gally Hill Road to shorten pedestrian crossing distance.
Z4.4	Wide junction mouth at side road	Tighten kerb radii on Beech Ride at Spring Woods. Add dropped kerbs at a minimum. Consider installing continuous footway or raised table.
Z4.5	Wide junction mouth at side road	Tighten kerb radii on Beech Ride. Add dropped kerbs at a minimum. Consider installing continuous footway or raised table.
Z4.6	Busy school area	Consider potential for a school zone around Courtmoor School
Z4.7	Reduced footway width due to pavement parking	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.
Z4.8	Poor/no crossing; Wide junction mouth at side road	Install a 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
Z4.9	Poor/no crossing	Install a zebra crossing over B3013 near Velmead Road. This may be helpful for those travelling to Fleet Infant School and Velmead Junior School.
Z4.10	Wide junction mouth at side road	Tighten turning radii on Longmead Road to reduce pedestrian crossing distance.
Z4.11	Lack of pedestrian priority across junction mouth	Investigate feasibility of installing a raised table across the staggered junction of Basingbourne Road/ Reading Road South and Florence Road
Z4.12	Wide junction mouth at side road	Tighten turning radii at Rounton Road to reduce pedestrian crossing distance.



Intervention Number	Issue	Recommendation
Z4.13	Wide junction mouth at side road	Tighten turning radii to reduce pedestrian crossing distance at Vivian Close.
Z4.14	Wide junction mouth at side road	Tighten turning radii on Ryelaw Road.
Z4.15	Wide junction mouth at side road	Tighten turning radii on Sian Close.
Z4.16	Wide junction mouth at side road	Tighten turning radii on Compton Road.
Z4.17	Potential for vehicle conflict	Introduce right turn ban from petrol station exit.
Z4.18	Poor/no crossing facilities at junction	Investigate feasibility of installing controlled crossings at junction arms.

Z5. Hartley Wintney core walking zone

Zone description

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.

Hartley Wintney CWZ links to the cycle routes 110 and 120.

Existing conditions

Reviewing interventions to improve pedestrian priority and reduce traffic dominance at key locations in the zone will enhance the experience offered to visitors and residents of Hartley Wintney.

The majority of the High Street already includes wide footways, seating and greenery, as well as cycle parking, however there are opportunities to improve the public realm and pedestrian priority at side roads.

Barriers to walking

- Wide junction mouths at side roads make it hard for people on foot to cross as it allows high vehicle turning speeds and longer crossing distances.
- Opportunity to improve the walking environment at the north east end of the CWZ

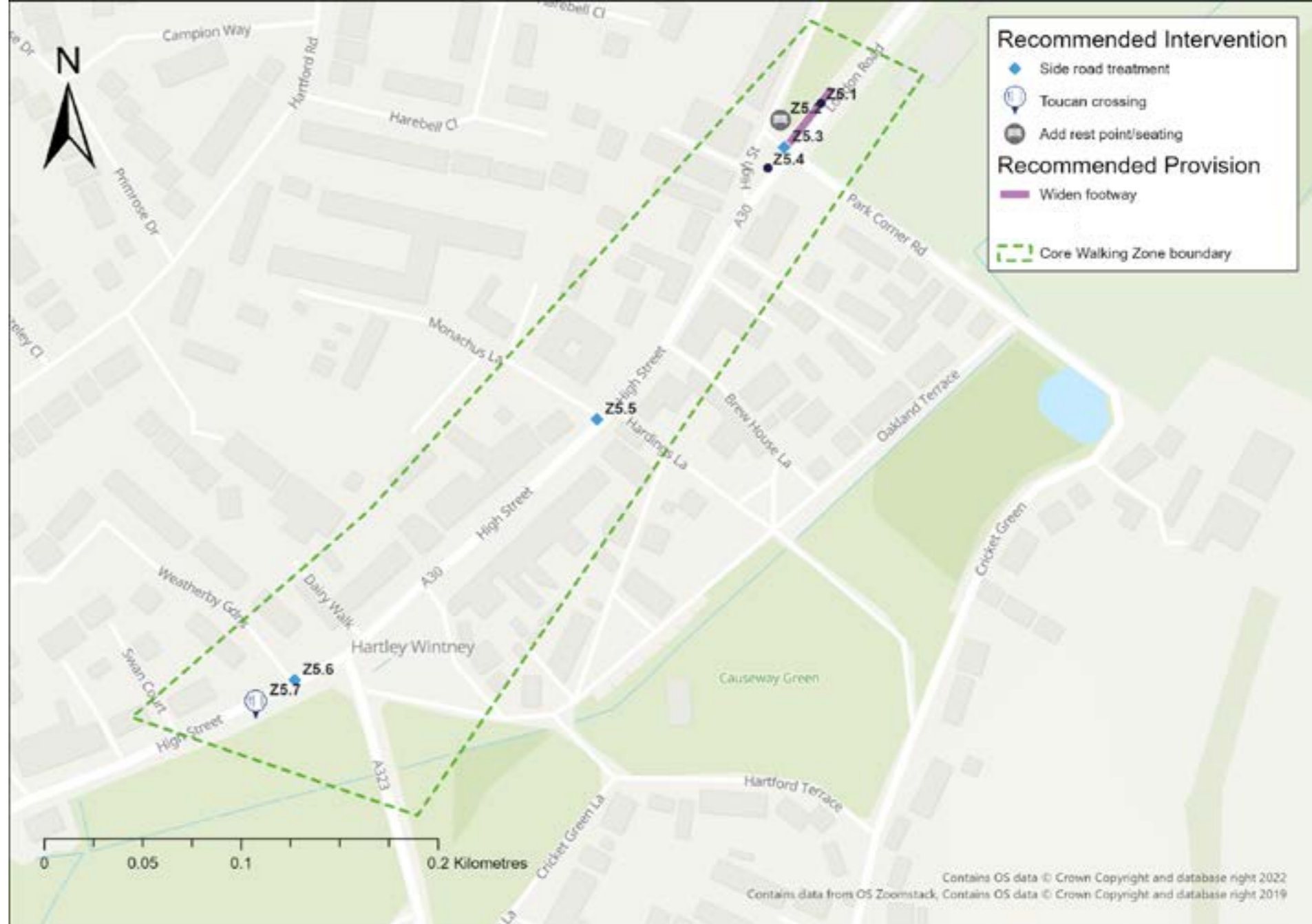


Hartley Wintney High Street



High Street, Fleet Road roundabout

Z5.1	Inadequate footway width	Widen existing footway on London Road (A30) to 2m minimum, and continue this widening to reach Hartfordbridge
Z5.2	Lack of rest points	Add seating.
Z5.3	Opportunity to improve the public realm	Evaluate feasibility of removing one of the access roads onto Hunts Common to reduce vehicle dominance. Only one 'slip road' is needed.
Z5.4	Inadequate footway width	Widen existing footway to 2m minimum.
Z5.5	Lack of pedestrian priority across junction mouth	Consider adding raised table or continuous footway across Monachus Lane.
Z5.6	Lack of pedestrian priority across junction mouth	Tighten kerb radii and consider installing raised table or continuous footway across Weatherby Gardens
Z5.7	Poor/no crossing	Investigate upgrading existing uncontrolled crossing to signalised pedestrian crossing.



Z6. Hook core walking zone

Zone description

Hook is a primary local service centre, and is a retail district centre. The proposed core walking zone includes the railway station, schools and retail in the west of the zone, including a supermarket and pubs. It also includes important employment and business sites located in the south of the zone.

The Hook core walking zone (CWZ) focuses on access from and across the boundary roads: London Road, B3349, and Station Road.

This CWZ is bordered by Primary and Secondary Cycle Routes - routes 120, 130 and 200 - therefore some recommendations for pedestrian improvements are also included in the cycle route recommendations.

Existing conditions

There is a general lack of safe, controlled crossing points of the boundary roads which creates severance for local communities and people on foot. There is also a lack of pedestrian priority across junction mouths. Footways in much of the zone should be widened to meet minimum desirable widths.

While not fully within the core walking zone, consultation feedback highlighted Griffin Way North, which has a high speed limit and lack of controlled crossings. To maximise the benefits from the measures included in the CWZ, this issue should also be addressed.

Reviewing interventions to improve pedestrian priority and reduce severance will enhance the experience offered to visitors and residents of Hook.

Barriers to walking

- Wide junction mouths at side roads make it hard for people on foot to cross as it allows high vehicle turning speeds and longer crossing distances.
- Lack of safe crossing facilities at key junctions, e.g. roundabouts in each corner of the CWZ
- Lack of safe crossing facilities across the primary roads
- Lack of rest points
- Consultation feedback highlighted generally poor lighting on key routes in Hook, for which further work is required to identify areas for upgrades.

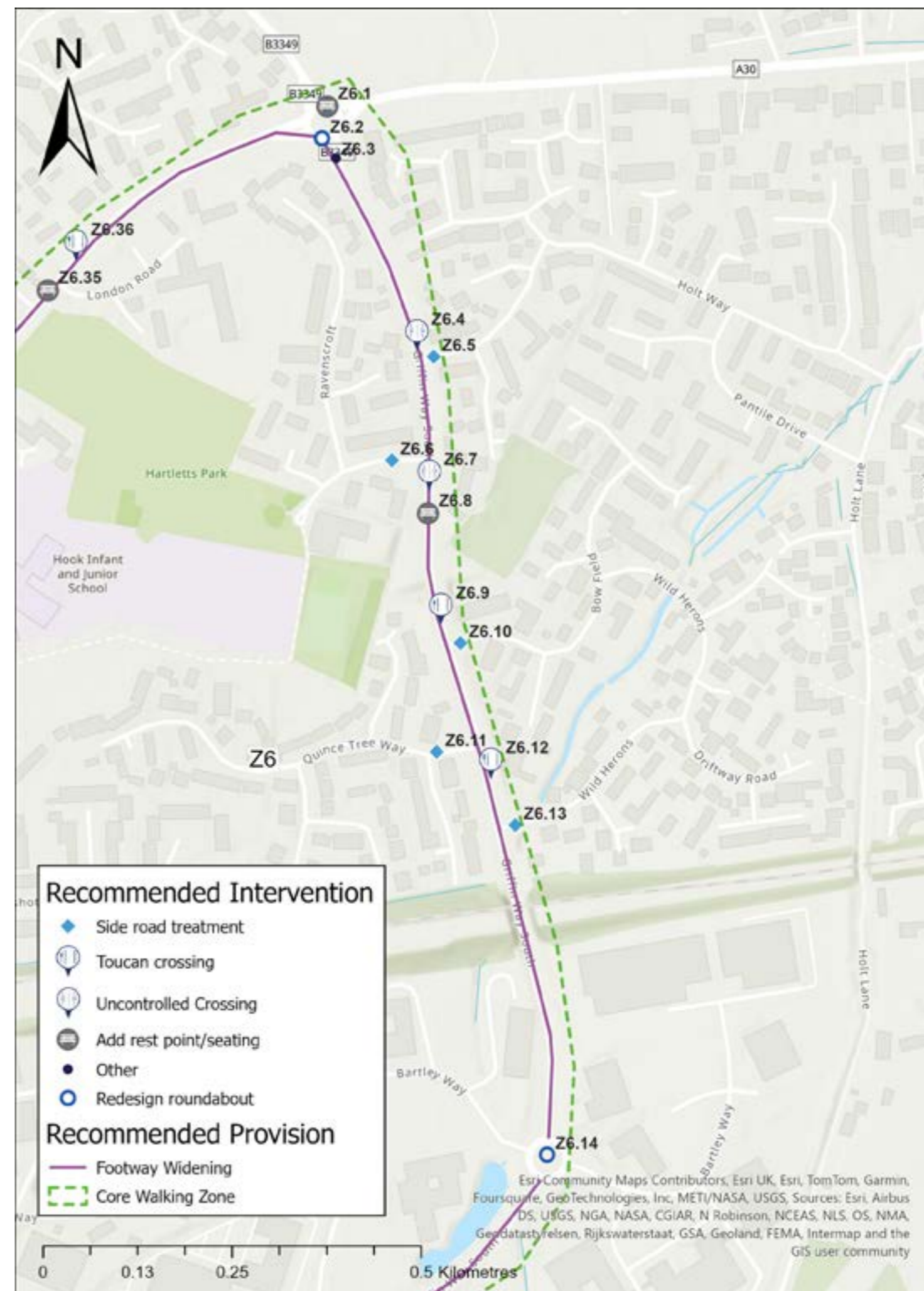


Station Road/London Road roundabout, Hook



Station Road, Hook

Intervention Number	Issue	Recommendation
Z6.1	Lack of rest points	Provide resting / seating facilities at the B3349 and A30 roundabout
Z6.2	Poor/no crossing facilities at junction	Investigate the feasibility of upgrading the B3349 and A30 roundabout to provide crossing facilities on all roundabout arms that prioritise pedestrians and cyclists
Z6.3	Inadequate footway width	Widen the footway on both sides of the B3349 to 2m minimum by using the existing verge space and/or excess carriageway space if necessary
Z6.4	Poor/no crossing	Investigate the feasibility of installing an uncontrolled crossing in place of the traffic island over the B3349, north of Four Acre Coppice (note that a Toucan crossing is present approximately 50m away)
Z6.5	Wide junction mouth at side road	Tighten turning radii to shorten pedestrian crossing distance over Four Acre Coppice
Z6.6	Wide junction mouth at side road	Tighten turning radii to shorten pedestrian crossing distance over Ravenscroft
Z6.7	Poor/no crossing	Investigate the feasibility of installing an uncontrolled crossing in place of the traffic island over the B3349 south of Ravenscroft
Z6.8	Lack of rest points	Provide more resting / seating facilities on green verges along the B3349
Z6.9	Poor/no crossing	Consider upgrading the current uncontrolled crossing to a Toucan or Zebra crossing, subject to analysis of traffic data
Z6.10	Wide junction mouth at side road	Tighten turning radii to shorten pedestrian crossing distance over Bow Field
Z6.11	Wide junction mouth at side road	Tighten turning radii to shorten pedestrian crossing distance over Quince Tree Way
Z6.12	Poor/no crossing	Consider upgrading the current uncontrolled crossing south of Quince Tree Way to a Toucan or Zebra crossing, subject to analysis of traffic data
Z6.13	Wide junction mouth at side road	Tighten turning radii to shorten pedestrian crossing distance over Wild Herons
Z6.14	Poor/no crossing facilities at junction	Investigate the feasibility of upgrading the Griffin Way South (B3349) roundabout to provide crossing facilities that prioritise pedestrians. For example, consider installing controlled crossing facilities on all roundabout arms and install wayfinding signage



Intervention Number	Issue	Recommendation
Z6.15	Wide junction mouth at side road	Tighten turning radii to shorten pedestrian crossing distance over Bartley Way
Z6.16	Poor/no crossing	Consider upgrading the current uncontrolled crossing west of Bartley Way to a Toucan or Zebra crossing, subject to analysis of traffic data
Z6.17	Poor/no crossing	Consider upgrading the current uncontrolled crossing east of the Griffin Way South and Station Road roundabout to a Toucan or Zebra crossing, subject to analysis of traffic data
Z6.18	Lack of rest points	Provide resting / seating facilities on at Griffin Way South and Station Road roundabout
Z6.19	Poor/no crossing	Consider installing a Zebra crossing across Station Road, subject to analysis of traffic data
Z6.20	Lack of pedestrian priority across junction mouth	Consider installing a raised table or continuous footway over Hook Road
Z6.21	Inadequate footway width	Note that there are narrow sections of footway along Station Road, with highway width constraints. Investigate the feasibility of cutting into the verge to widen the footway where necessary to at least 2m minimum. Landownership and/or ecological constraints may be present
Z6.22	Lack of rest points	Add seating, shelter and bins at both bus stops near Berry Court. Note that there are width constraints, however, investigate the feasibility of cutting into the verge
Z6.23	Wide junction mouth at side road	Tighten turning radii to shorten pedestrian crossing distance over Osborn Way
Z6.24	Wide junction mouth at side road	Tighten turning radii to shorten pedestrian crossing distance over Rawlings Road
Z6.25	Poor/no crossing	Install a Toucan or Zebra crossing over Station Road, north of the Tesco car park entrance, subject to analysis of traffic data
Z6.26	Lack of rest points	Add seating, shelter and bins at the bus stop south of Raven Road
Z6.27	Wide junction mouth at side road	Tighten turning radii over Bell Meadow Road. Consider installing a continuous footway, subject to analysis of traffic data
Z6.28	Poor/no crossing	Consider installing a Zebra crossing over Station Road. Further traffic counts may be necessary, however, note that traffic calming measures are already in place in some sections, near Bell Meadow Road



Intervention Number	Issue	Recommendation
Z6.29	Poor/no crossing facilities at junction	Investigate the feasibility of redesigning the Station Road and London Road (A30) roundabout to make it more pedestrian friendly. For example, install controlled crossing facilities at roundabout arms, and add resting points and wayfinding signage
Z6.30	Poor/no crossing	Install a parallel crossing over London Road (A30)
Z6.31	Wide junction mouth at side road	Tighten turning radii over Reading Road, and consider installing a continuous footway or raised table
Z6.32	Lack of pedestrian priority across junction mouth	Install a continuous footway over the Shell and Texaco petrol station entrances
Z6.33	Inadequate footway width	There are sections of narrow footway on London Road, particularly near the petrol stations. Explore options to widen the footway, ensuring that it is at least 2m wide. This may involve cutting into the verge or using carriageway space if possible
Z6.34	Wide junction mouth at side road	Tighten turning radii on Rookwood Close and install missing tactile paving
Z6.35	Lack of rest points	Add seating, shelter and bins at the bus stop north of Wagon Lane
Z6.36	Poor/no crossing	Consider installing a Toucan or Zebra crossing over London Road near Geffery's House bus stop, subject to analysis of traffic data



Z7. Odiham core walking zone

Zone description

Odiham is a secondary local service centre and a local retail centre. The Odiham Core Walking Zone (CWZ) focusses on Dunleys Hill/B3349 and High Street and their junction.

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.

This CWZ overlaps with primary cycle route 200. Some pedestrian recommendations are included within the cycle route recommendations.

Existing conditions

Reviewing interventions to improve pedestrian priority and reduce traffic dominance at key locations in the zone will enhance the experience offered to visitors and residents of Odiham.

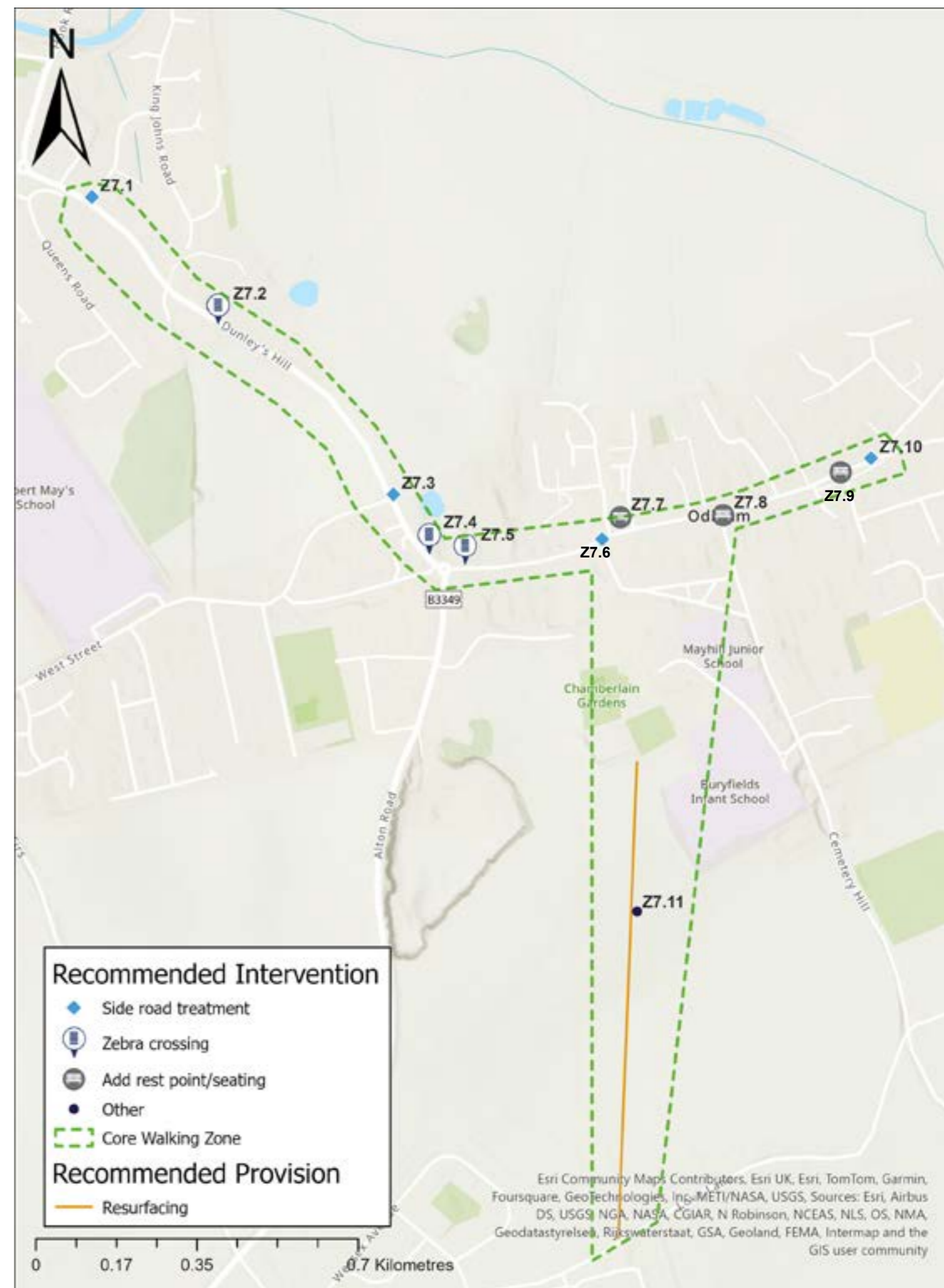
The majority of the zone includes wide footways; the single footway provision on Dunleys Hill is appropriate given it connects two built up areas. Some seating, greenery and cycle parking are present on High Street, however there are opportunities to improve formal crossings and pedestrian priority at side roads.

Barriers to walking

- Wide junction mouths at side roads make it hard for people on foot to cross as it allows high vehicle turning speeds and longer crossing distances.
- Opportunities to add more seating and greenery for resting points
- Lack of safe crossings, e.g. of Dunleys Hill and near mini roundabout



Intervention Number	Issue	Recommendation
Z7.1	Wide junction mouth at side road	Tighten kerb radii at Whitewater Road.
Z7.2	Poor/no crossing	Consider upgrading the current uncontrolled crossing of Dunleys Hill to a Toucan or Zebra crossing, subject to analysis of traffic data.
Z7.3	Wide junction mouth at side road	Tighten kerb radii at Western Lane - consider adding raised table/continuous footway.
Z7.4	Poor/no crossing	Consider upgrading existing uncontrolled crossing north of mini roundabout to Toucan or Zebra crossing, subject to analysis of traffic data.
Z7.5	Poor/no crossing	Consider upgrading existing uncontrolled crossing east of mini roundabout to Toucan or Zebra crossing, subject to analysis of traffic data.
Z7.6	Wide junction mouth at side road	Tighten kerb radii at Church Street. Opportunity to realign footway taking space from the carriageway to align crossing points at junction.
Z7.7	Lack of rest points	Add seating.
Z7.8	Opportunity to improve the public realm	Consider adding seating and planting in area of stone setts either side of King Street / High Street junction
Z7.9	Lack of rest points	Consider adding more seating on the green space near London Road junction
Z7.10	Wide junction mouth at side road	Tighten kerb radii at London Road - consider adding raised table/continuous footway.
Z7.11	Opportunity to upgrade existing walking infrastructure	Investigate the feasibility of upgrading the existing path south west of Buryfields Infant School, which leads to RAF Odiham, by making surfacing, lighting and wayfinding improvements



4.3 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.



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.

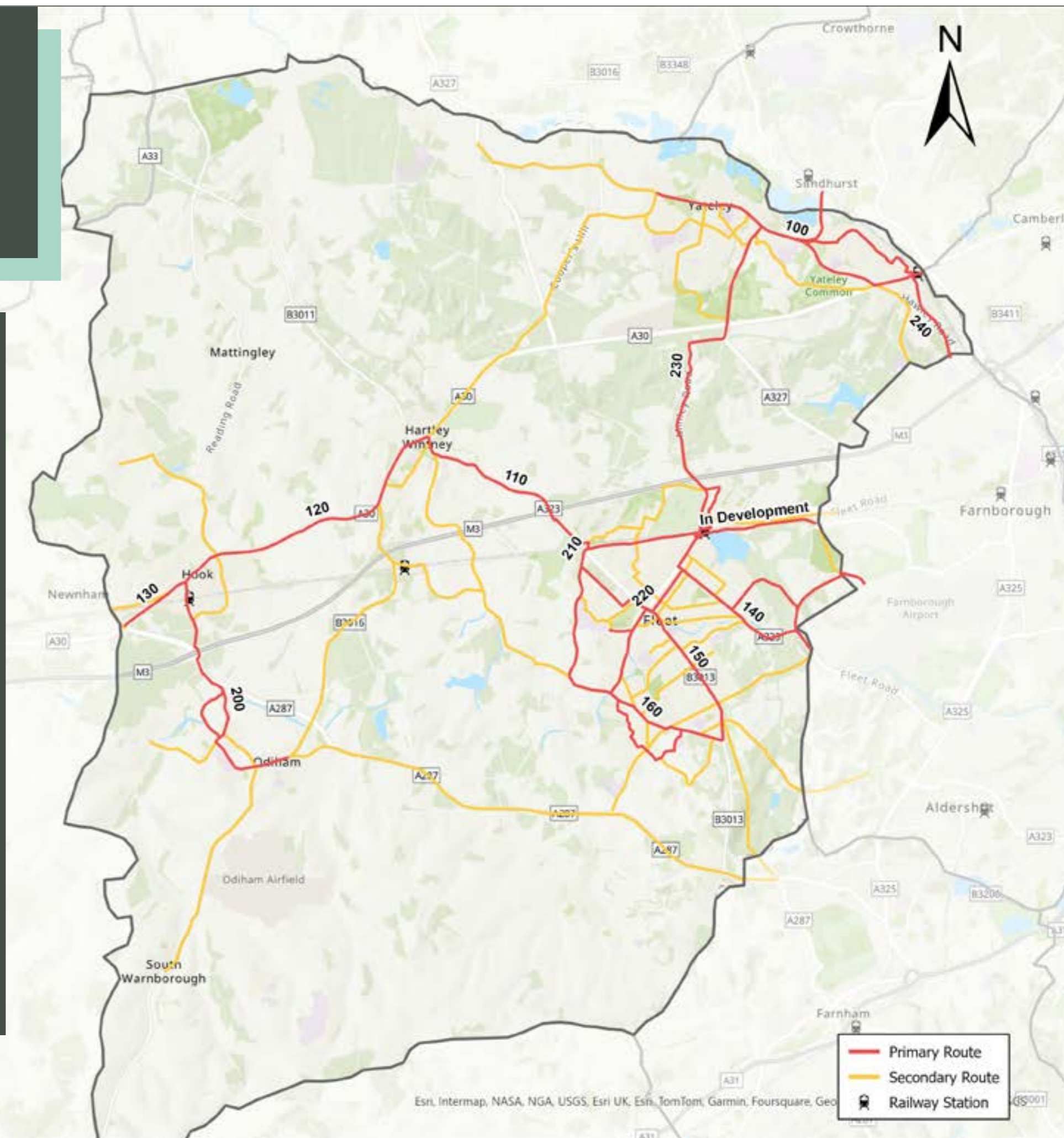
Horizontal routes are numbered beginning from 100 going from north to south. Vertical routes are numbered beginning from 200 from east to west. Route number does not indicate priority.

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 to bring about a step-change in cycling within Hart district.

Implementation of cycle routes may use a variety of techniques. Where traffic volumes and speeds are higher, physically separated cycle tracks will be needed. On quieter streets, mixing cycling with motor traffic will often provide a suitable environment, but traffic speeds and volumes need to be low. Current guidance recommends a maximum speed limit of 20mph for mixed traffic, and this report follows that approach. Where individual streets are noted as requiring a 20mph limit, it may be more appropriate to cover a longer section, or several streets as part of a zone for consistency. This would be addressed in more detail at the feasibility stage of any route.

In some areas tracks shared with pedestrians are suggested; these should be designed to meet the needs of both types of user and not simply footways where cycling is permitted. Local Transport Note 1/20 provides further guidance on this issue.



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 B2372 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.



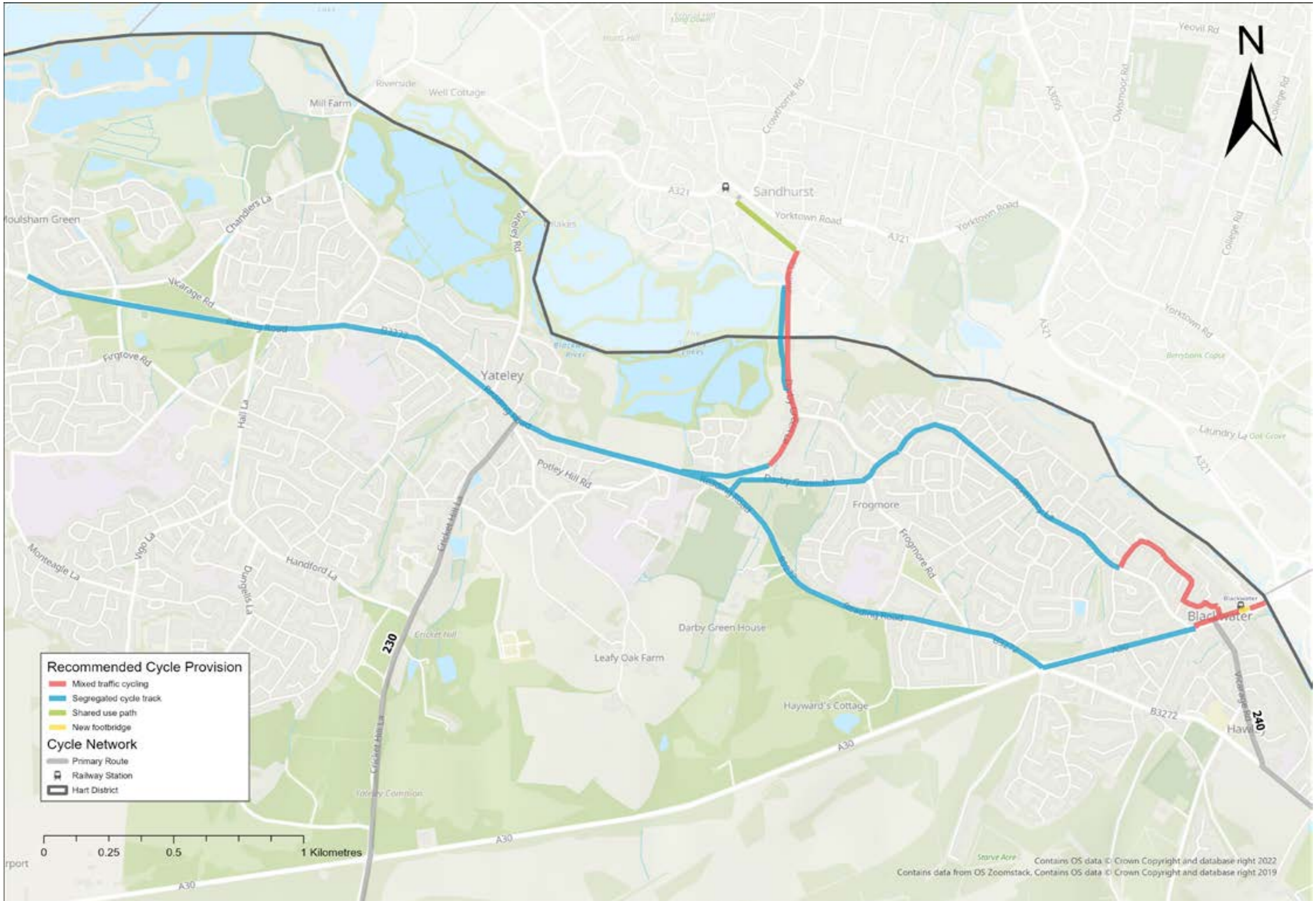
The B3272 east of Cricket Hill Lane



Rosemary Lane



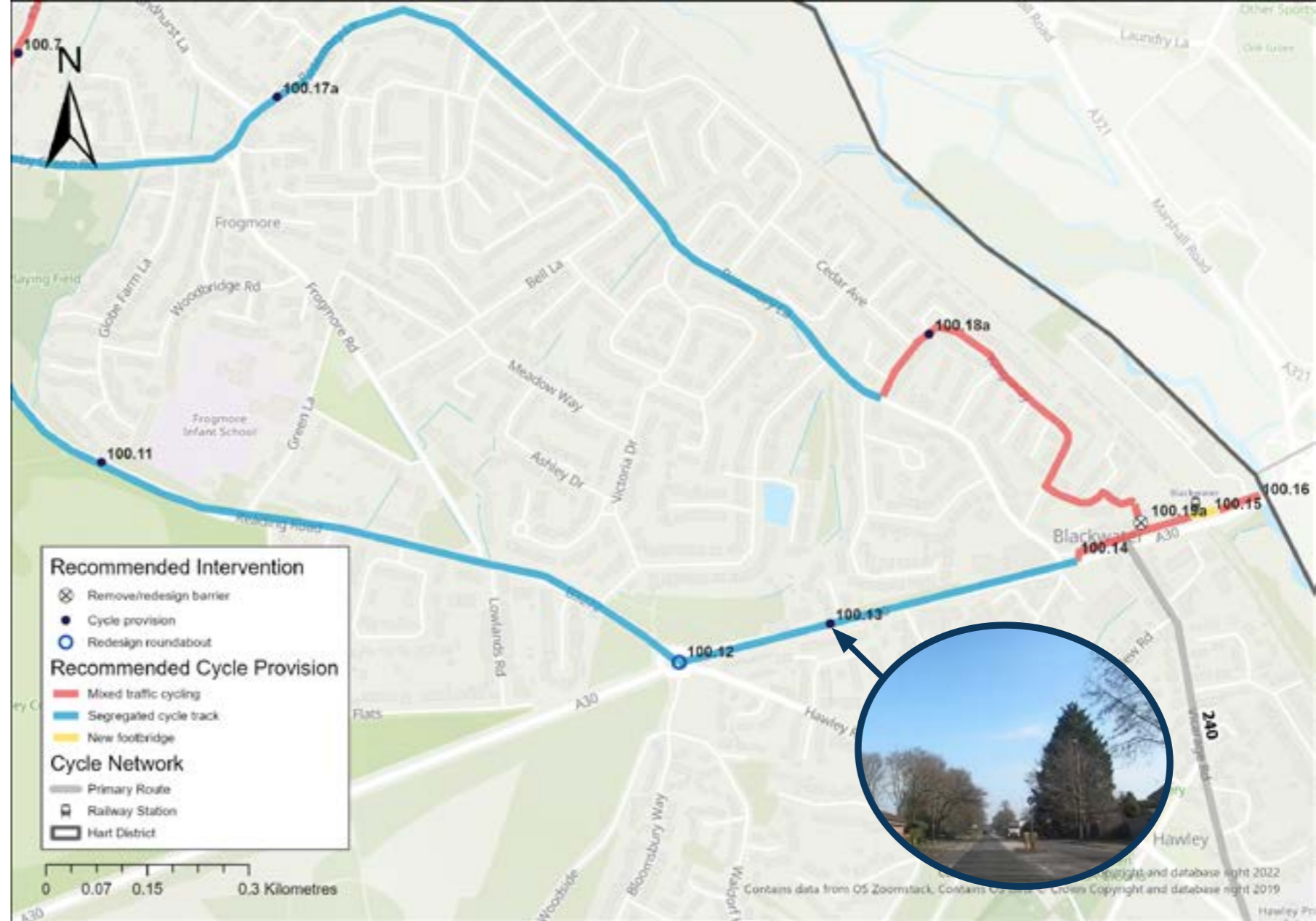
The A30 in Blackwater





Intervention Number	Issue	Recommendation
100.1	Lack of cycling infrastructure	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 priority along the route.
100.2	Poor/no walking and cycling facilities at junction	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	Poor/no walking and cycling facilities at junction	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	Poor/no walking and cycling facilities at junction	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	Poor/no walking and cycling facilities at junction	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	Lack of cycling infrastructure	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	Potential for high vehicle speeds/flows	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	Lack of cycling infrastructure	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	Opportunity to upgrade existing cycling infrastructure	Due to space constraints consider upgrading existing footpath to Sandhurst Station to permit cycling. Ensure that lighting is provided on the path.
100.10	Poor/no walking and cycling facilities at junction	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.

Intervention Number	Issue	Recommendation
100.11	Lack of cycling infrastructure	Investigate feasibility of installing segregated cycle tracks on the B323/Reading Road from Darby Green Road to A30/London Road, subject to land availability.
100.12	Poor/no walking and cycling facilities at junction	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	Lack of cycling infrastructure	Investigate feasibility of installing segregated cycle tracks on the A30/London Road between the B3272 and Rosemary Lane.
100.14	Lack of cycling infrastructure	Create a cyclist and pedestrian priority street on Kings Parade/White Hart Parade from Rosemary Lane to Blackwater Station.
100.15	Lack of cycling infrastructure	Long term: New shared use bridge over railway line with accessible ramps is required.
100.16	Potential for high vehicle speeds/ flows	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	Lack of cycling infrastructure	Investigate feasibility of installing two-way segregated cycle track on Darby Green Road/ Rosemary Lane from the B3272 to Kingsway.
100.18a	Potential for high vehicle speeds/ flows	Use low traffic Kingsway to connect to rear of Blackwater parade of shops.
100.19a	Barrier restricts legitimate access	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 8,000¹ 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.

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



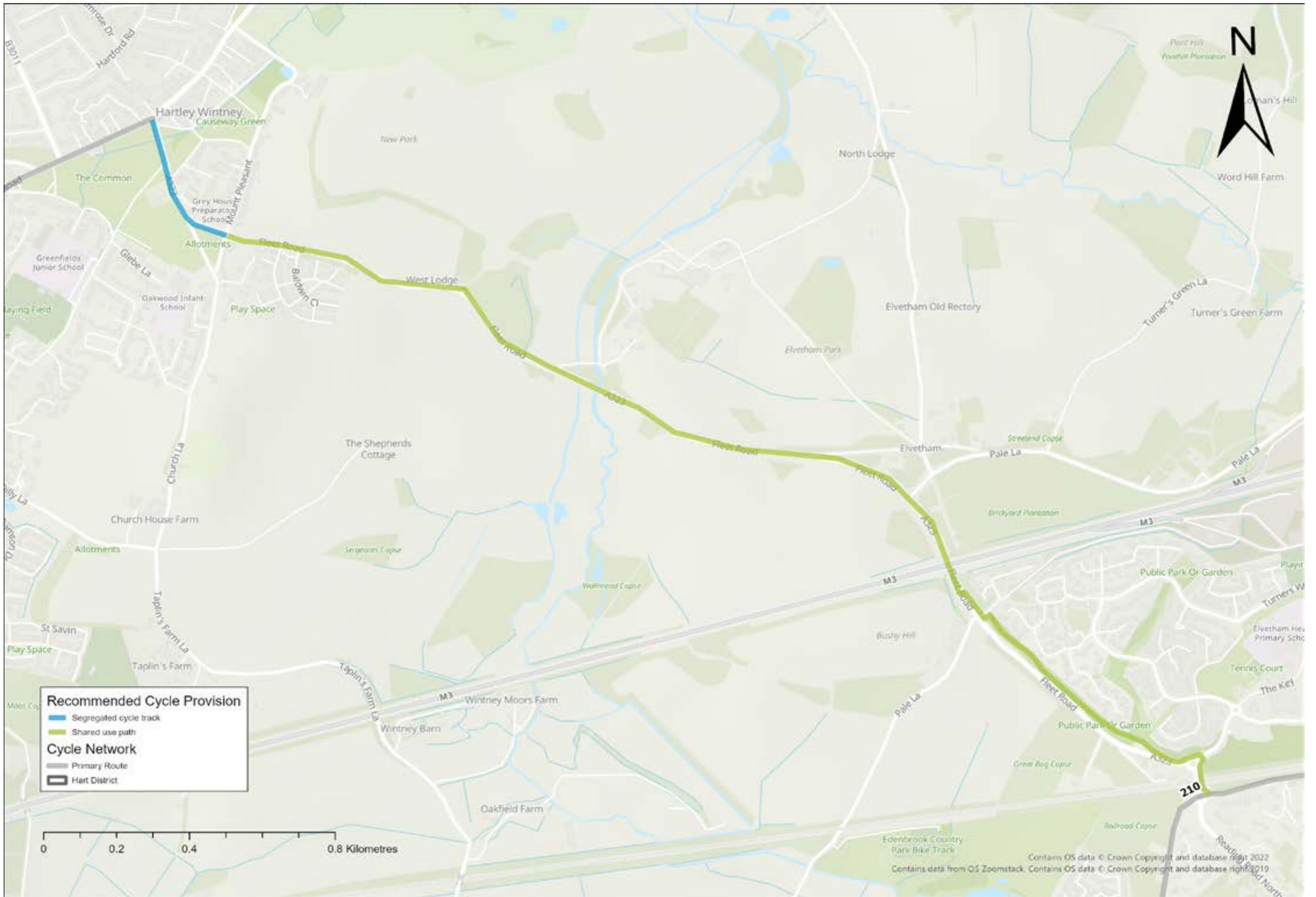
Hitches Lane / Fleet Road roundabout



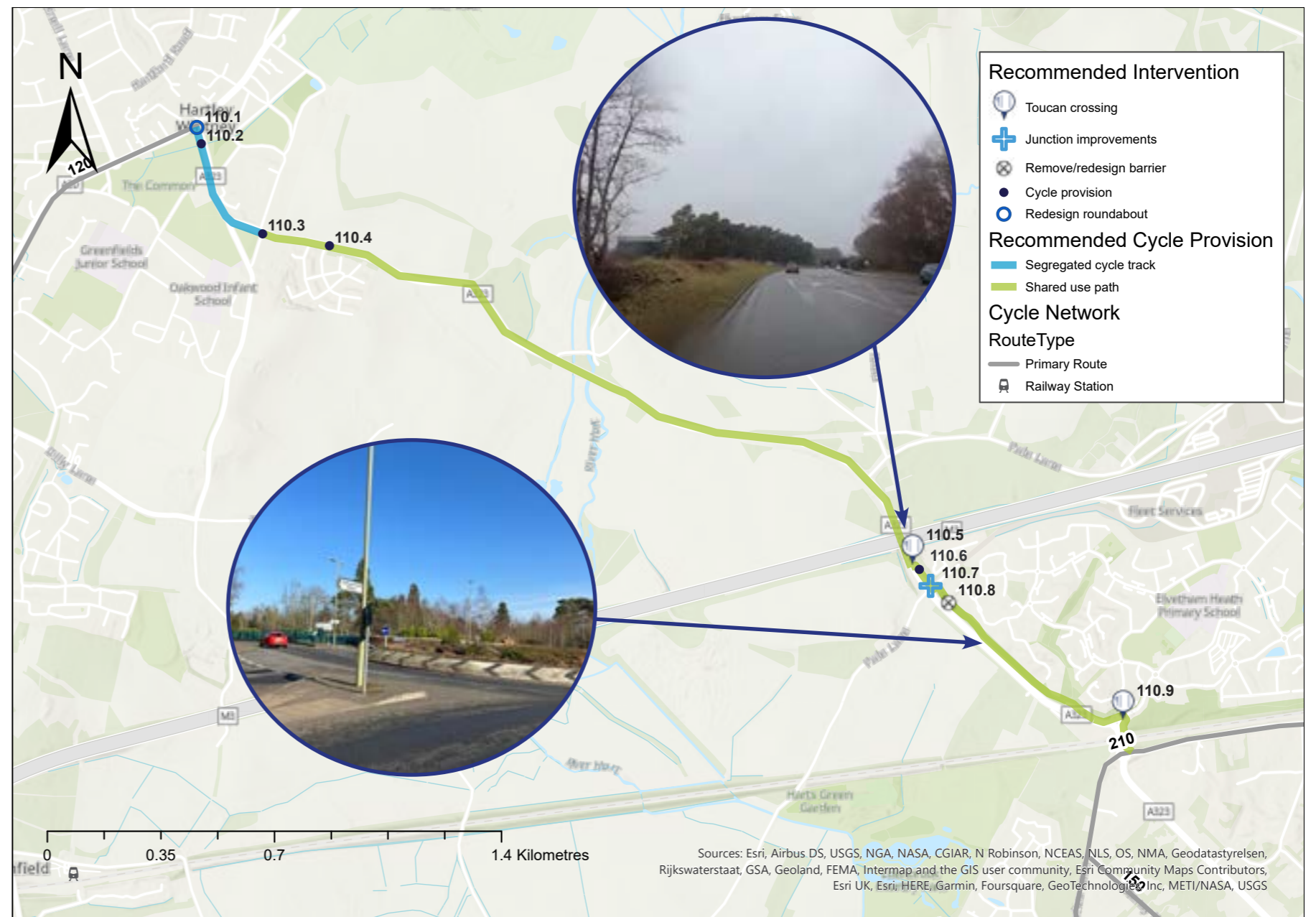
Verge along Fleet Road



Fleet Road / Elvetham Heath way roundabout



Intervention Number	Issue	Recommendation
110.1	Poor/no walking and cycling facilities at junction	Redesign A30/A323 roundabout. Also, investigate feasibility of installing a Toucan crossing on west side of roundabout.
110.2	Lack of cycling infrastructure	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	Lack of cycling infrastructure	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	Potential for high vehicle speeds/flows	Increase 30 mph zone to include Baldwin Close
110.5	Poor/no cycle crossing	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	Opportunity to upgrade existing cycling infrastructure	Shared use path needs to be 3m in width with lighting provision, from Pale Lane to the Elvetham Road / Hitches Lane roundabout.
110.7	Poor/no walking and cycling facilities at junction	Consider redesign junction to allow cyclist to join Pale Lane safely.
110.8	Barrier restricts legitimate access	Modify barrier on shared use path near Pale Lane to allow for cycle access.
110.9	Poor/no cycle crossing	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 11,500¹
- 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 of 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 Cemetary, and by re-allocating some frontage .

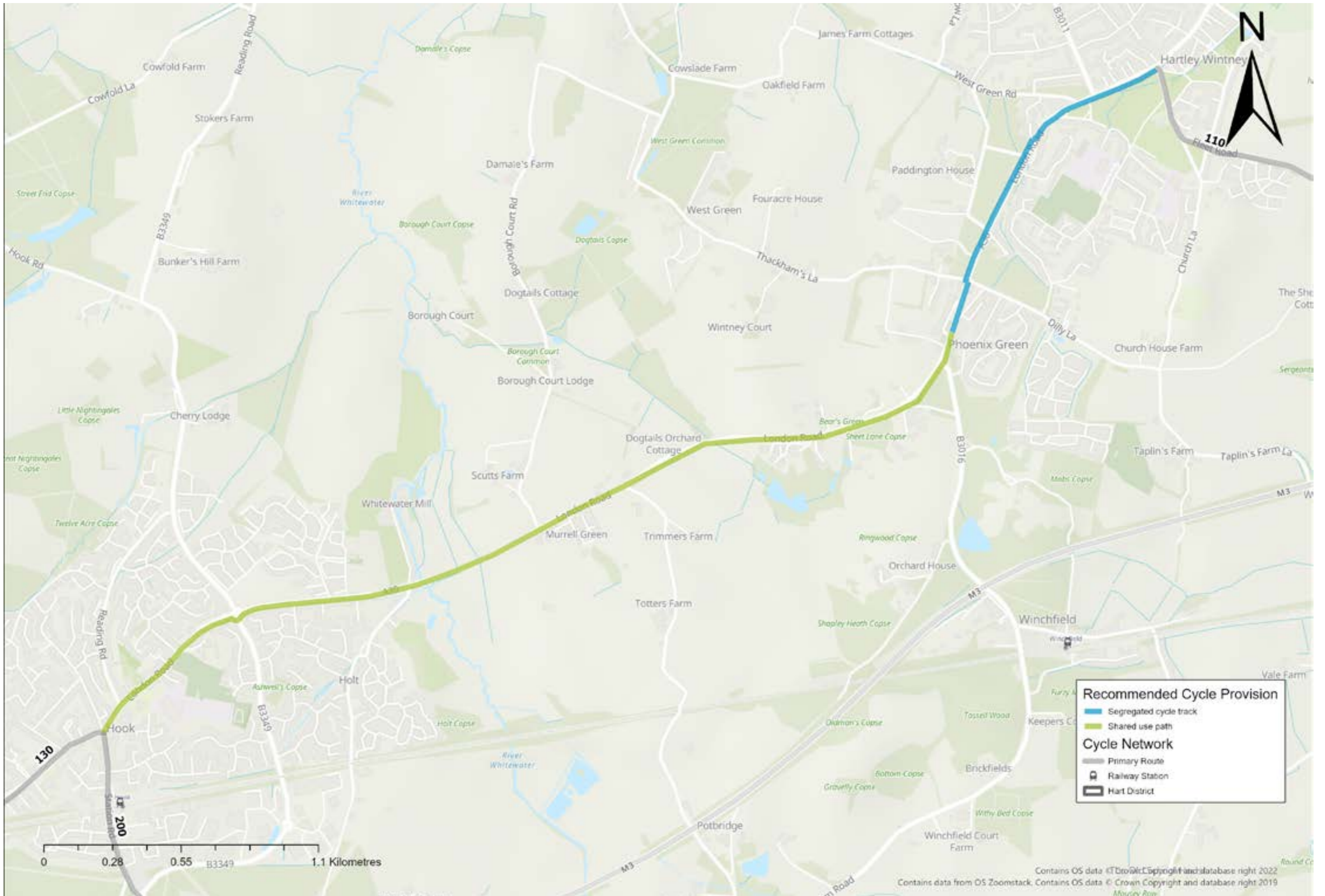


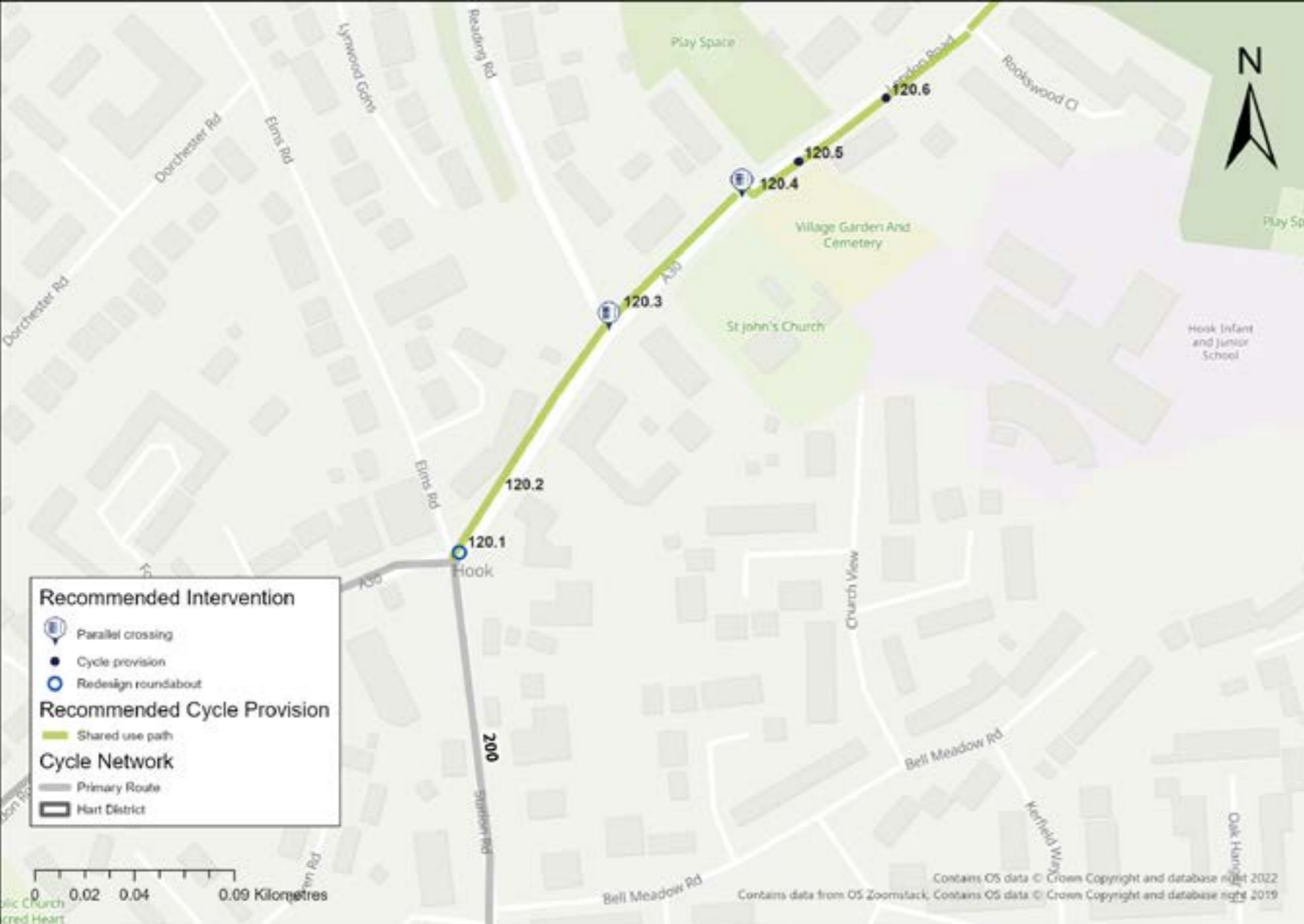
London Road / Dilly Lane junction



Fleet Road / London Road roundabout

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



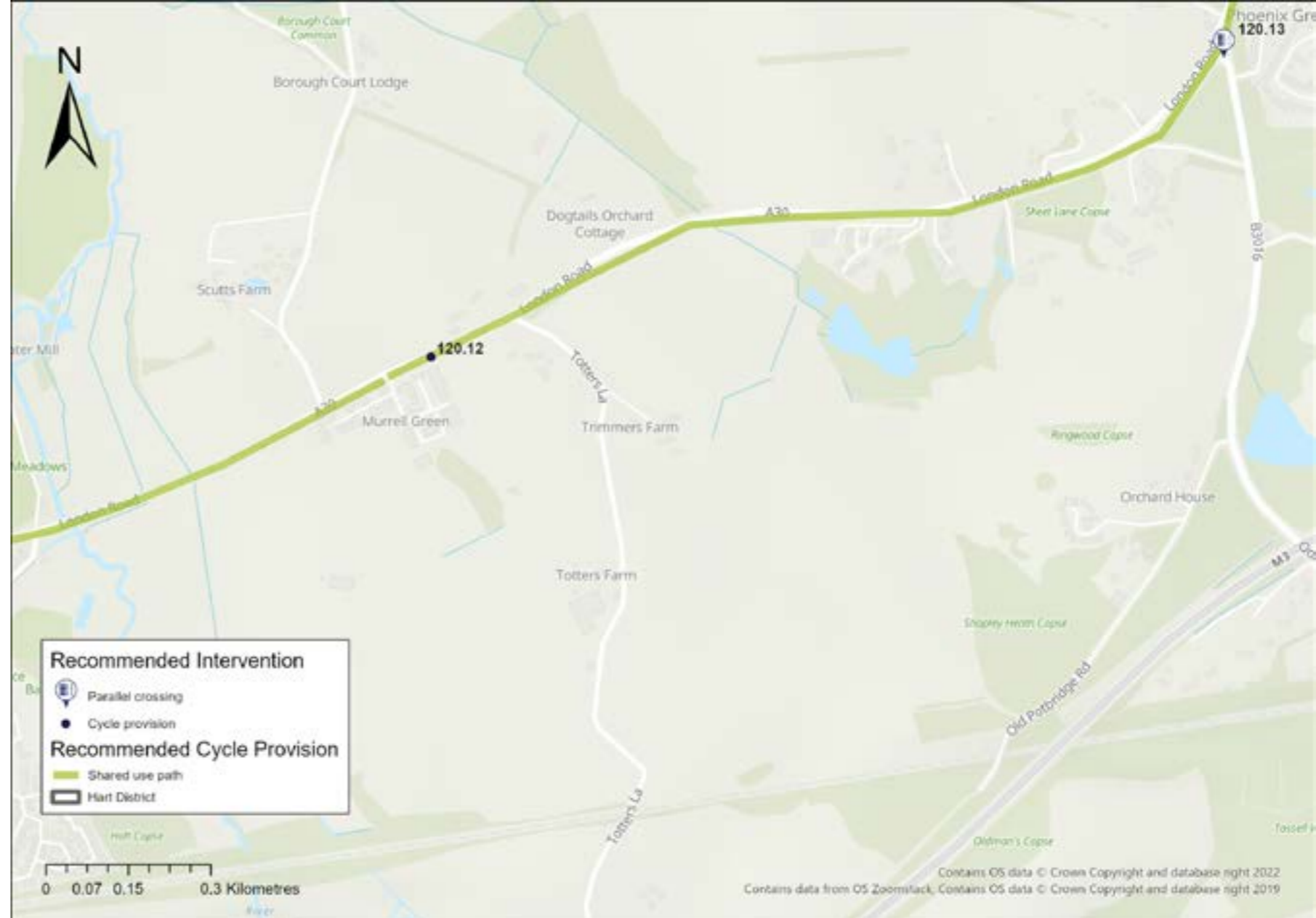


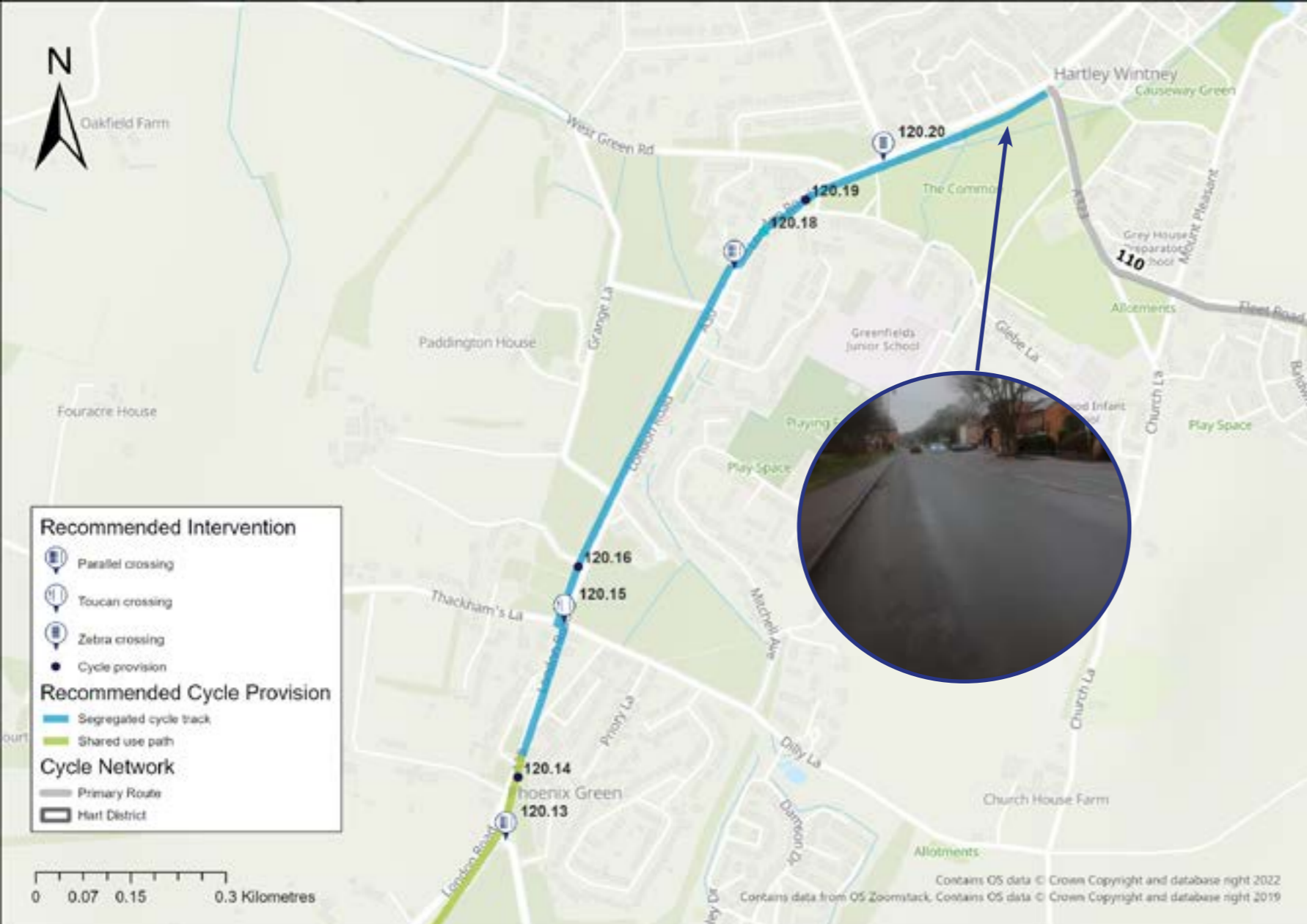
Intervention Number	Issue	Recommendation
120.1	Poor/no walking and cycling facilities at junction	Install parallel crossings on Elms Road arm and London Road arm, at A30 roundabout.
120.2	Lack of cycling infrastructure	Footway on A30/London Road could be upgraded to shared use path with the reallocation of some frontage and the removal of the bus layby.
120.3	Poor/no cycle crossing	A parallel crossing could be installed across Reading Road.
120.4	Poor/no cycle crossing	The existing pedestrian crossing could be upgraded to a parallel crossing over the A30/London Road.
120.5	Lack of cycling infrastructure	Investigate feasibility of providing a shared use path alongside Hook Village Garden and Cemetery.
120.6	Lack of cycling infrastructure	Footway on A30 to be upgraded to shared use, but will remain narrow in places due to physical constraints.

Intervention Number	Issue	Recommendation
120.7	Opportunity to upgrade existing cycling infrastructure	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	Barrier restricts legitimate access	Remove barrier on existing path.
120.9	Poor/no walking and cycling facilities at junction	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	Poor/no cycle crossing	Consider upgrading existing uncontrolled crossing at Papermill Avenue to a parallel crossing.
120.11	Poor/no cycle crossing	Refuge on existing uncontrolled crossing should be made larger to accommodate shared use.



Intervention Number	Issue	Recommendation
120.12	Lack of cycling infrastructure	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	Poor/no cycle crossing	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	Issue	Recommendation
120.14	Lack of cycling infrastructure	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	Poor/no walking and cycling facilities at junction	Consider installing Toucan crossings at southern and western arms of Thackhams Lane/London Road junction.
120.16	Lack of cycling infrastructure	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. An alternative option could be to upgrade the existing woodland footpath running parallel to the north west of the A30.
120.17	Poor/no cycle crossing	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	Lack of cycling infrastructure	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	Lack of cycling infrastructure	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	Poor/no walking and cycling facilities at junction	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.



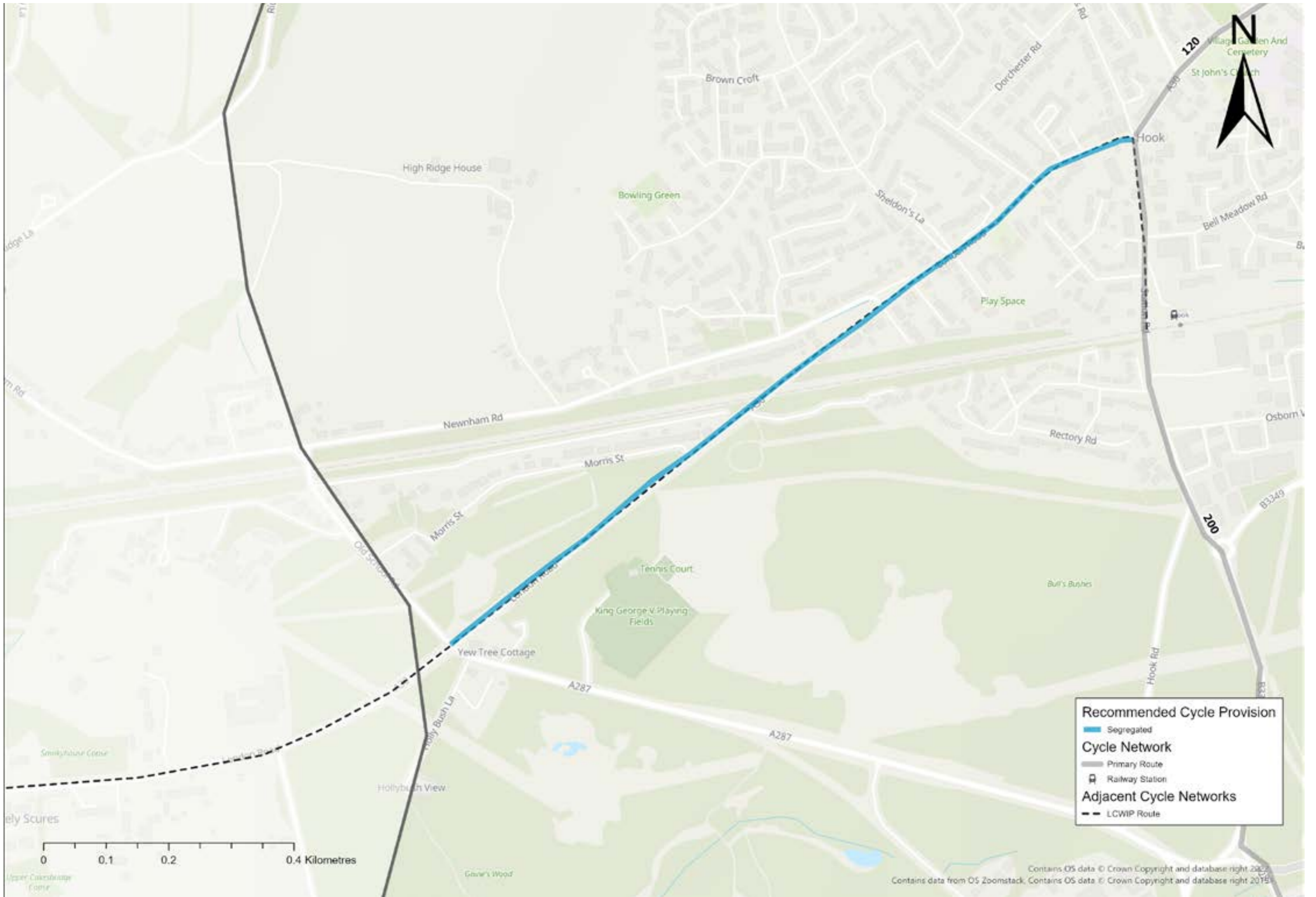
A30/ London Road in Hook



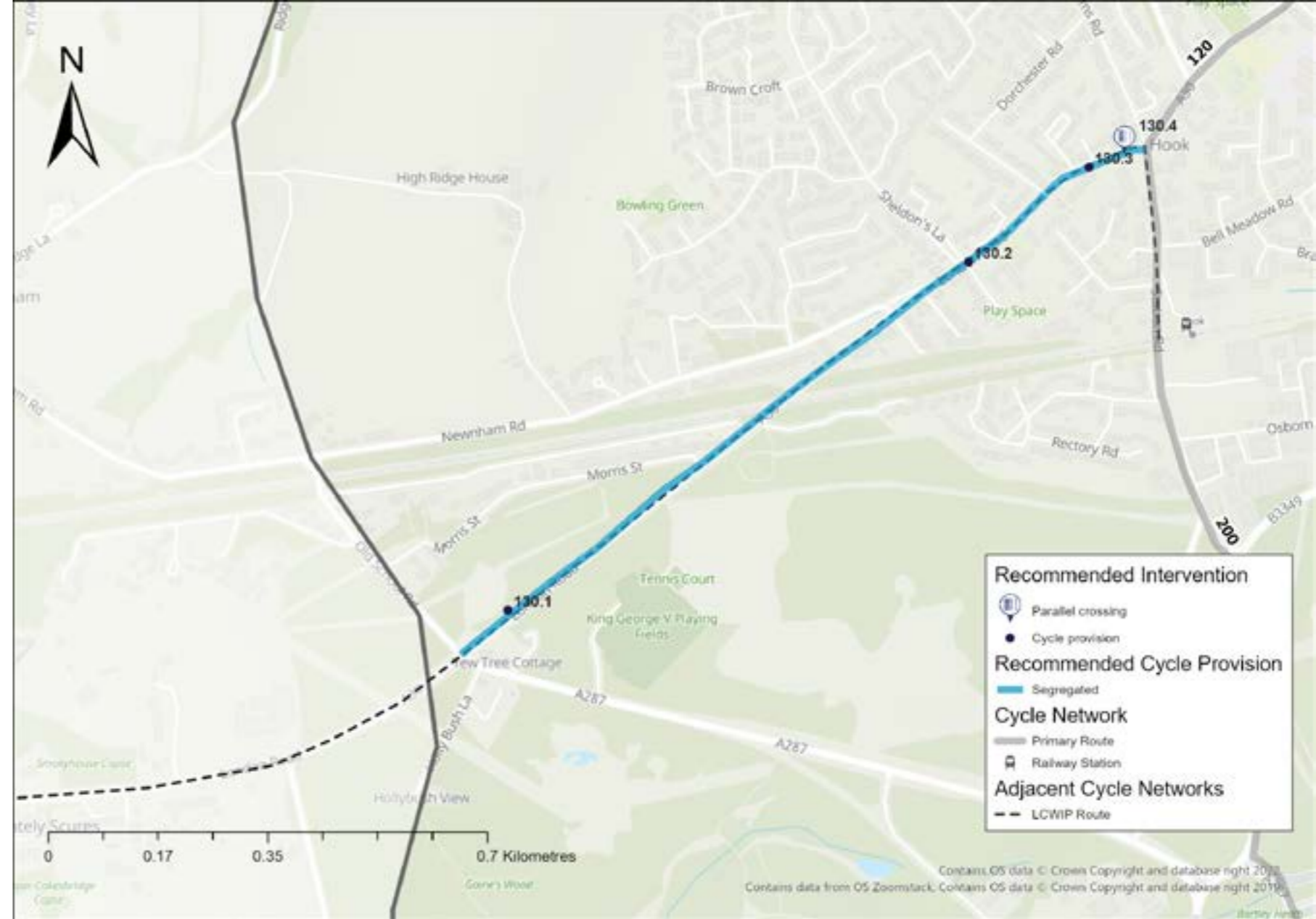
Fleet Road / London Road at Sheldon's Lane



A30/London Road near The Hogget bus stop



Intervention Number	Issue	Recommendation
130.1	Lack of cycling infrastructure	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	Lack of cycling infrastructure	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	Lack of cycling infrastructure	Consider removing bus layby to allow for space to be allocated for a segregated cycle facility.
130.4	Poor/no walking and cycling facilities at junction	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 15,000¹ 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.

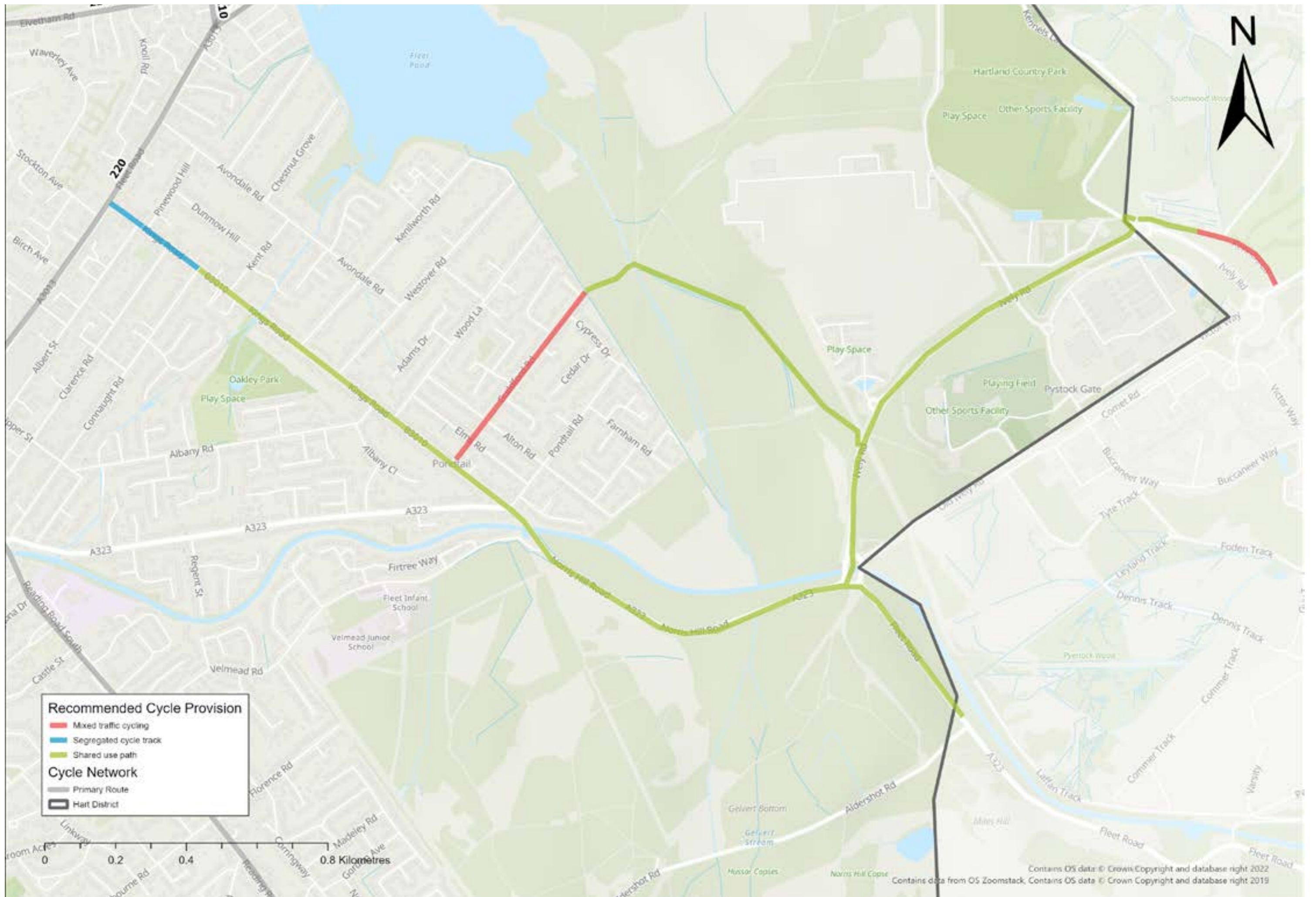
¹ Department for Transport (2019) Road Traffic Statistics. <https://roadtraffic.dft.gov.uk/manualcountpoints/945237>



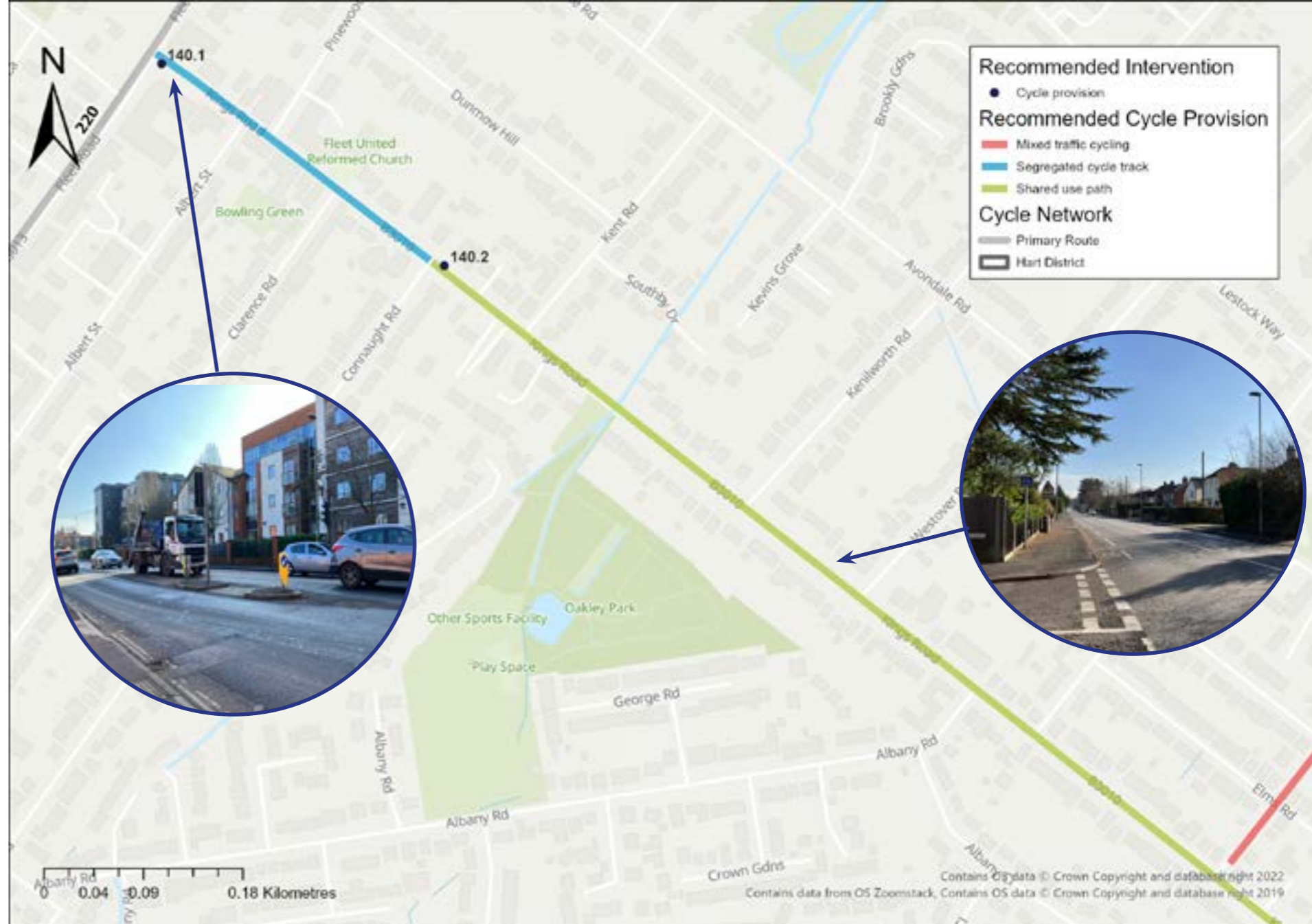
Narrow existing cycling facilities along Kings Road



Extra carriageway space at the Aldershot Road / Kings Road junction



Intervention Number	Issue	Recommendation
140.1	Lack of cycling infrastructure	Investigate the feasibility of installing a segregated two-way cycle track from Fleet Road to Connaught Road.
140.2	Lack of cycling infrastructure	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	Issue	Recommendation
140.3	Poor/no cycle crossing	Investigate feasibility of installing a Toucan crossing over Pondtail Road.
140.4	Lack of cycling infrastructure	Investigate the feasibility of creating a 3m shared use path on the north side of Norris Hill Road from Aldershot Road to Ively Road.
140.5	Opportunity to upgrade existing cycling infrastructure	Existing shared use path on Ively Road. Investigate the possibility of widening to a minimum of 3m where possible.
140.6	Lack of cycle priority at side road	Install cyclist priority crossing across Pyestock Way.
140.7	Poor/no cycle crossing	Consider upgrading existing uncontrolled crossing to parallel crossing at Kennels Lane.
140.8	Inadequate maintenance	Maintain existing shared use path on Old Kennels Lane.
140.9	Potential for high vehicle speeds/flows	Create pedestrian and cyclist priority street on Old Kennels Lane by adding signage and ensuring a 20 mph speed limit.
140.10a	Alternative route option	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 on Norris Hill Road.
140.11a	Opportunity to upgrade existing cycling infrastructure	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

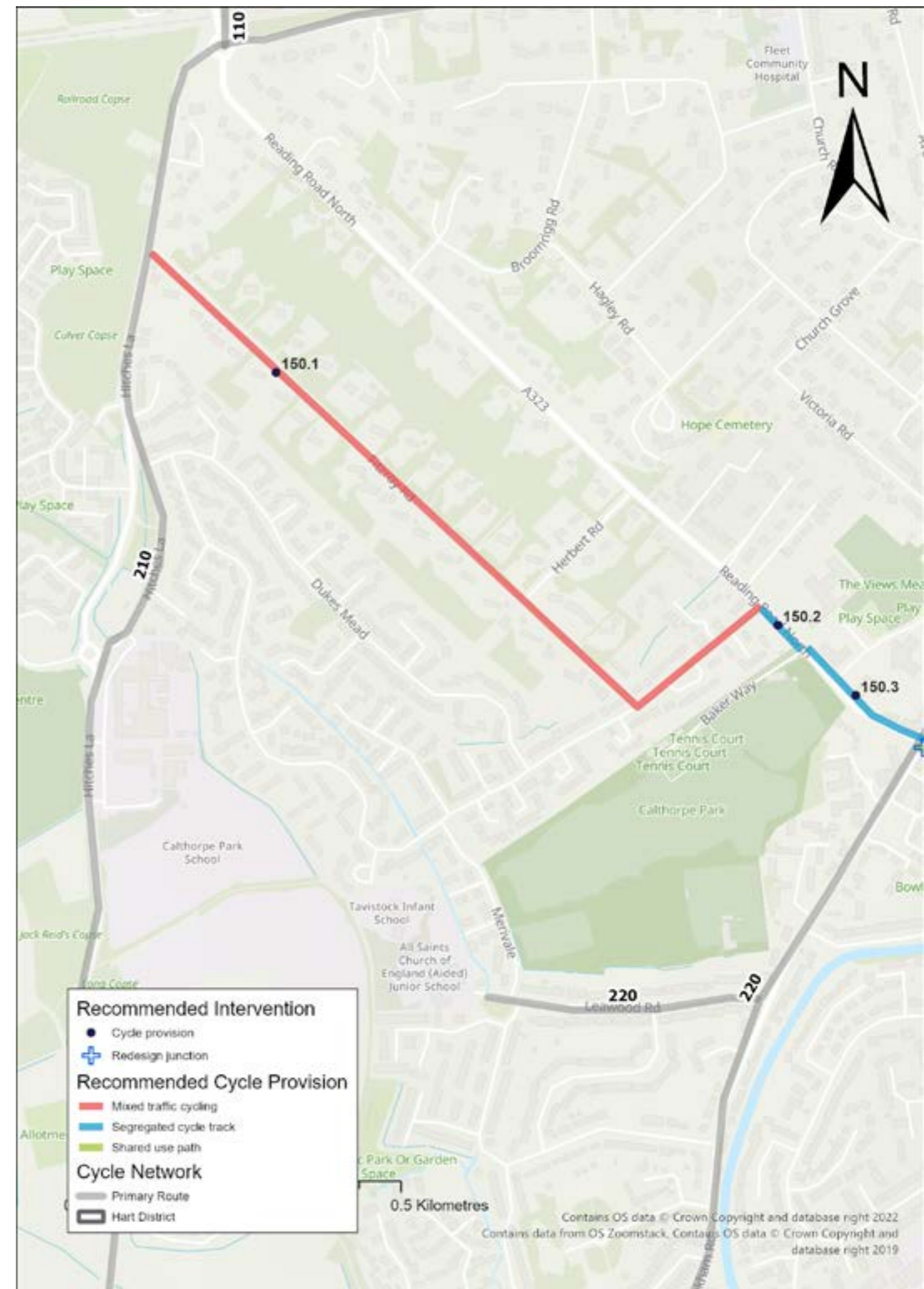
Potential options

- 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





Intervention Number	Issue	Recommendation
150.1	Potential for high vehicle speeds/flows	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	Lack of cycling infrastructure	Widen footway on western side of Reading Road North to create a segregated cycle facility and 2m wide footway. Connect to existing Toucan crossing on Reading Road North.
150.3	Lack of cycling infrastructure	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	Issue	Recommendation
150.4	Poor/no walking and cycling facilities at junction	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	Lack of cycling infrastructure	Explore providing shared use path facilities on Reading Road South between Fleet Road and Aldershot Road, subject to pedestrian and cycle usage.
150.6	Poor/no walking and cycling facilities at junction	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	Lack of resting points; Poor quality public realm	Investigate feasibility of reallocating excess carriageway space and guardrailling to add seating and greenery to improve attractiveness and potentially reduce vehicle speeds through junction.
150.8	Lack of cycle priority at side road	Consider redesign existing uncontrolled crossing to a parallel crossing at Courtmoor Ave and Haywood Dr.
150.9	Lack of cycle priority at side road	Consider redesign existing uncontrolled crossing to a parallel crossing (or side road treatment depending on traffic counts) at Velmead Road.
150.10	Lack of cycle priority at side road	Consider redesign existing uncontrolled crossing to a parallel crossing (or side road treatment depending on traffic counts) at Basingbourne and Florence Roads.



Intervention Number	Issue	Recommendation
150.11	Poor/no walking and cycling facilities at junction	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	Lack of cycling infrastructure	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	Poor/no walking and cycling facilities at junction	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	Poor/no walking and cycling facilities at junction	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 day¹. 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.

¹ 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 day².
- 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

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



Existing conditions on Sandy Lane, with a shared use path



Poor crossing point at The Street / Crookham Road junction



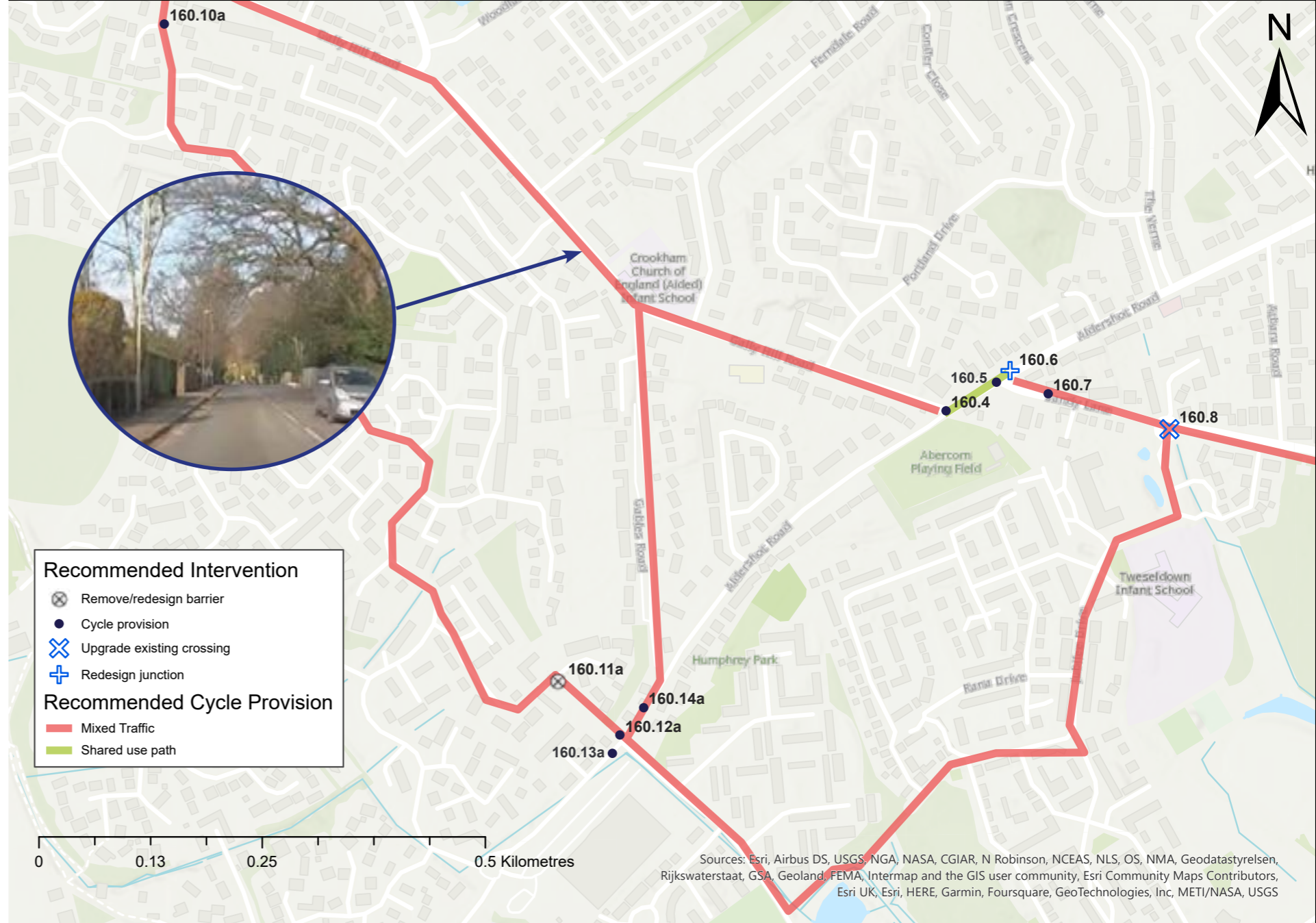
Lack of controlled crossings on Gally Hill Road / Brandon Road roundabout



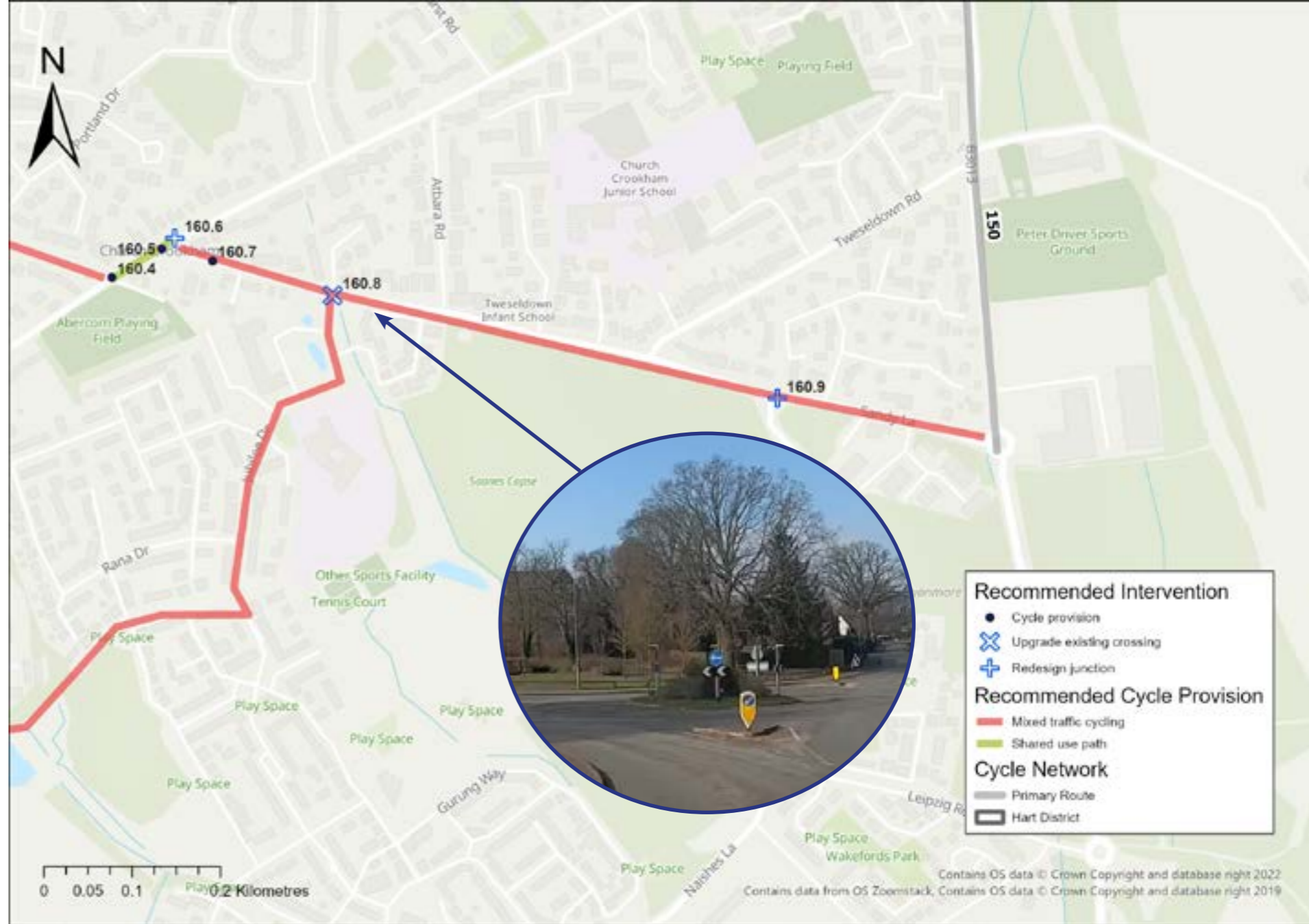
Intervention Number	Issue	Recommendation
160.1	Potential for high vehicle speeds/flows	If traffic volumes are low, mixed traffic cycling provision may be suitable from the Pilcot Road/Hitches Lane junction, to the Crookham Road/The Street junction. Reduce speed limit to 20mph and introduce physical traffic calming measures as required.
160.2	Poor/no walking and cycling facilities at junction	Investigate the feasibility of installing signalised crossing facilities at The Street / Crookham Road junction, including pedestrian crossing facilities on the southern arm.
160.3	Lack of cycling infrastructure; Potential for high vehicle speeds/flows	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	Issue	Recommendation
160.4	Lack of cycling infrastructure	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	Lack of wayfinding	Add wayfinding signage to show route continuation down Sandy Lane.
160.6	Poor/no walking and cycling facilities at junction	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	Lack of cycling infrastructure; Potential for high vehicle speeds/flows	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	Poor/no walking and cycling facilities at junction	Install parallel crossings at the Sandy Lane / Jubilee Drive roundabout on the western, southern and eastern arms
160.10a	Alternative route option	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	Barrier restricts legitimate access	Consider removing or redesigning barriers if access width is less than 1.5m.
160.12a	Poor/no cycle crossing	Investigate feasibility of installing controlled crossing facilities at Aldershot Road/Ewshot Lane junction. May be challenging due to land constraints.
160.13a	Lack of wayfinding	Install wayfinding signs at Aldershot Road/ Ewshot Lane junction to show continuation of route
160.14a	Potential for high vehicle speeds/flows	Gables Road identified as a 'link' route where mixed traffic conditions are appropriate.



Intervention Number	Issue	Recommendation
160.9	Poor/no walking and cycling facilities at junction	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.

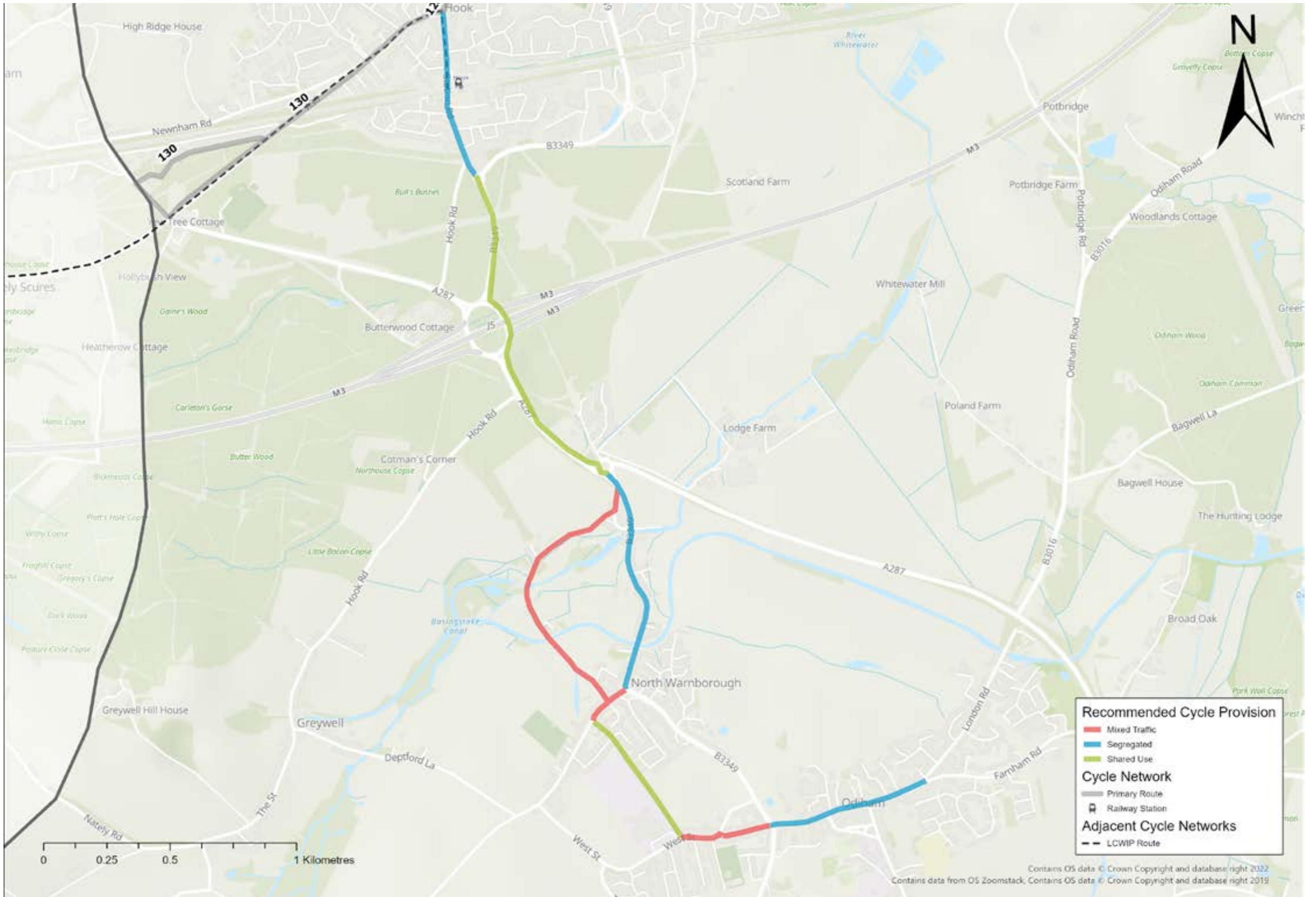
Barriers to walking and cycling

- 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

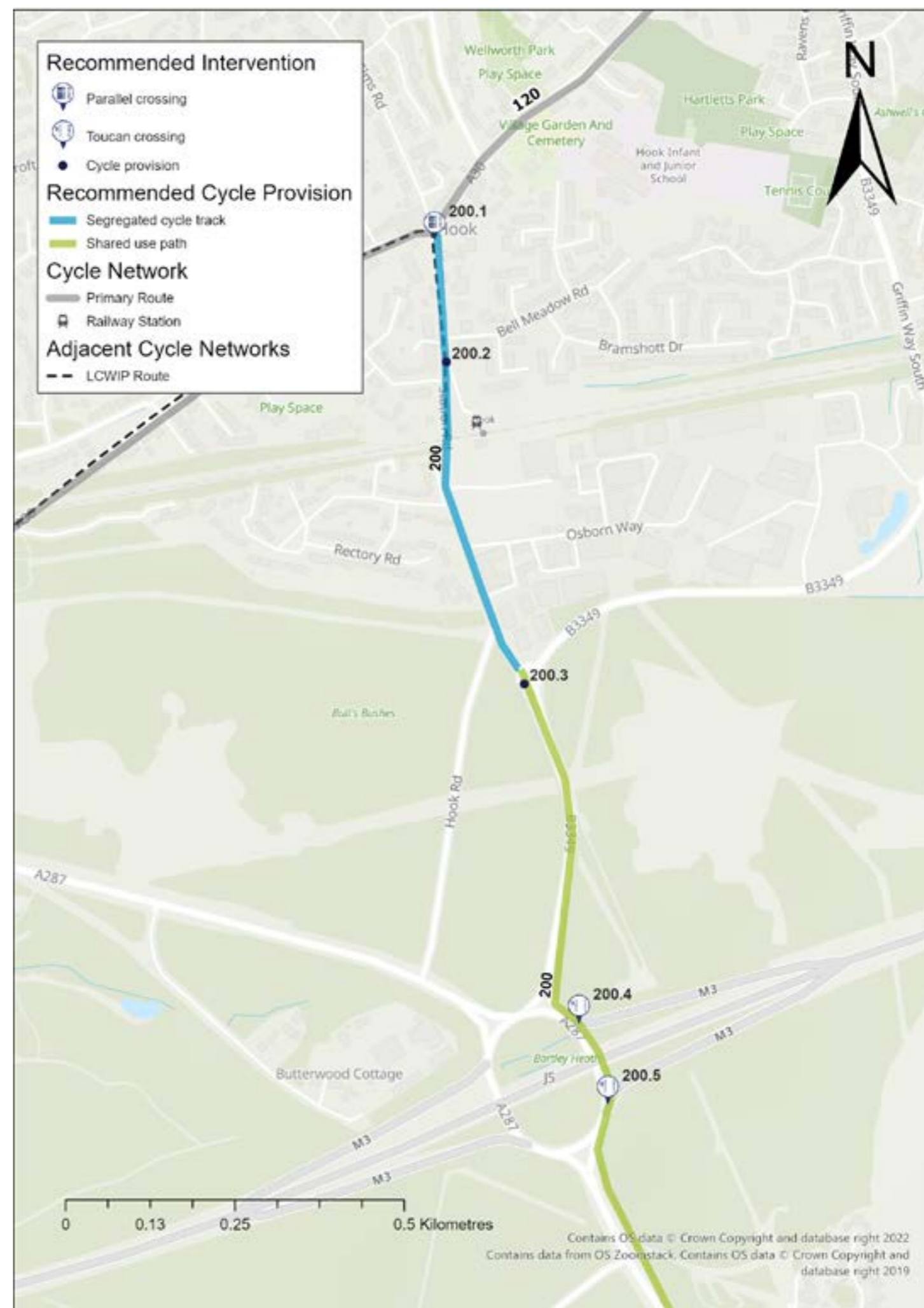
Potential options

- 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

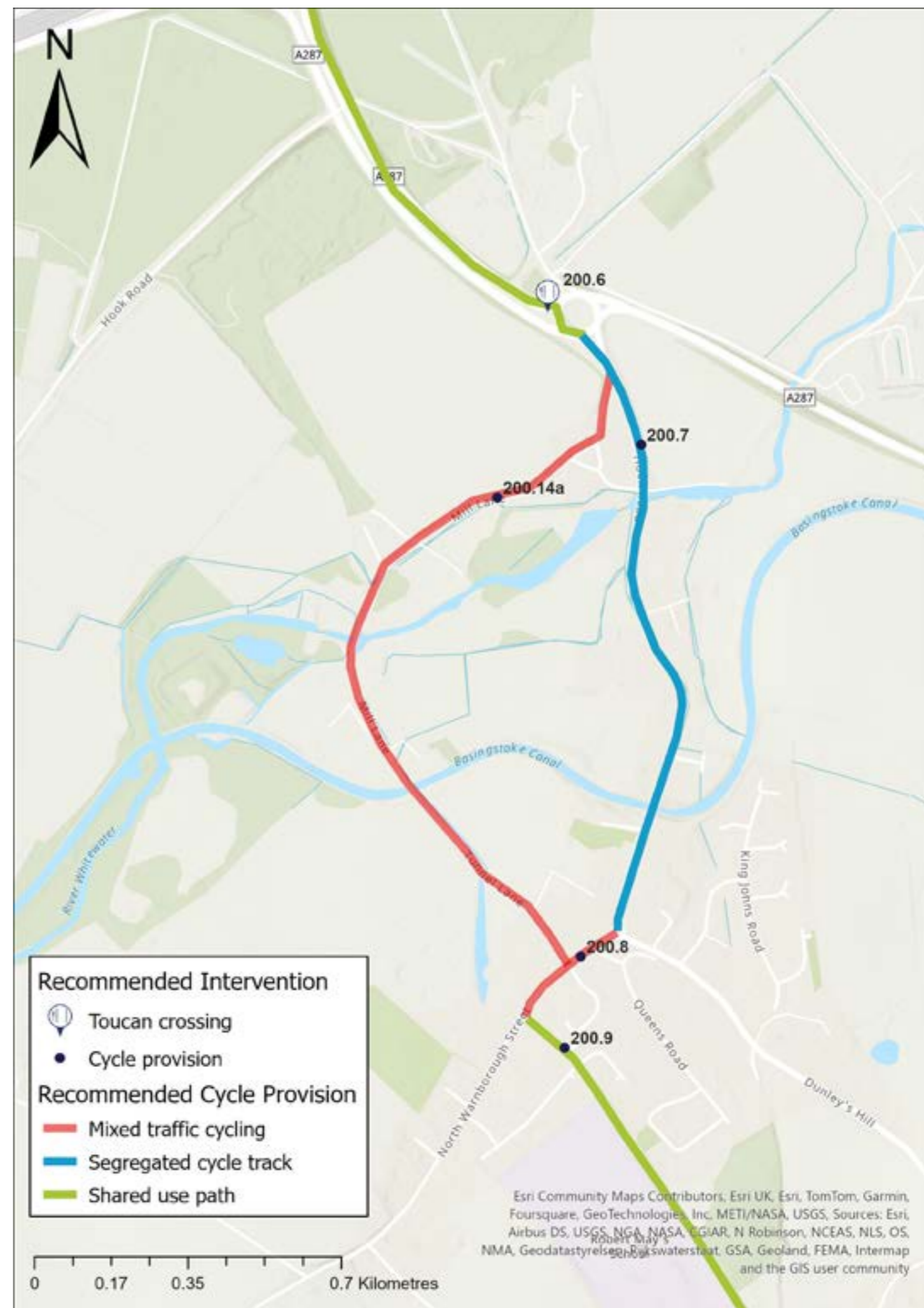




Intervention Number	Issue	Recommendation
200.1	Poor/no walking and cycling facilities at junction	Install parallel crossing on Station Road roundabout, south arm.
200.2	Lack of cycling infrastructure	Investigate feasibility of installing a segregated two way cycle track on Station Road from the A30 to B3349. If not possible investigate potential to add modal filter to reduce traffic flows on Station Road.
200.3	Lack of cycling infrastructure	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	Poor/no cycle crossing	Install Toucan crossing at north side of Hook Interchange.
200.5	Poor/no cycle crossing	Install Toucan crossing at south side of Hook Interchange.



Intervention Number	Issue	Recommendation
200.6	Poor/no cycle crossing	Add Toucan (or potentially grade separated) crossing to transition to southern side of A287 roundabout.
200.7	Lack of cycling infrastructure	Investigate feasibility of implementing a segregated cycle facility, if not feasible, consider alternative routing option (see 200.13a).
200.8	Potential for high vehicle speeds/flows	Mixed traffic cycling provision suitable on North Warnborough Street from the B3349 roundabout to existing shared use path. Ensure 20mph speed limit.
200.9	Opportunity to upgrade existing cycling infrastructure	Investigate feasibility of lighting as well as improving wayfinding and drainage on this path.
200.14a	Alternative route option	Option to use narrow country lane with very low traffic volumes. Visibility improvements would be required, and the route is less overlooked.



Intervention Number	Issue	Recommendation
200.10	Potential for high vehicle speeds/ flows	If traffic volumes are sufficiently low, mixed traffic cycling provision would be suitable on West Street from Robert May's School to the B3349/Dunleys Hill, with traffic calming measures as required. If not, utilise the wide verges to provide an off-carriageway cycle track.
200.11	Barrier restricts legitimate access	Ensure there is a 1.5m gap between existing bollards at the end of West Street.
200.12	Poor / no cycle crossing	Upgrade current uncontrolled crossing on Dunleys Hill, north of West Street, and bring closer to the junction.
200.13	Lack of cycling infrastructure	Investigate feasibility of installing segregated cycle facility. Due to width constraints, this will be challenging and may require realignment of existing on carriageway parking.



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 day¹.

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 Road²

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

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

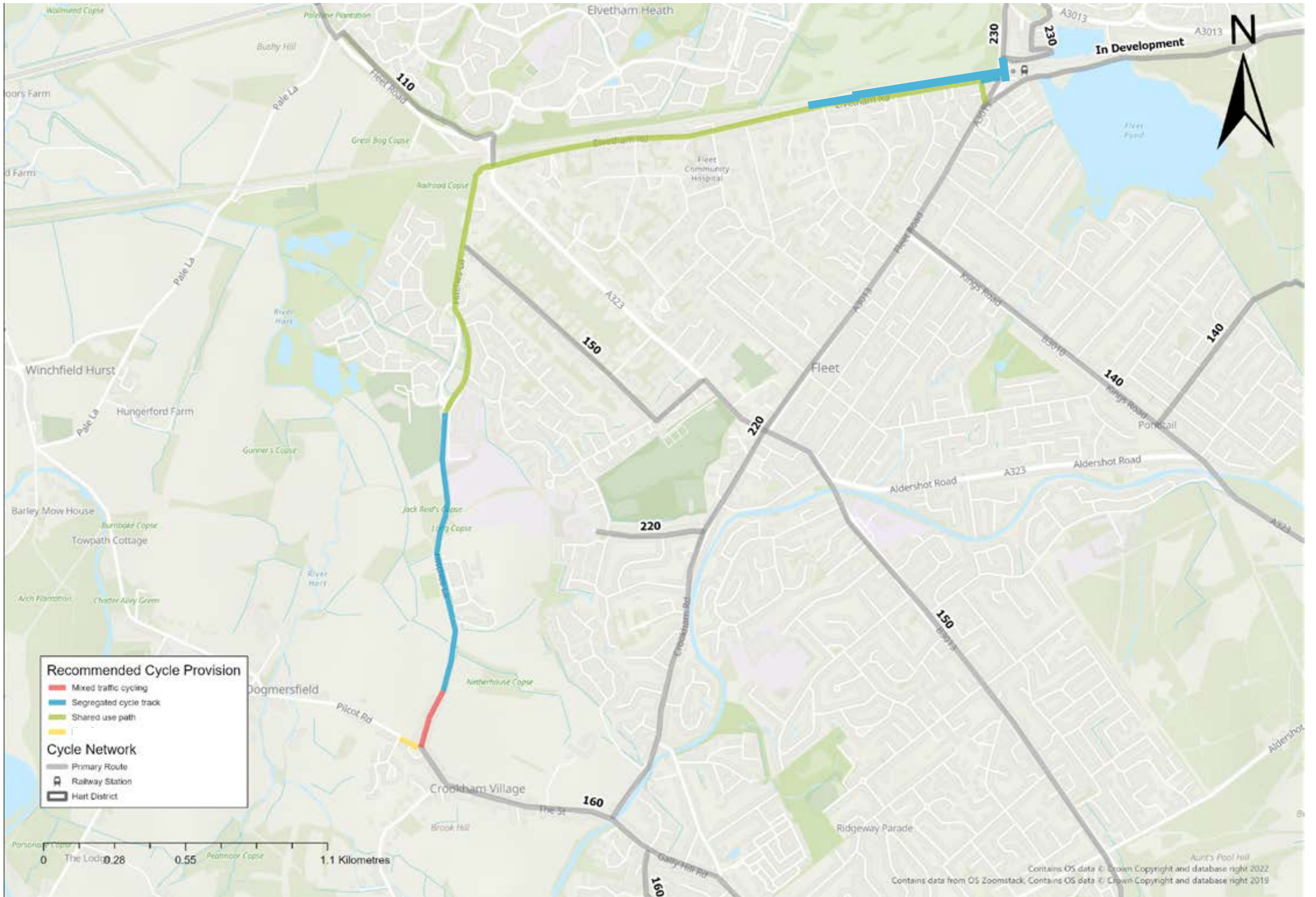
- Records showing average traffic flows reaching over 7,900 vehicles per day on Hitches Lane
- Lack of controlled crossing points throughout the route, particularly at the Elvetham Road / Hitches Lane roundabout
- Barriers to walking and cycling on the bridge near Elvetham Road.

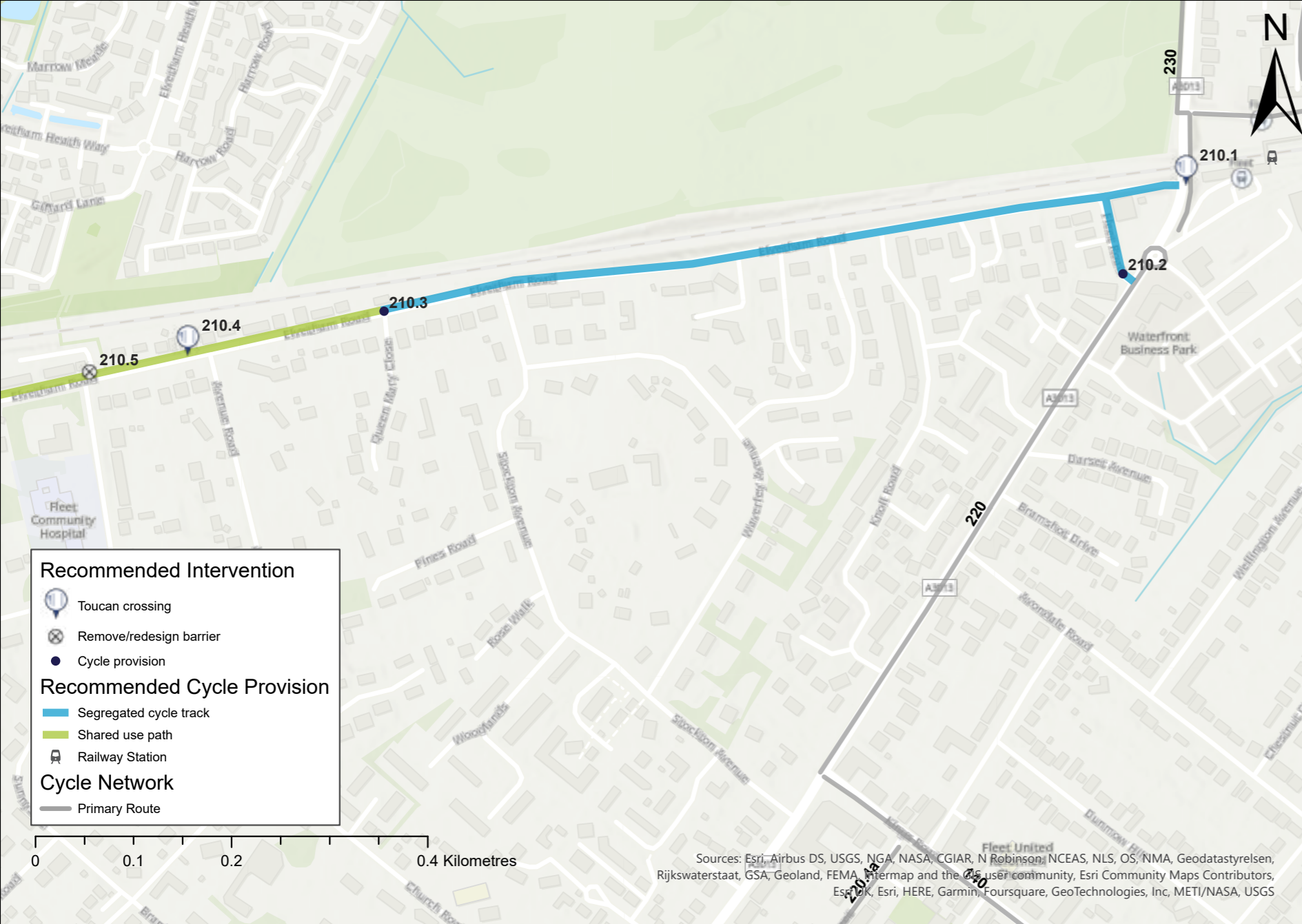


Potential options

- 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







Intervention Number	Issue	Recommendation
210.1	Poor/no cycle crossing	Investigate feasibility of installing controlled crossing over the A3013.
210.2	Lack of cycling infrastructure	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	Lack of cycling infrastructure	Investigate feasibility of installing a shared use path between Queen Mary Close and the A323/Reading Road North.
210.4	Poor/no cycle crossing	Install a controlled crossing over Elvetham Road to connect to existing footbridge.
210.5	Barrier restricts legitimate access	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	Issue	Recommendation
210.6	Poor/no walking and cycling facilities at junction	Consider implementing a Dutch style roundabout in the long term at Elvetham Road/Fleet Road/Hitches Lane.
210.7	Poor/no cycle crossing	Signalised Toucan crossing to be installed over Hitches Lane junction arm in summer 2023.
210.8	Lack of cycling infrastructure	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	Poor/no cycle crossing	Install a signalised crossing over Hitches Lane.



Intervention Number	Issue	Recommendation
210.10	Poor/no walking and cycling facilities at junction	Consider implementing a Dutch style roundabout Hitches Lane/Emerald Avenue.
210.11	Lack of cycling infrastructure	Investigate feasibility of installing segregated cycle facility on Hitches Lane from Emerald Avenue to Crookham Village.
210.12	Poor/no walking and cycling facilities at junction	Install parallel crossing on eastern roundabout arm at Featherfall Road.
210.13	Potential for high vehicle speeds/flows	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	Poor/no cycle crossing	Investigate feasibility of installing a parallel crossing over Pilcot Road.
210.15	Lack of footway	Gap in footway on south side of Pilcot Road - install new footway.



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



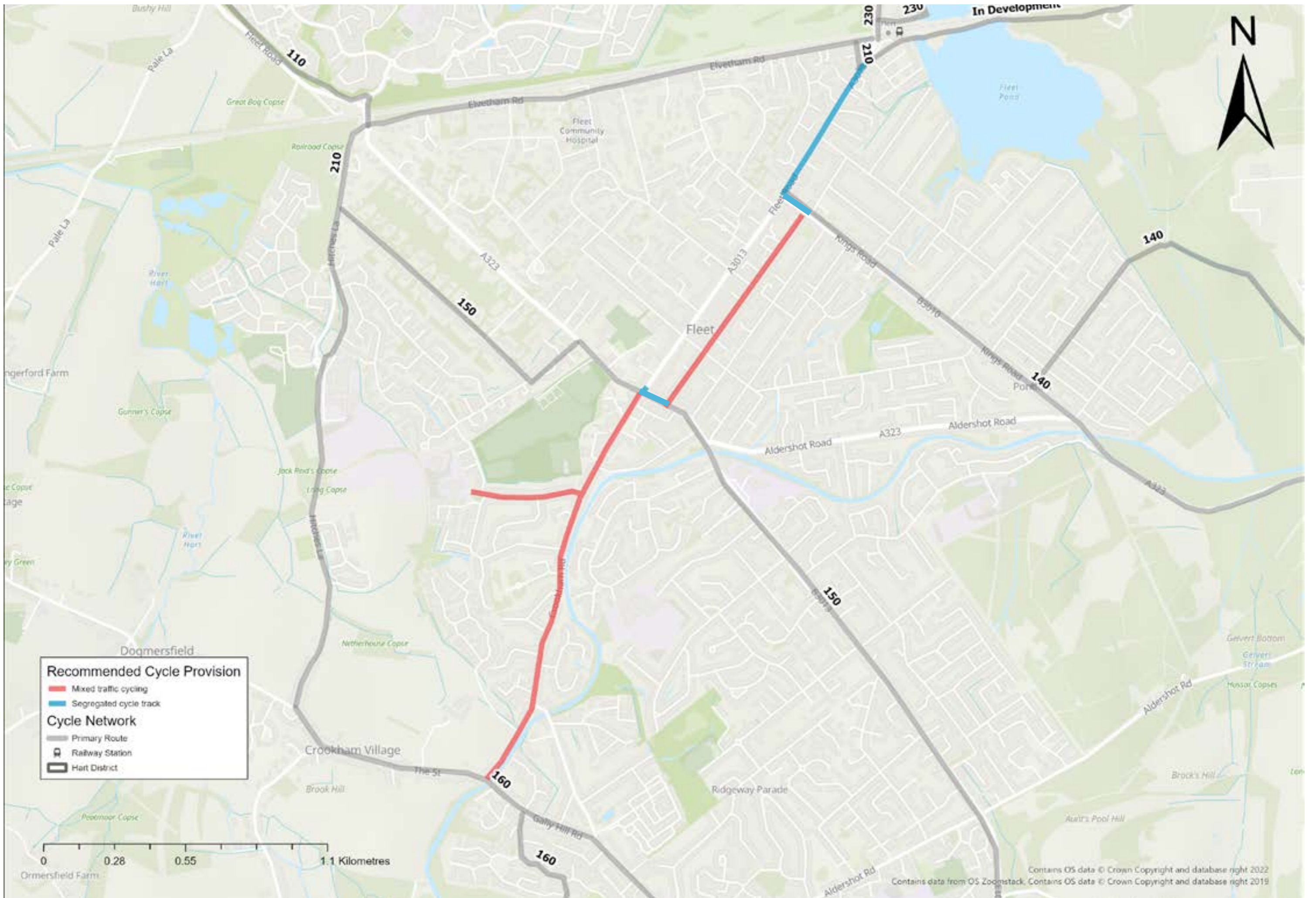
Extra carriageway space that could be re-allocated to cycling infrastructure at the Kings Road / Fleet Road junction



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



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





Intervention Number	Issue	Recommendation
220.1	Poor/no walking and cycling facilities at junction	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	Poor/no cycle crossing	Consider installing a Toucan crossing over Fleet Road, near the Shell Fleet (south of the station)
220.3	Lack of cycling infrastructure	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	Potential for high vehicle speeds/flows	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	Poor/no walking and cycling facilities at junction	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	Issue	Recommendation
220.6	Lack of secure cycle parking	Install secure cycle parking facilities at junction.
220.7	Potential for high vehicle speeds/flows	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	Potential for high vehicle speeds/flows	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.
Cross-reference to 160.2	Poor/no walking and cycling facilities at junction	Investigate the feasibility of installing signalised crossing facilities at The Street / Crookham Road junction, including pedestrian crossing facilities on the southern arm.



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.



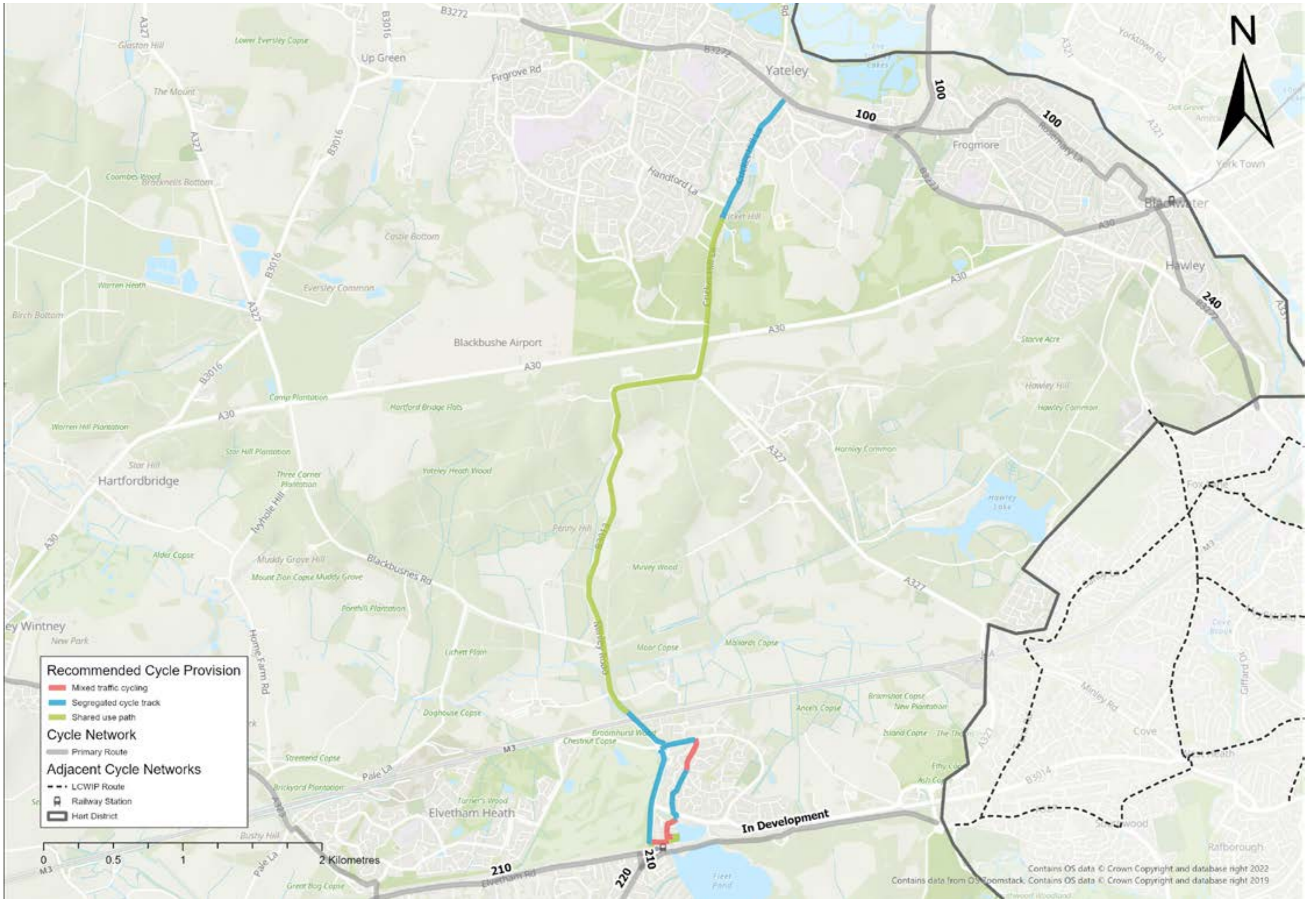
Minley Road near North Hants Golf Club



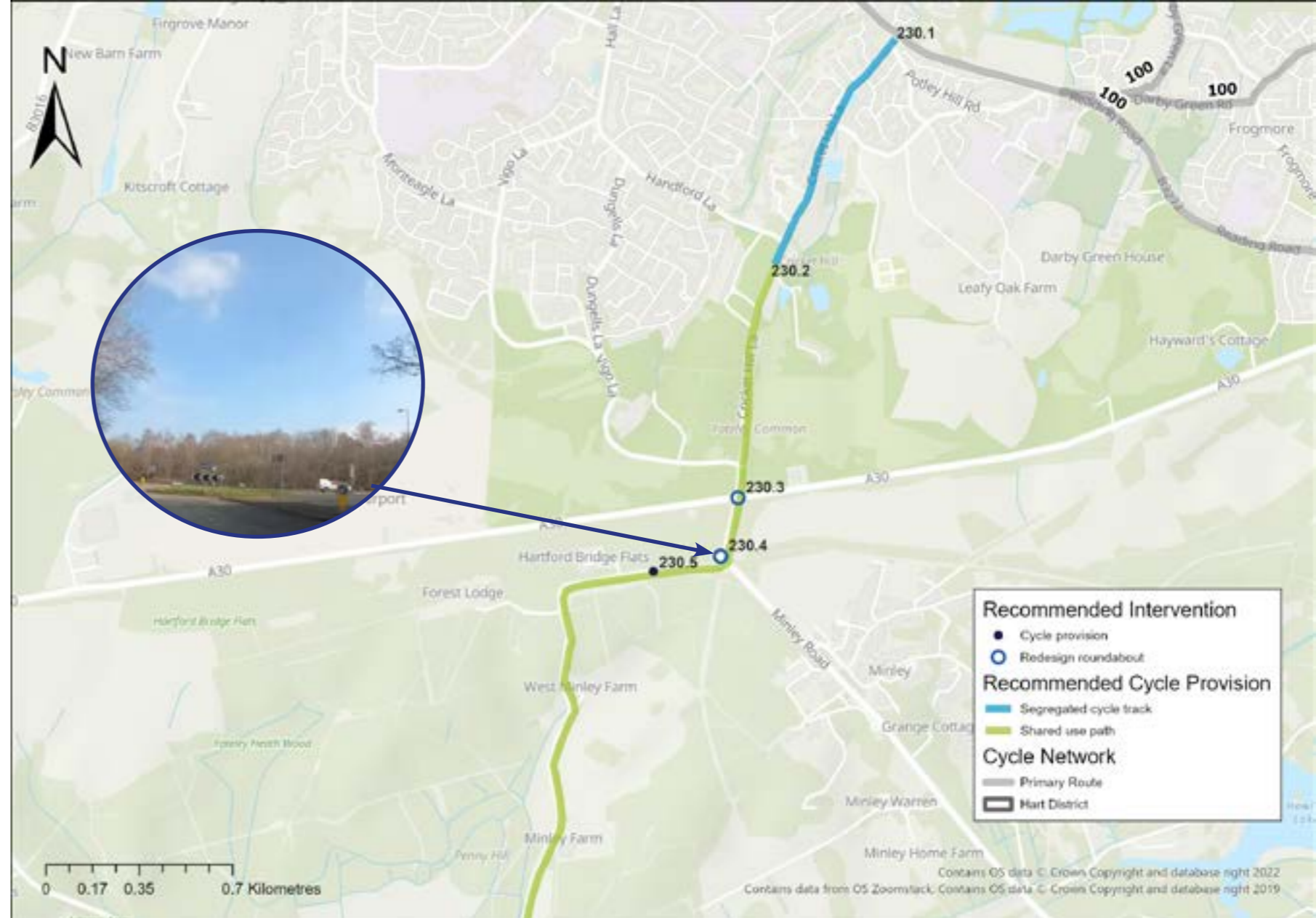
Minley Road M3 overpass



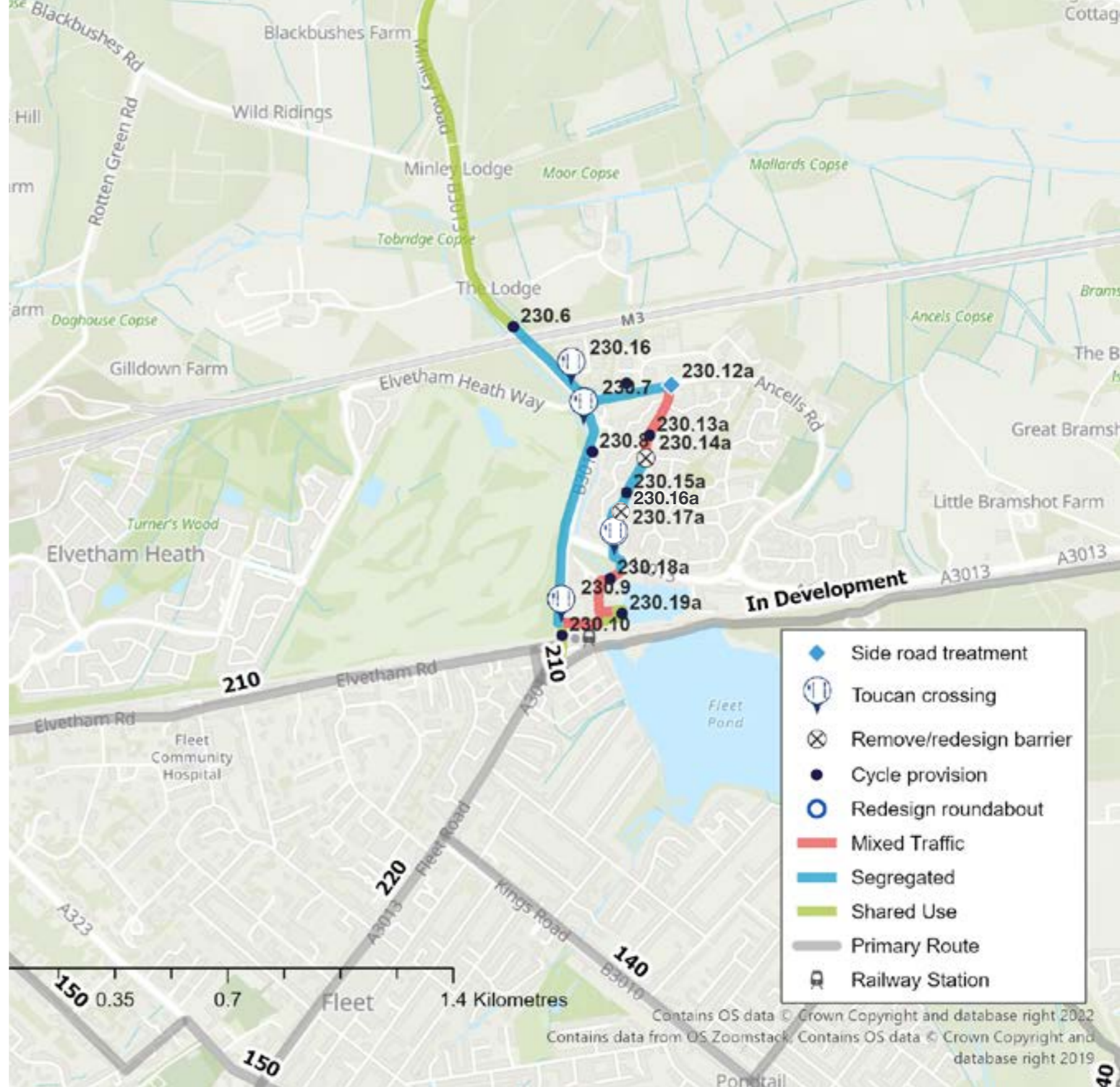
Minley Road



Intervention Number	Issue	Recommendation
230.1	Lack of cycling infrastructure	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	Lack of cycling infrastructure	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	Poor/no walking and cycling facilities at junction	Complete re-design of roundabout required. Re-designed roundabout must include controlled cyclist/pedestrian crossings.
230.4	Poor/no walking and cycling facilities at junction	Complete re-design of roundabout required. Re-designed roundabout must include controlled cyclist/pedestrian crossings.
230.5	Lack of cycling infrastructure	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	Issue	Recommendation
230.6	Lack of cycling infrastructure	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	Poor/no cycle crossing	Install Toucan crossing over Minley Road.
230.8	Lack of cycling infrastructure	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	Poor/no cycle crossing	Install Toucan crossing over the A3013.
230.10	Opportunity to upgrade existing cycling infrastructure	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	Lack of cycling infrastructure	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	Lack of cycle priority at side road	Tighten kerb radii at Farm Drive and Ancells Road to reduce vehicle turning speeds onto Farm Drive.
230.13a	Potential for high vehicle speeds/flows	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	Barrier restricts legitimate access	Remove or re-design existing barrier.
230.15a	Opportunity to upgrade existing cycling infrastructure	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 due to width constraints.
230.16a	Barrier restricts legitimate access	Remove or re-design existing barrier.
230.17a	Poor/no cycle crossing	Install Toucan crossing across Cove Road.



Intervention Number	Issue	Recommendation
230.18a	Potential for high vehicle speeds/flows	Implement mixed traffic cycling provision on Waterside Court. Ensure 20mph speed limit.
230.19a	Lack of cycling infrastructure	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

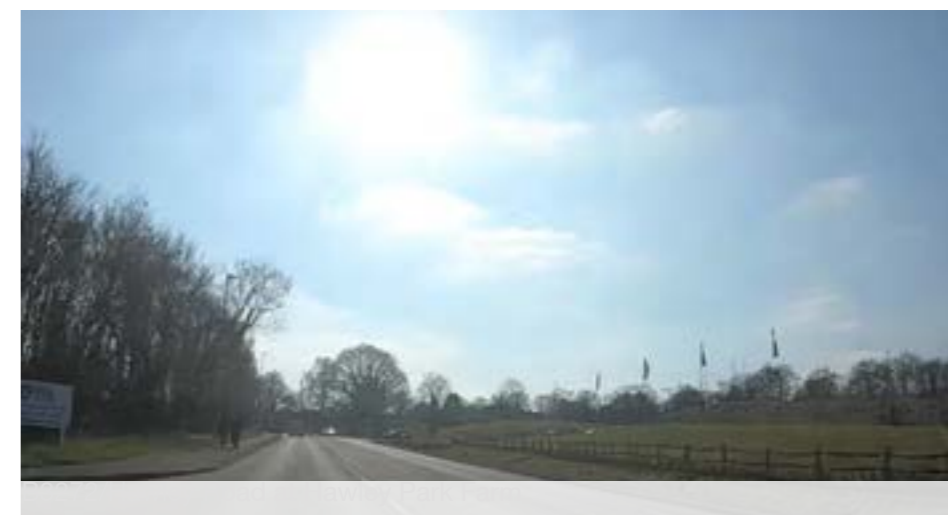
- There is no dedicated cycle provision on Vicarage Road on the B3272

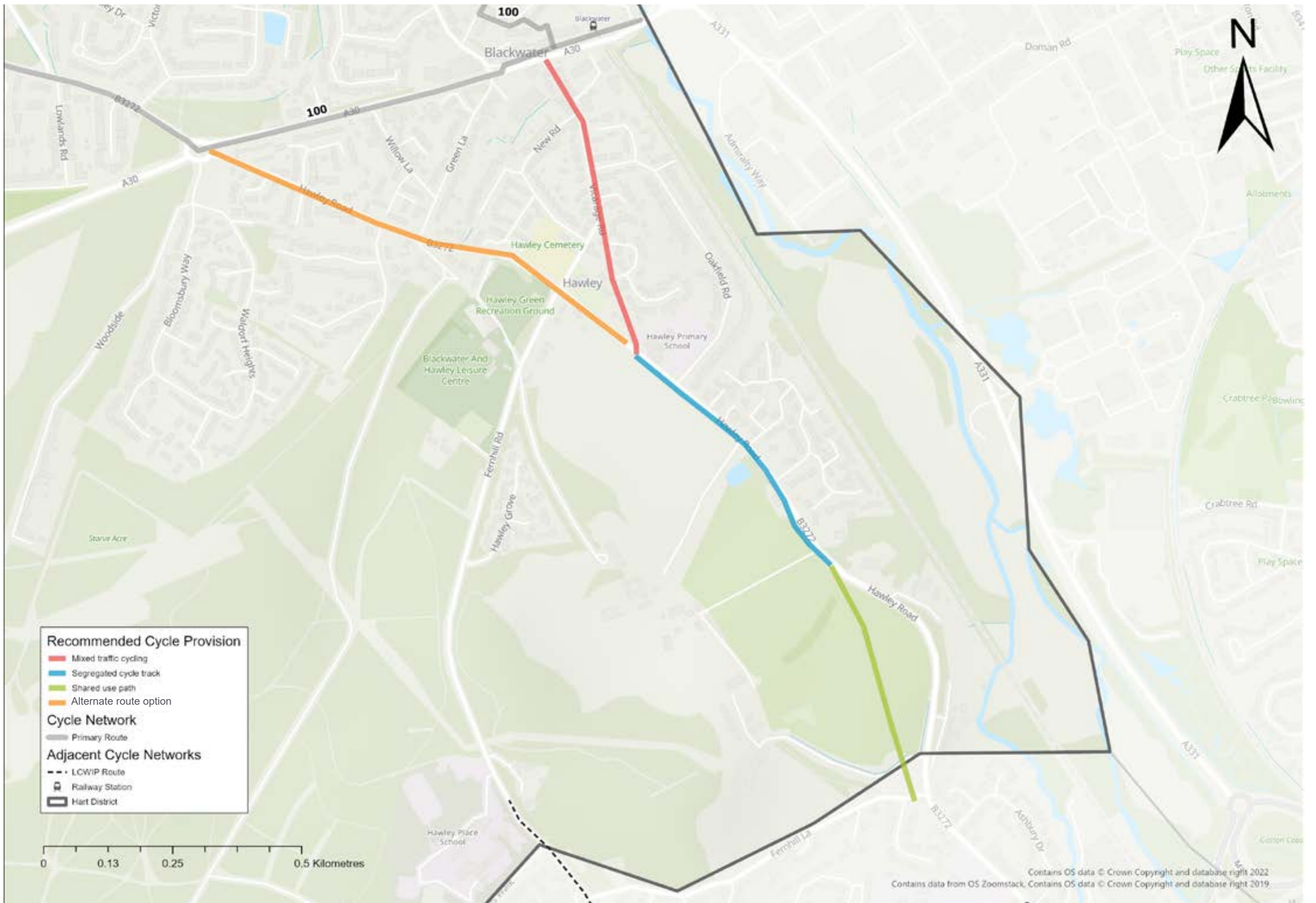
Barriers to walking and cycling

- 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.







Intervention Number	Issue	Recommendation
240.1	Potential for high vehicle speeds/flows	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 for high vehicle speeds/flows	Potential modal filter location. A modal filter would likely also be required on New Road/The Glebe. Further study is required.
240.3	Poor/no cycle crossing	Investigate feasibility of installing Toucan crossing over Hawley Road.
240.4	Lack of cycling infrastructure	Investigate using western verge to create a segregated cycle track from Vicarage Road to the SANG's northern boundary.
240.5	Lack of cycling infrastructure	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.

4.4 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 ¹	Motor Traffic Flow (pcu/24 hour) ²	Protected Space for Cycling			Cycle Lane (mandatory/ advisory)	Mixed Traffic
		Fully Kerbed Cycle Track	Stepped Cycle Track	Light Segregation		
20 mph ³	0	Green	Green	Green	Green	Green
	2000	Green	Green	Green	Green	Green
	4000	Green	Green	Green	Yellow	Yellow
	6000+	Green	Green	Green	Yellow	Yellow
30 mph	0	Green	Green	Green	Yellow	Yellow
	2000	Green	Green	Green	Yellow	Yellow
	4000	Green	Green	Green	Yellow	Yellow
	6000+	Green	Green	Green	Yellow	Yellow
40 mph	Any	Green	Yellow	Yellow	Pink	Pink
50+ mph	Any	Green	Pink	Pink	Pink	Pink

- Notes:
- 1. If the 85th 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
 - 3. 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
- Legend:
- Green: Provision suitable for most people
 - Yellow: Provision not suitable for all people and will exclude some potential users and/or have safety concerns
 - Pink: Provision suitable for few people and will exclude most potential users and/or have safety concerns

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
	2 way	<300	3.0	2.0
		>300-1000	3.0	2.5
Cycle lane	1 way	>1000	4.0	3.0
		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	Yellow	Yellow	Yellow	Yellow	Green
40 mph and 50 mph	> 10000	Any	Yellow	Yellow	Yellow	Green	Green
	6000 to 10000	2 or more	Yellow	Yellow	Yellow	Green	Green
	0-6000	2	Yellow	Yellow	Yellow	Green	Green
	0-10000	1	Yellow	Yellow	Yellow	Green	Green
< 30mph	> 8000	> 2	Yellow	Yellow	Yellow	Green	Green
	> 8000	?	Yellow	Yellow	Yellow	Green	Green
	4000-8000	?	Yellow	Yellow	Yellow	Green	Green
	0-4000	2	Yellow	Yellow	Yellow	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 85th 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

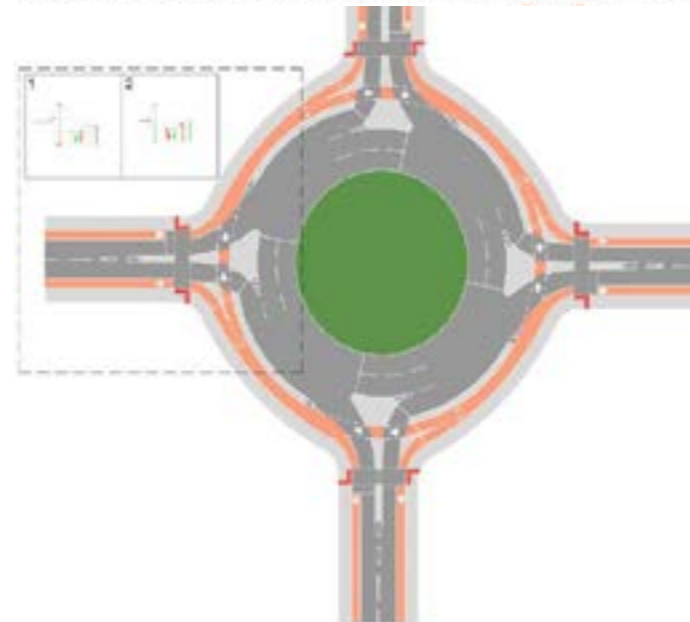


Table 11-1: Suggested minimum cycle parking capacity for different types of land use

Land use type	Sub-category	Short stay requirement (obvious, easily accessed and close to destination)	Long stay requirement (secure and ideally covered)
All	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.
Retail	Small (<200m ²)	1 per 100m ²	1 per 100m ²
	Medium (200-1,000m ²)	1 per 200m ²	1 per 200m ²
	>1,000m ²	1 per 250m ²	1 per 500m ²
Employment	Office/Finance (A2/B1)	1 per 1000m ²	1 per 200m ²
	Industrial/Warehousing (B2/B8)	1 per 1,000m ²	1 per 500m ²
Leisure and Institutions	Leisure centres, assembly halls, hospitals and healthcare	Greatest of: 1 per 50m ² 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: Staff: 1 per 20 staff Students: 1 per 10 students
Residential	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
Public Transport Interchange	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